

**Fw: Requested Alignment Sheet**  
Teresita Rodriguez to: Jose Soto

03/29/2011 02:11 PM

----- Forwarded by Teresita Rodriguez/R2/USEPA/US on 03/29/2011 02:19 PM -----

From: Daniel Pagan <daniel\_paganrosa@yahoo.com>  
To: Teresita Rodriguez/R2/USEPA/US@EPA  
Date: 03/29/2011 01:21 PM  
Subject: Requested Alignment Sheet

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Dear Teresita; Attached please find the requested alignment sheet.



48.0-Z-321.54\_Rev1.PDF







Re: Via Verde - DRAFT # 2   
Teresita Rodriguez to: Jose Soto

03/30/2011 03:05 PM

History: This message has been replied to.

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Hola Jose,

Attached please find the draft Via Verde letter with my comments. As you will see, I propose shortening the alternatives analysis paragraph since it is not an issue anymore and just one of the alternatives was being discussed. I propose leaving the more detailed discussion for the issues that we are still concerned about (mitigation, ROW). However, if you feel strongly that the alternatives discussion should be in the letter, I'll go along with your recommendation.

The other modifications I made are really minor. Feel free to make additional modifications as you see fit.

Thanks,

Tere



Follow Up letter 2TR.docx

Jose Soto

Attached is draft # 2 of the Via Verde letter, inclu...

03/29/2011 11:51:00 AM

From: Jose Soto/R2/USEPA/US  
To: Carl Soderberg/R2/USEPA/US@EPA  
Cc: Teresita Rodriguez/R2/USEPA/US@EPA, Jose Font/R2/USEPA/US@EPA  
Date: 03/29/2011 11:51 AM  
Subject: Via Verde - DRAFT # 2

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Attached is draft # 2 of the Via Verde letter, including modifications as per the additional information submitted by Danny Pagan.

Please let me know of any comments and/or changes.

Thanks!

Jose Soto  
Multimedia Permits and Compliance Branch  
Phone: (787) 977-5829

[attachment "Via Verde follow-up letter - March 29, 2011 - DRAFT #2.docx" deleted by Teresita Rodriguez/R2/USEPA/US]



Mr. Edgar W. García  
Regulatory Project Manager  
Antilles Regulatory Section  
Jacksonville District Corps of Engineers  
400 Fernandez Juncos Avenue  
San Juan, Puerto Rico 00901-3299

Re: Vía Verde Natural Gas Pipeline; SAJ-2010-02881 (IP-EWG)

Dear Mr. García:

This is in reference to the Vía Verde natural gas pipeline project proposed by the Puerto Rico Electric Power Authority (PREPA). After our December 23, 2010 letter, additional information has been provided by PREPA and its consultants to address the U.S. Environmental Protection Agency's (EPA's) concerns. In addition, the applicant has met with EPA representatives on several occasions to present and/or discuss such additional information, including several chapters of the local Environmental Impact Statement (EIS) for the project. These updated comments on the project are based on a thorough review of the additional information furnished by the applicant.

EPA originally objected to the issuance of a Department of the Army permit for the project based on the lack of a detailed alternatives analysis, concerns regarding the use of directional drilling, the lack of suitable compensatory mitigation to address wetlands impacts, and the need to complete a federal Environmental Impact Statement (EIS) for the project. After evaluating the additional information delivered by the applicant, EPA has the following comments.

PREPA provided information, contained in the local EIS prepared for the project, regarding the alternatives analysis performed for the project. These included the a no action alternative, as well as the conversion of other PREPA facilities to natural gas and several terrestrial pipeline alignments. We believe that PREPA has satisfactorily addressed our alternatives analysis concern per requirements of the 404(b)(1) guidelines.

In regards to EPA's concerns regarding the use of directional drilling in wetlands and karst terrain, PREPA provided additional information regarding best management practices, the monitoring to be performed and the presence of specialized personnel during drilling operations to monitor the process and stop work immediately if any escape of bentonite mud





into karst formations and/or waters of the United States is suspected. In addition, during a March 2, 2011 meeting at the Corps of Engineers, PREPA's consultants announced that directional drilling operations in karst terrain would be greatly reduced, since the pipeline route would be altered to circumvent haystack hills ("*mogotes*"), light equipment would be used, and a pipeline pull method would be required to further reduce impacts. We commend PREPA on these impact reduction measures, and remain confident that the best management practices, combined with adequate monitoring, should minimize any impacts from directional drilling. EPA urges the Corps of Engineers to consider a special condition to the permit requiring the presence of a trained geologist/engineer with expertise on karst terrain during drilling operations to closely monitor the operations and stop work if any abnormalities are detected. Another special condition mandating the avoidance of karst formations during pipeline placement should also be considered.

In our previous letter, we commented on the perceived unsuitability of the initially proposed compensation for unavoidable impacts to aquatic resources. Additional information supplied by PREPA to address this issue includes, among others, a commitment to coordinate with the Department of Natural and Environmental Resources (DNER) to develop suitable on-site mitigation in a 3:1 ratio for any unavoidable impacts to aquatic resources. While PREPA has stated that a suitable mitigation plan would be developed in a timely manner, EPA believes that such plan must be reviewed and accepted by the Corps of Engineers' resource agencies before a permit is issued. In addition, questions regarding the concept of "temporary impacts" proposed by PREPA remain. While PREPA expresses that after placing the pipeline, areas would be immediately brought back to initial conditions so that natural re-colonization by suitable wetlands species begins, several of the documents indicate a willingness to enhance areas by suppressing invasive and/or nuisance species. These "enhancement" areas need to be identified and quantified. We also think that additional details on the management/maintenance methods to be used need to be clarified. In addition, we believe that the mitigation and/or wetlands enhancement plans should include performance/success rates to evaluate their suitability and long term viability. Furthermore, please be advised that on January 14, 2011 the Council on Environmental Quality (CEQ) provided guidance for departments and agencies of the Federal government on mitigation and monitoring of activities. As highlighted in this guidance, "Mitigation measures included in the project design are integral components of the proposed action, are implemented with the proposed action, and therefore should be clearly described as part of the proposed action." Therefore, EPA feels that a more robust description of the mitigation and monitoring plans needs to be developed to ensure that this federal objective is fulfilled. The guidance further states that "Mitigation commitments needed to lower the level of impacts so that they are not significant should be clearly described in the mitigated FONSI [finding of no significant impact] document and in any other relevant decision documents related to the proposed action." Therefore, any Corps-



issued Environmental Assessment coupled with a FONSI for this project should include that information. We look forward to receiving and reviewing any mitigation planning documents as they become available.

One additional remaining concern for EPA is the proposed project's right-of-way (ROW). At various times throughout the documents supplied by PREPA, the ROW is described as being 100, 150 or 50 feet wide. While the applicant has since explained the concept of a variable ROW at the meetings, we would appreciate a written, detailed explanation of this concept in order to include it in the project review file. If possible, PREPA should provide this information on a map, including the location of any staging areas or work platforms needed during construction. This information would help EPA determine whether there are any other issues that need to be addressed within the ROW in order to provide substantive comments to the Corps and PREPA.

In summary, while PREPA has addressed our major concerns regarding the Vía Verde Natural Gas Pipeline project, EPA believes that some additional information is required to fully comply with the Clean Water Act, Section 404(b)(1) Guidelines requirements. Specifically, we request the consideration of special conditions to the permit addressing our concerns regarding the use of directional drilling, additional details regarding the project's compensatory mitigation plan, and a detailed explanation of the project's variable right-of-way, including maps and staging areas. We therefore condition our approval of the proposed permit project to the submittal and positive evaluation of data to alleviate our remaining concerns.

If you have any questions or require additional information on this matter, please contact Ms. Teresita Rodriguez, Chief of the Multimedia Permits and Compliance Branch (MPCB), at 787-977-5864 or Mr. José Soto, of the MPCB, at 787-977-5829.

Sincerely,

Carl-Axel P. Soderberg

Director

CC: USFWS-Cabo Rojo, PR

DNER- San Juan, PR

PRPB- San Juan, PR



**PREQB- San Juan, PR**



**Via Verde - Draft Follow Up Letter**  
**Teresita Rodriguez** to: Carl Soderberg  
Cc: Jose Font, Jose Soto

03/30/2011 06:46 PM

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History: This message has been replied to.

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Carl,

Attached you'll find a draft letter which includes our latest comments on the Via Verde project based on a review of the information submitted by PREPA. Please, let us know if you have any questions.

Thanks,

Tere



Draft Follow Up letter.docx





Sindulfo Castillo  
Chief, Antilles Regulatory Section  
Jacksonville District Corps of Engineers  
400 Fernández Juncos Avenue  
San Juan, Puerto Rico 00901-3299

Re: Vía Verde Natural Gas Pipeline; SAJ-2010-02881 (IP-EWG)

Dear Mr. Castillo:

This is in further reference to the Vía Verde natural gas pipeline project proposed by the Puerto Rico Electric Power Authority (PREPA). Since our December 23, 2010 letter, additional information has been provided by PREPA and its consultants to address the U.S. Environmental Protection Agency's (EPA's) concerns. In addition, the applicant met with EPA representatives on several occasions to present and/or discuss such additional information, including chapters four and six of the local Environmental Impact Statement (EIS) for the project, plus several summary sections.

In our previous letter, EPA objected to the issuance of a Department of the Army permit for the project based on the lack of a detailed alternatives analysis, concerns regarding the use of directional drilling, the lack of suitable compensatory mitigation to address wetlands impacts, and the need to complete a federal Environmental Impact Statement (EIS) for the project. The comments provided herein are based on a thorough review of the additional information furnished by the applicant and its consultants.

To address the alternatives analysis issue, PREPA provided information on the alternatives contained in the local EIS prepared for the project. These included a no action alternative, the construction of a natural gas import terminal on the north coast of the island, tanker and buoy systems and/or transfer platforms for receipt of natural gas at PREPA's Palo Seco, San Juan and Cambalache plants, gravity based systems, floating storage and re-gasification units, and several terrestrial alignments for a natural gas pipeline system. While this represents a significant milestone in the review of alternatives for the project, the documents provided included an additional option: The use of natural gas at PREPA's existing Costa Sur and Aguirre power generating facilities on the south coast of Puerto Rico, combined with the conversion of the nearby Las Mareas Port facility to receive liquefied natural gas (LNG) as means to achieve significant energy production using an alternative fuel. This project, formerly known as the "*Gasoducto del Sur*", was previously considered by PREPA as means to address the diversification of the electric power supply methods in Puerto Rico. The project was briefly



mentioned in response to comments from the U.S. Army Corps of Engineers and the Puerto Rico Engineers and Surveyors Association. EPA believed that PREPA's dismissal of this alternative was inconsistent with the current project's overall project purpose, since it would provide PREPA with an alternative fuel option for two major generating facilities with lesser environmental impacts. However, after evaluating additional information furnished by the applicant's environmental consultant, it appears that *Gasoducto del Sur* was geared to provide natural gas to the combined cycle units located at the Aguirre Power Plant with a 592 MW operational capacity. On the other hand, Via Verde would provide natural gas and an increase in PREPA's operational capabilities to a total of 1,519 MW. Moreover, the Via Verde Project would provide PREPA with the flexibility to operate the most efficient power generating units on the island, which are located on the north coast, through the monitoring of each unit's rated capacity, individual fuel consumption and the type of fuel that fosters the lowest power generating costs. The Via Verde project would thus allow a more efficient use of such power generating units, allowing reductions in the transmission losses, as observed in other PREPA electric power transfer systems. EPA also defers to PREPA's expertise on the fact that "*Gasoducto del Sur*" may destabilize the island's electrical system, resulting in frequent collapses of the electric network of Puerto Rico. Upon further consideration of the supplied information, EPA believes that the alternatives analysis issues have been fully addressed by the applicant. These included the a no action alternative, the construction of a natural gas import terminal on the north coast of the island, tanker and buoy systems and/or transfer platforms for receipt of natural gas at PREPA's Palo Seco, San Juan and Cambalache plants, gravity based systems, floating storage and re-gasification units, and several terrestrial alignments for a natural gas pipeline system. Supplemental information was provided regarding the "*Gasoducto del Sur*", one of the alternatives also considered. Upon further consideration of the supplied information, EPA believes that the alternatives analysis issues have been fully addressed by the applicant.

In regards to EPA's concerns about the use of directional drilling in wetlands and karst terrain, PREPA provided additional information regarding best management practices, the monitoring to be performed and the presence of specialized personnel during drilling operations to monitor the process and stop work immediately if any escape of bentonite mud into karst formations and/or waters of the United States is suspected. In addition, during a March 2, 2011 meeting at the Corps of Engineers, PREPA's consultants announced that directional drilling operations in karst terrain would be greatly reduced, since the pipeline route would be altered to circumvent haystack hills ("*mogotes*"), light equipment would be used, and a pipeline pull method would be required to further reduce impacts. We commend PREPA on these impact reduction measures, and remain confident that best management practices, combined with adequate monitoring by qualified personnel should minimize any undesirable impacts from directional drilling. EPA recommends that that a special condition to the Corps of Engineers permit, requiring the presence of a trained geologist/engineer with expertise on karst terrain in the field at all times during drilling operations to closely monitor the process and stop work if any issues or abnormalities are detected be included. We also urge the Corps to consider additional special conditions requiring the avoidance of major karst formations during pipeline construction.



In our previous letter, we commented on the unsuitability of the initially proposed compensation for unavoidable impacts to aquatic resources. Additional information supplied by PREPA to address this issue includes, among others, a commitment to coordinate with the Department of Natural and Environmental Resources (DNER) to develop suitable on-site mitigation in a 3:1 ratio for any unavoidable impacts to aquatic resources. While PREPA has repeatedly stated that a suitable mitigation plan would be developed in a timely manner, EPA believes that such plan must be reviewed and accepted by the Corps of Engineers' resource agencies before construction of the project begins. In addition, questions remain regarding the concept of "temporary impacts". PREPA expresses that after placing the pipeline, areas would be immediately brought back to initial conditions so that natural re-colonization by prevailing vegetation begins. However, sections of the local Environmental Impact Statement (EIS) prepared for the project indicate a willingness to enhance areas by suppressing invasive and/or nuisance species at locations such as Caño Tiburones or other ecologically valuable areas. If PREPA plans to pursue such wetlands enhancement options, the areas need to be identified, quantified, and a specific plan to address local conditions must be developed. Additional details on the management/maintenance methods to be used need to be clarified. EPA believes that any mitigation and/or wetlands enhancement plans should include performance/success rates to evaluate their suitability and long term viability. Furthermore, please be advised that on January 14, 2011 the Council on Environmental Quality (CEQ) provided guidance for departments and agencies of the Federal government on mitigation and monitoring of activities. As highlighted in this guidance, "Mitigation measures included in the project design are integral components of the proposed action, are implemented with the proposed action, and therefore should be clearly described as part of the proposed action." Therefore, EPA believes that a more robust description of the mitigation and monitoring plans needs to be developed to ensure that this federal objective is fulfilled. The guidance further states that "Mitigation commitments needed to lower the level of impacts so that they are not significant should be clearly described in the mitigated FONSI [finding of no significant impact] document and in any other relevant decision documents related to the proposed action." Therefore, any Corps-issued Environmental Assessment coupled with a FONSI for this project should include that information. We look forward to receiving and reviewing the mitigation plan documents as they become available.

One additional remaining concern for EPA is the proposed project's right-of-way (ROW). At various times throughout the documents supplied by PREPA, the ROW is described as being 100, 150 or 50 feet wide. The applicant's consultant has provided a brief description of the ROW categories, but we would appreciate a written, detailed explanation of the concept and its implementation along the final pipeline route in order to include it in the project review file for future reference.

In summary, we believe PREPA has addressed most of our major concerns regarding the Via Verde Natural Gas Pipeline project. However, additional information is required to fully comply with the Clean Water Act, Section 404(b)(1) Guidelines requirements. We, therefore, condition our approval of the proposed project to receiving, for review and approval, a comprehensive mitigation plan which addresses compensation for both, temporary and permanent impacts to



wetlands and a detailed explanation of the project's variable right-of-way before project construction activities begin. In addition, we request that the permit includes a special condition requiring the presence of qualified personnel during drilling operations to closely monitor the process and stop work if any issues or abnormalities are detected.

If you have any questions or require additional information on this matter, please contact Ms. Teresita Rodríguez, Chief of the Multimedia Permits and Compliance Branch (MPCB), at 787-977-5864 or Mr. José Soto, of the MPCB, at 787-977-5829.

Sincerely,

Carl-Axel P. Soderberg  
Director

CC: USFWS-Cabo Rojo, PR  
DNER- San Juan, PR  
PRPB- San Juan, PR  
PREQB- San Juan, PR







RE: SAJ-2010-02881 Via Verde Pipeline Hazardous Materials Safety  
Administration (UNCLASSIFIED)

Garcia, Edgar W SAJ to: carrubba, Carl Soderberg, Carlos A.  
Rubio, Miguel Bonini, jaime.torres,  
Cc: "Castillo, Sindulfo SAJ", "Collazo, Osvaldo SAJ"

04/01/2011 07:23 AM

2 attachments



PHMSA Pipeline Overview all.pdf ViaVerde PHMSA 31MAR2011 Sign in sheet.pdf

Classification: UNCLASSIFIED  
Caveats: NONE

Ladies and Gentlemen,

I have enclosed the presentation from yesterday's meeting. I converted the information from its original format due to size constraints.

Also, the attendance sheet from the meeting is enclosed.

Thank you very much for your time,

Respectfully,

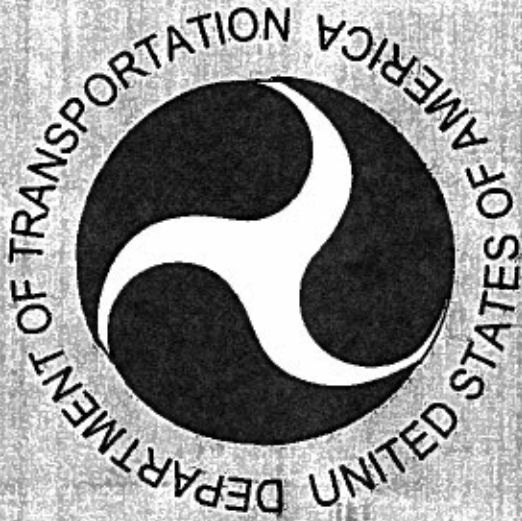
Edgar W. García  
Project Manager  
Army Corps of Engineers  
Jacksonville District  
Antilles Regulatory Section  
Tel: (787) 729-6905 Ext. 3059  
Fax: (787) 729-6906

Classification: UNCLASSIFIED  
Caveats: NONE





# Energy Pipelines in the U.S.



## Challenges & Safety Oversight

3/31/2011



# Outline

- **Who is PHMSA?**
- **What do we regulate?**
- **Pipeline Challenges**
- **PHMSA Programs**
- **Questions?**



# Thank You!

- **Mr. Edgar W. Garcia**
- **Puerto Rico Public Service Commission**
- **We appreciate the opportunity to meet with you today to talk about Pipeline Safety!**

# Energy Pipelines

The energy pipeline system is a transportation network of pipes, valves, and other parts connected together to deliver product from source to consumer. They underpin the American economy and our way of life.



## Energy Pipelines

Our nation uses oil and natural gas to heat and cool homes and businesses, produce electricity, transport virtually all of the commercial products we use, travel to work or recreation, and provide raw material for many other things we use.

They are the primary means of transporting natural gas and oil, moving all the natural gas and about two-thirds of the oil.

# Who Is PHMSA?

**We're one of ten agencies within DOT**

**We develop and enforce regulations for the safe, reliable and environmentally sound operation of:**

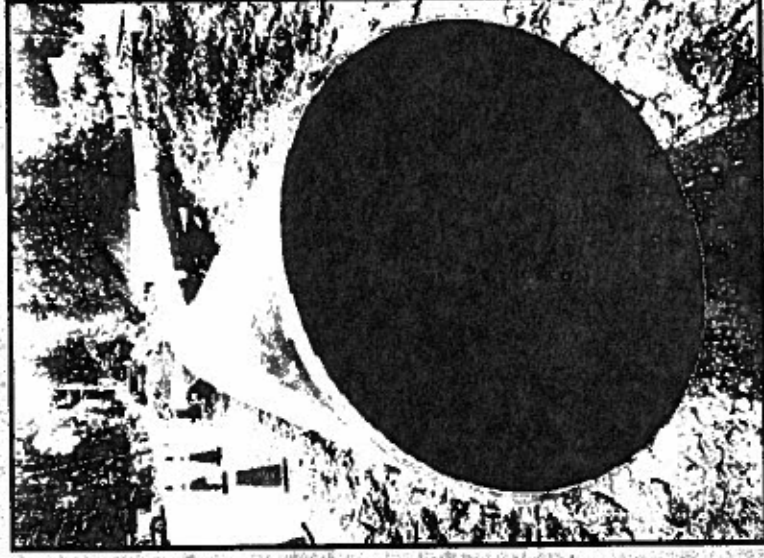
**Approximately**

**2.5 M pipeline miles**

**2,500 pipeline operators**

**1M daily hazmat shipments**

**By land, sea and air**



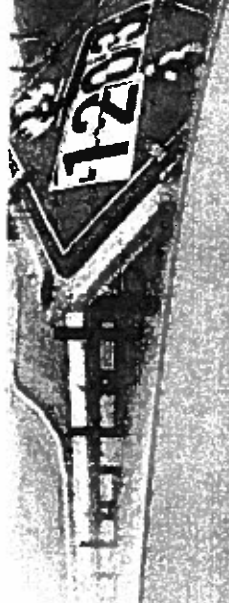




U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

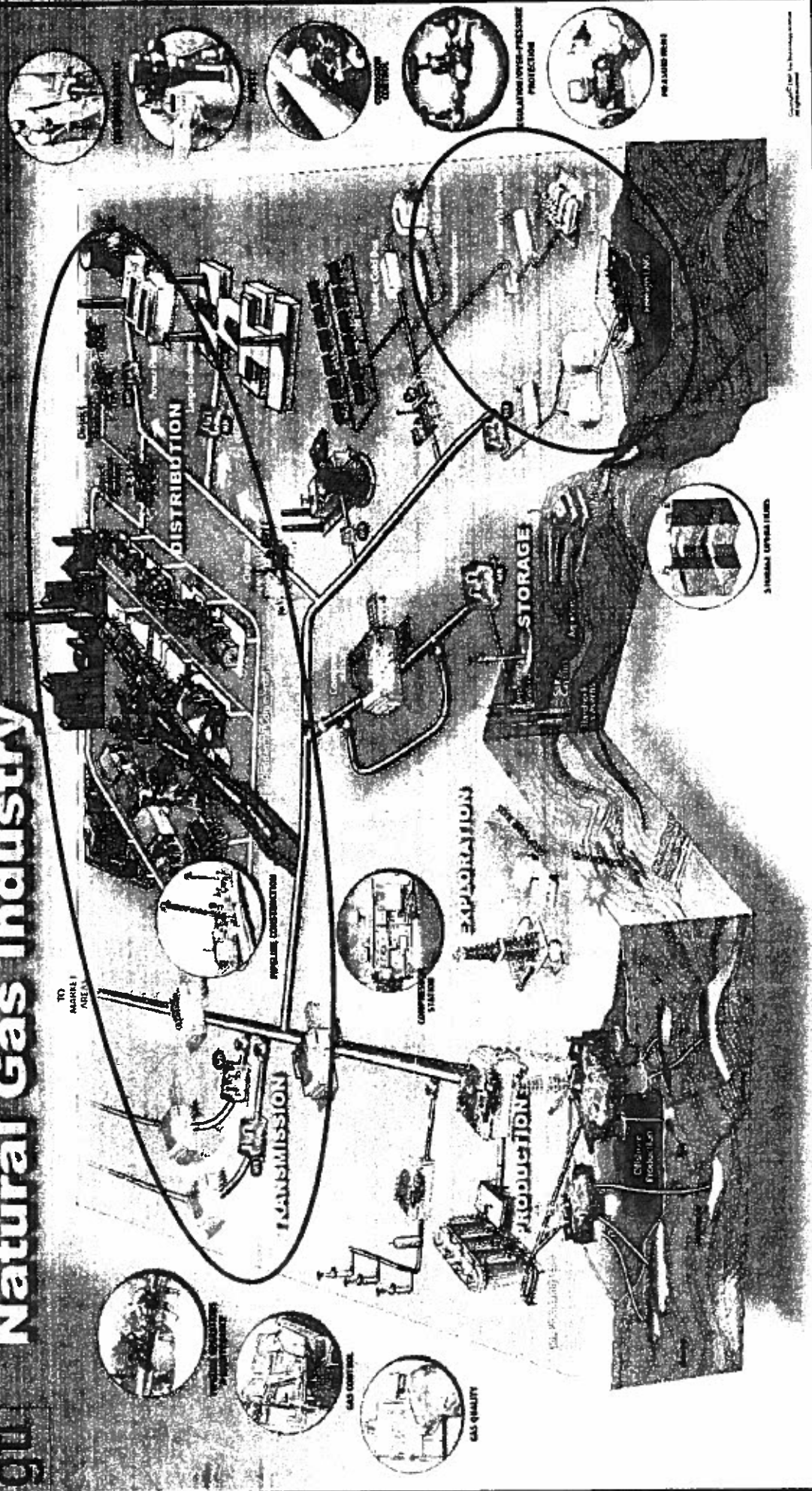
# **This oversight includes:**

- Design
- Construction
- Operation
- Maintenance
- Personnel Qualifications
- Drug and Alcohol Testing



# Relevance to the Network

## giti Natural Gas Industry





# Pipeline System Components

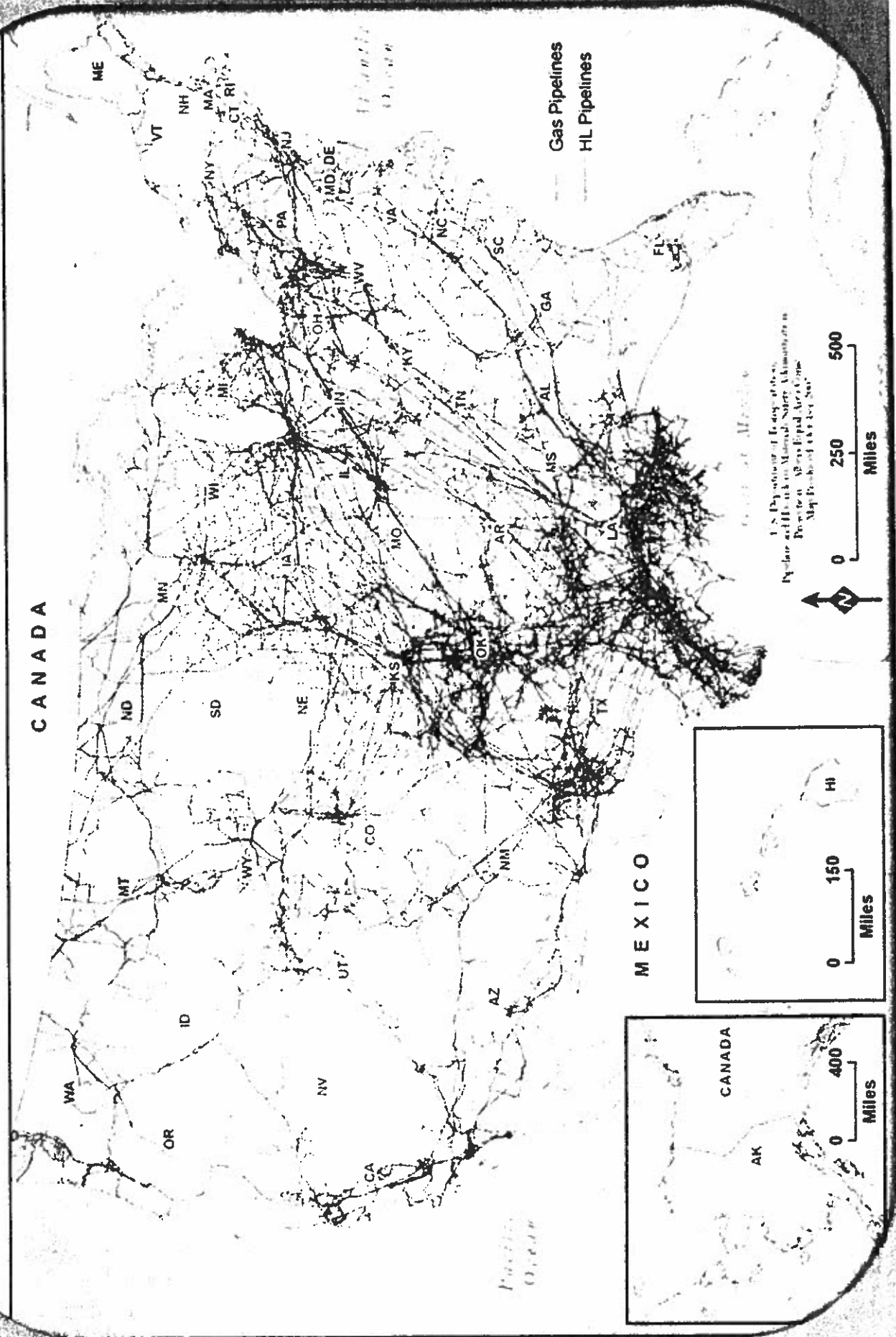
Pipeline	Mileage	% Total	Operators	% Total
Hazardous Liquid	173,396	7	306	12
Gas Transmission	317,516	13	939	38
Gas Distribution (main) (service)	2,035,253	80	1,245	50
	1,200,803	48		
	834,450	32		
<b>Total</b>	<b>2,526,165</b>	<b>100</b>	<b>2,490</b>	<b>100</b>



# Gas and Hazardous Liquid Transmission Pipelines

Pipelines as of 10/08/07

Pipeline and Hazardous  
Materials Safety Administration





# Transmission Pipeline Types

**A: Interstate**

**Pipeline A**



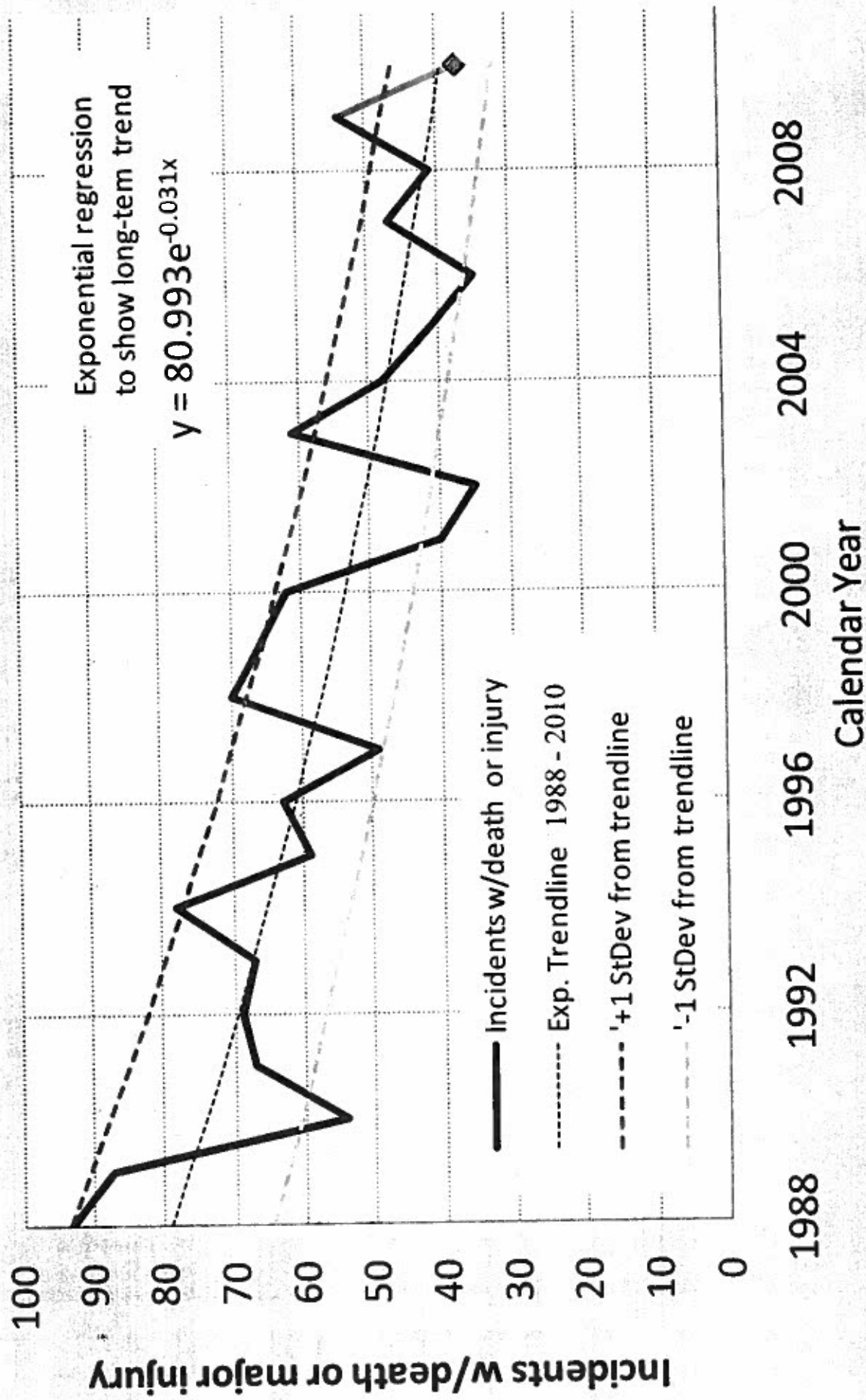
**Pipeline B**

**B: Intrastate**

## Example Commodities

- Natural Gas
- Liquid Hydrocarbons such as Crude Oil, Gasoline, Jet Fuels, Diesel, and Propane
- Anhydrous Ammonia
- Carbon Dioxide
- Hydrogen

# Pipeline Incidents w/Death or Major Injury (1988-2010)

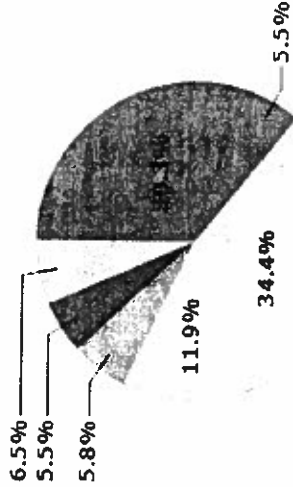


Data Sources: PHMSA Incident Data - as of Dec. 8, 2010.

# When Pipelines Fail

- **Catastrophic Consequences Occur**
- **Public Safety**
- **Environmental Impacts**
- **Loss of Service**
- **Loss of Public Confidence**

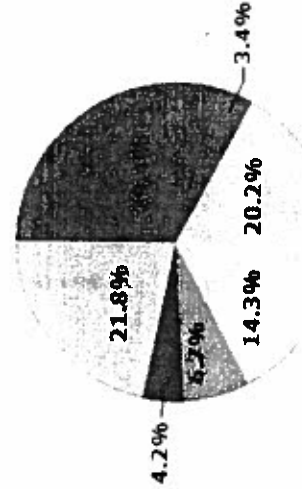
Serious Incident Cause Breakdown  
National, All Pipeline Systems, 1991-2010



ALL OTHER CAUSES  
 CORROSION  
 EXCAVATION DAMAGE  
 INCORRECT OPERATION  
 MAT'L/WELD/EQUIP FAILURE  
 NATURAL FORCE DAMAGE  
 OTHER OUTSIDE FORCE DAMAGE

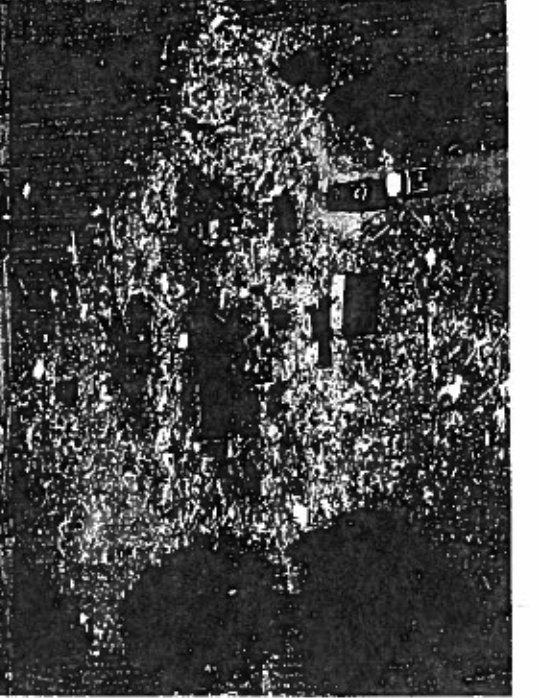
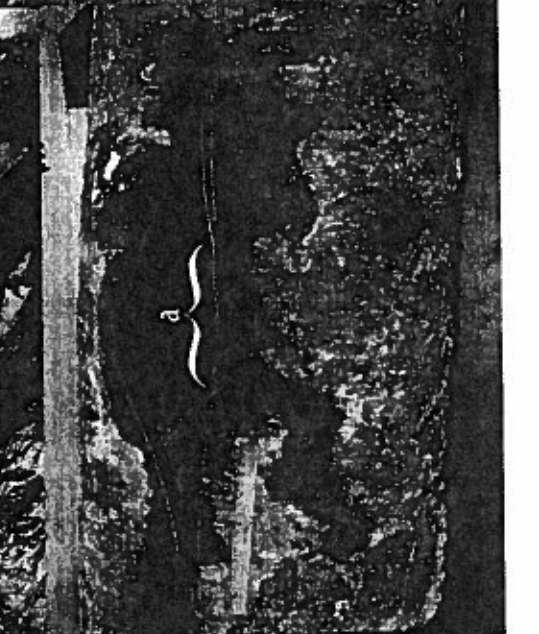
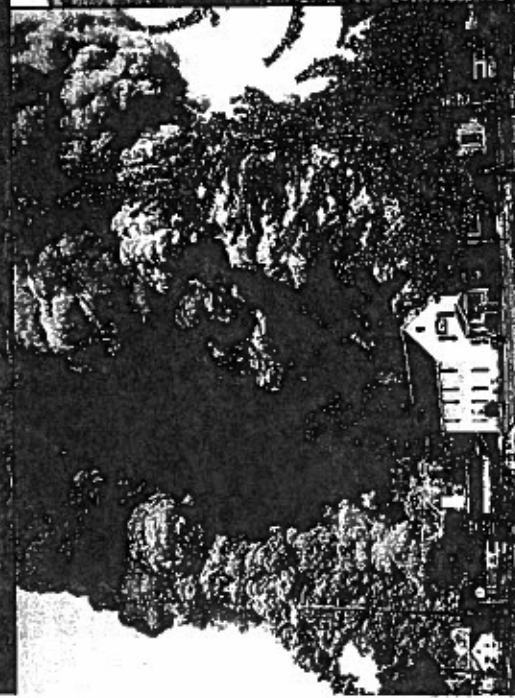
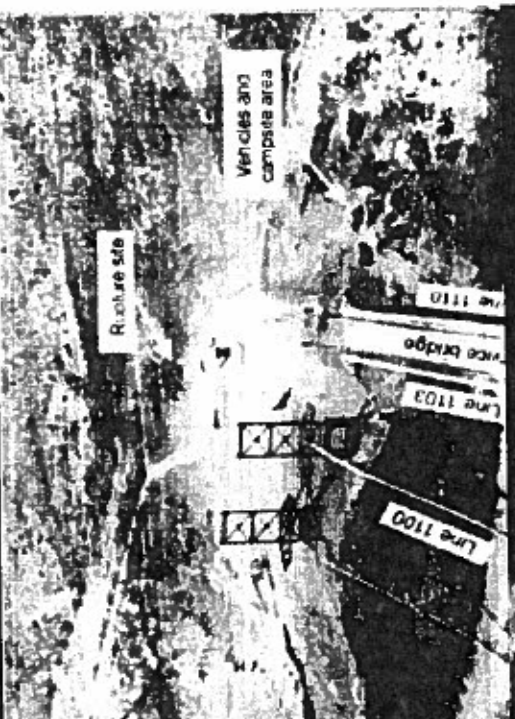
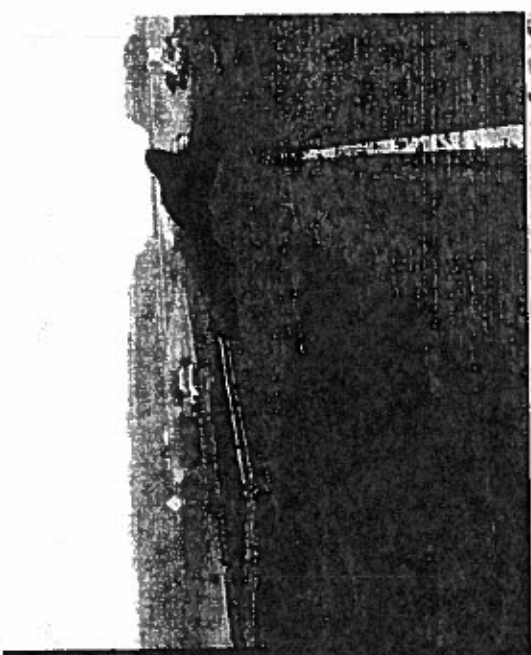
Source: PHMSA Significant Incidents Files as of July 19, 2011

Serious Incident Cause Breakdown  
National, All Pipeline Systems, 2008-2010

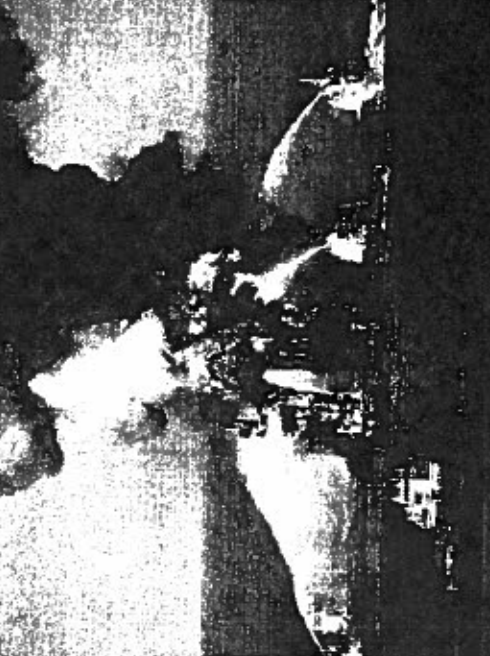
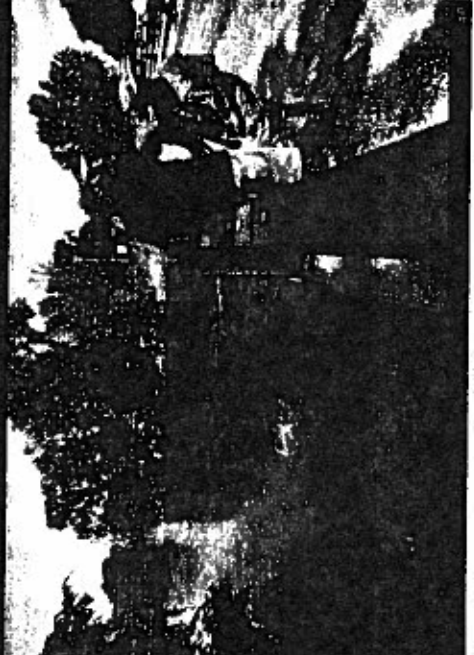
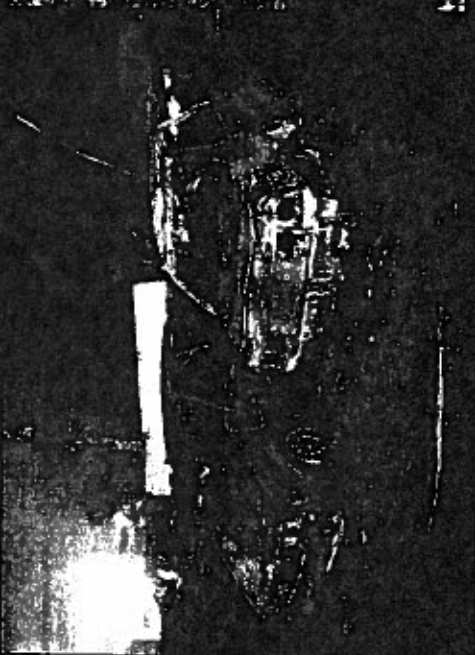
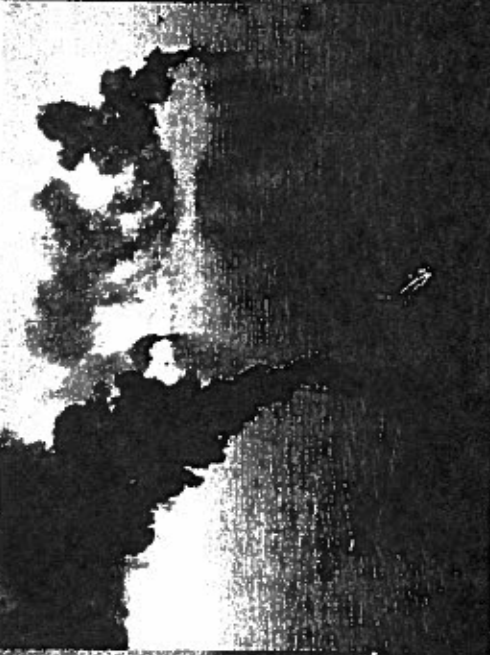
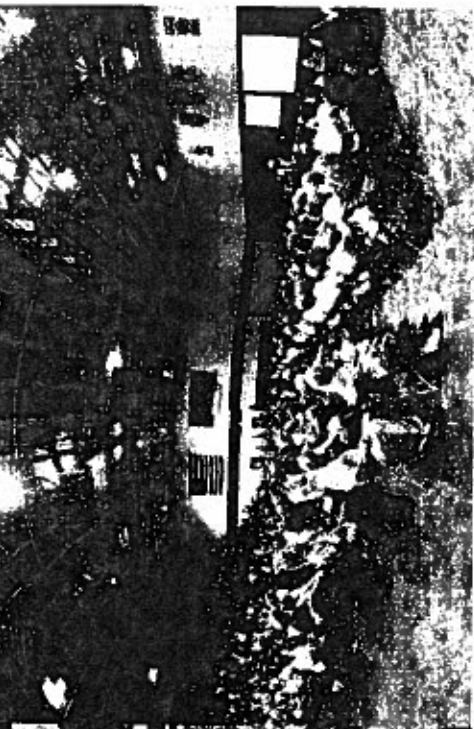
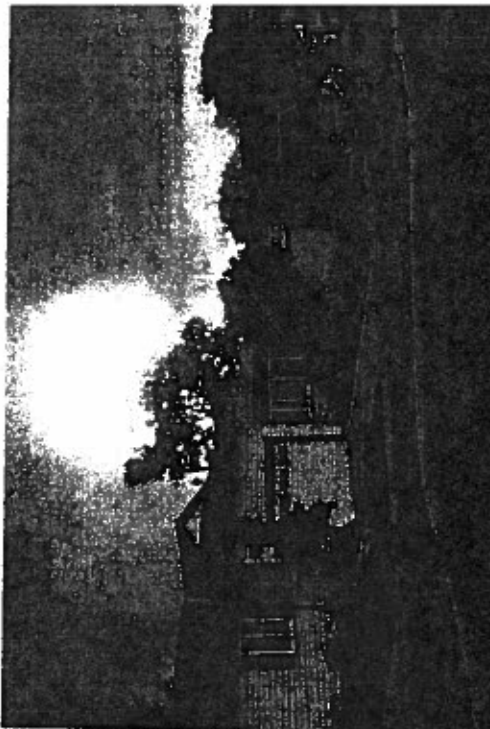


ALL OTHER CAUSES  
 CORROSION  
 EXCAVATION DAMAGE  
 INCORRECT OPERATION  
 MAT'L/WELD/EQUIP FAILURE  
 NATURAL FORCE DAMAGE  
 OTHER OUTSIDE FORCE DAMAGE

Source: PHMSA Significant Incidents Files as of July 19, 2011

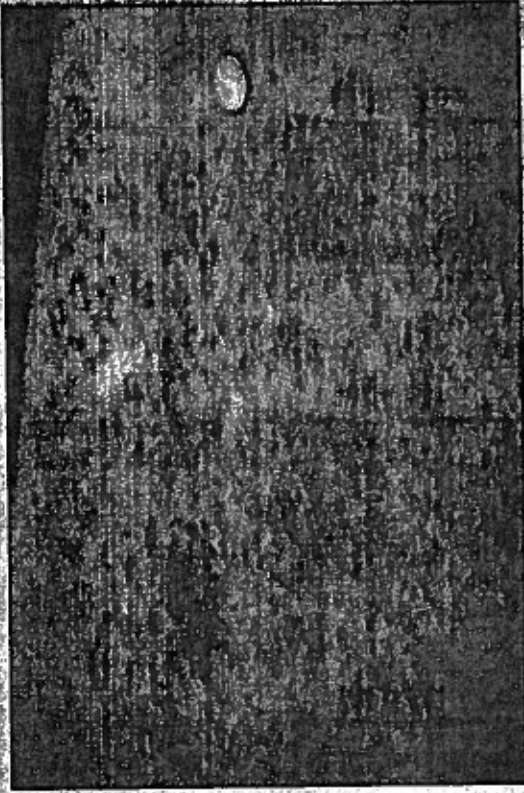








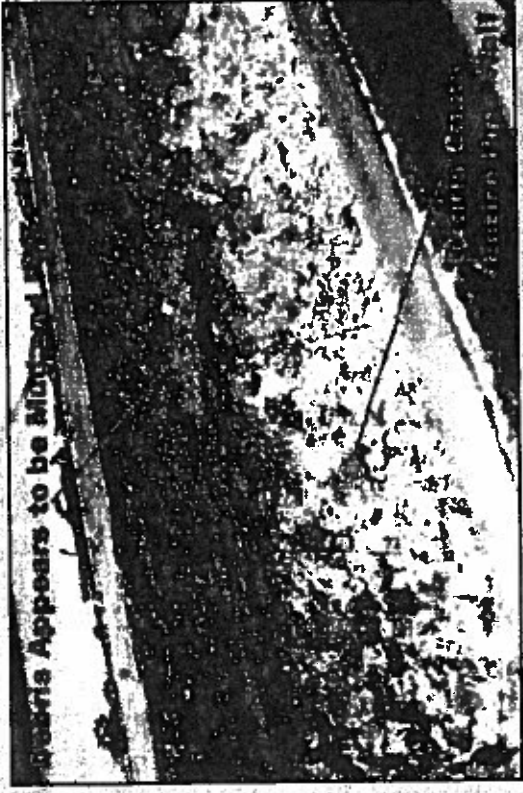
# Pipeline Challenges



General Corrosion



Pitting Corrosion

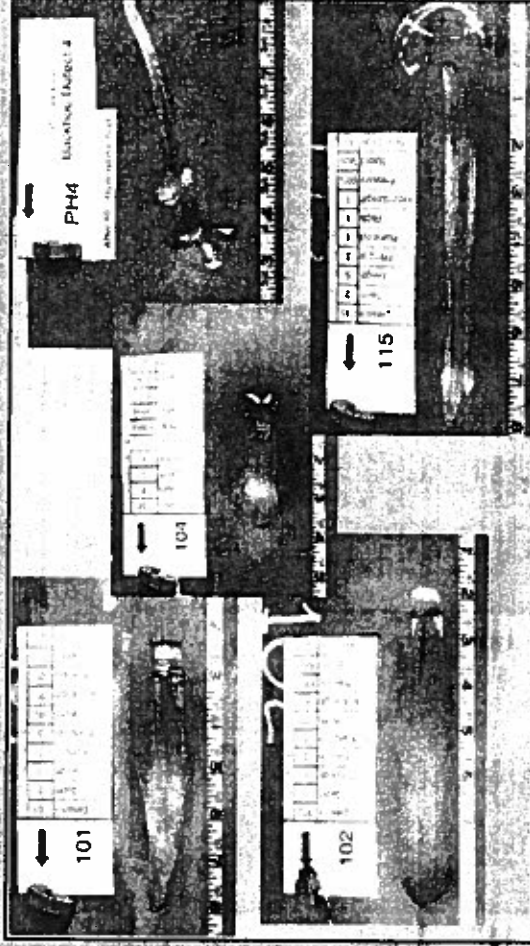
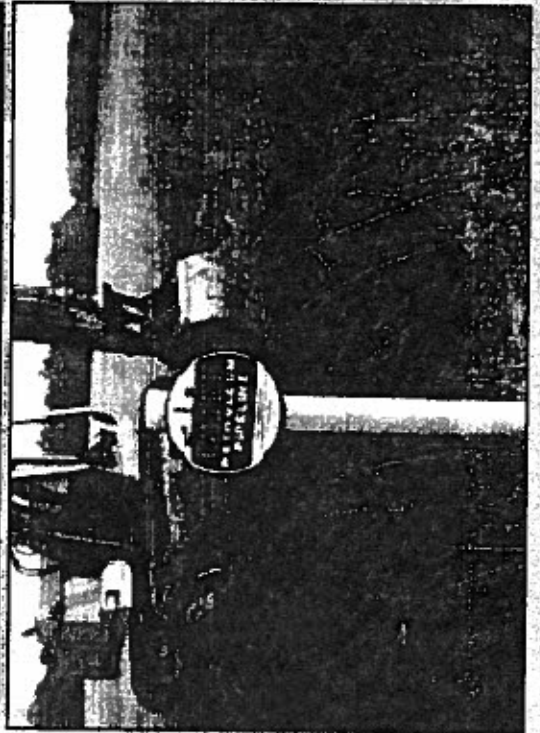
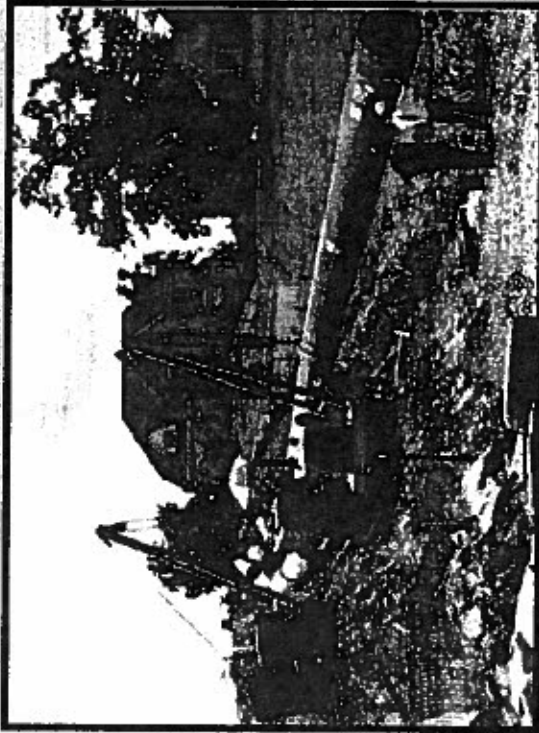


Microbial Induced Corrosion

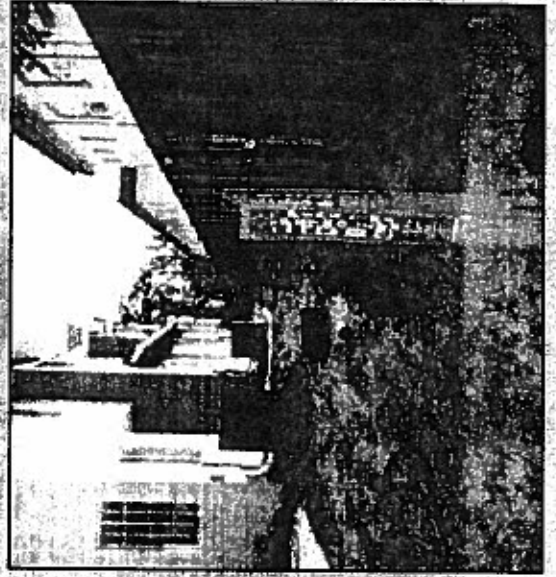


Stress Corrosion Cracking

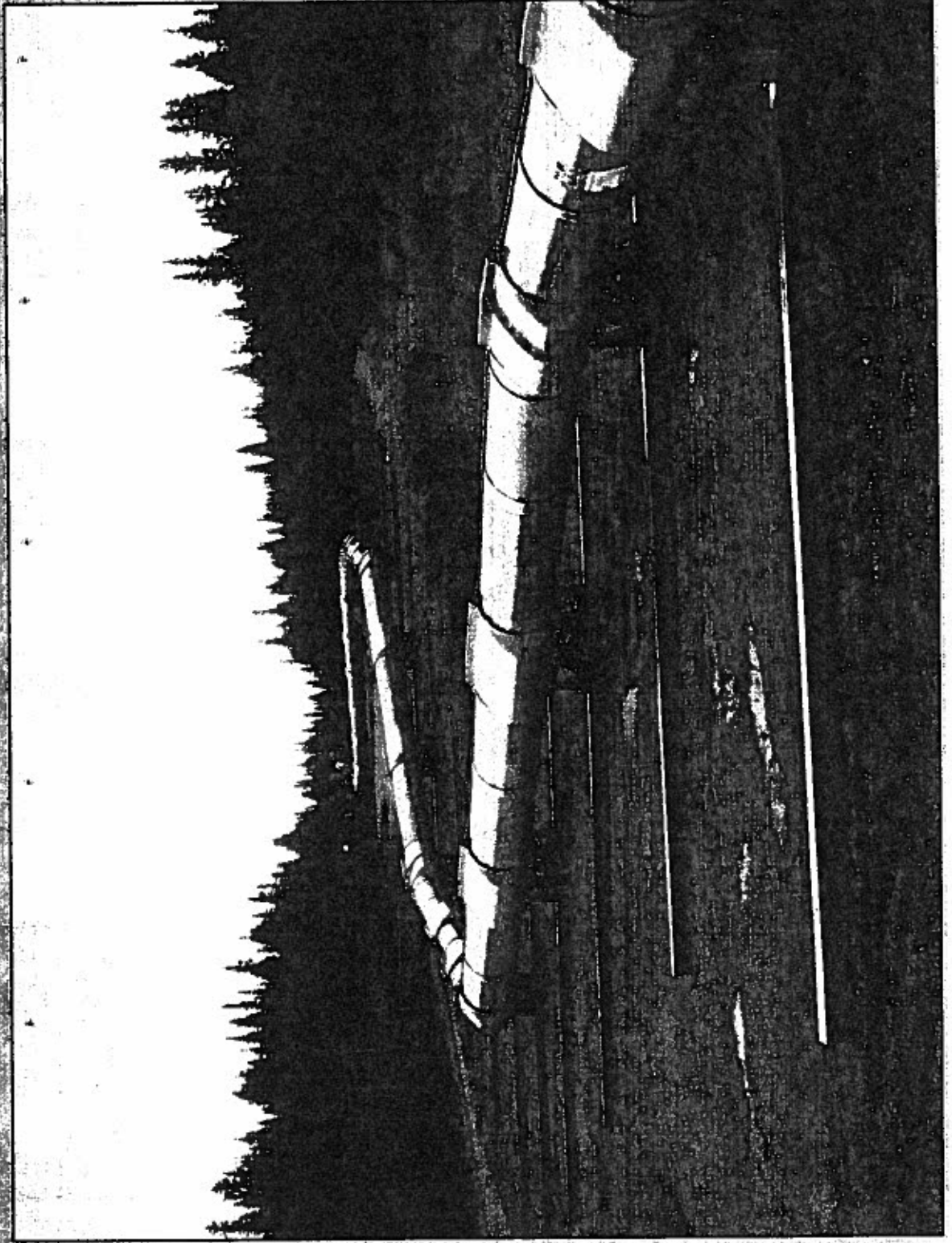
# Pipeline Challenges



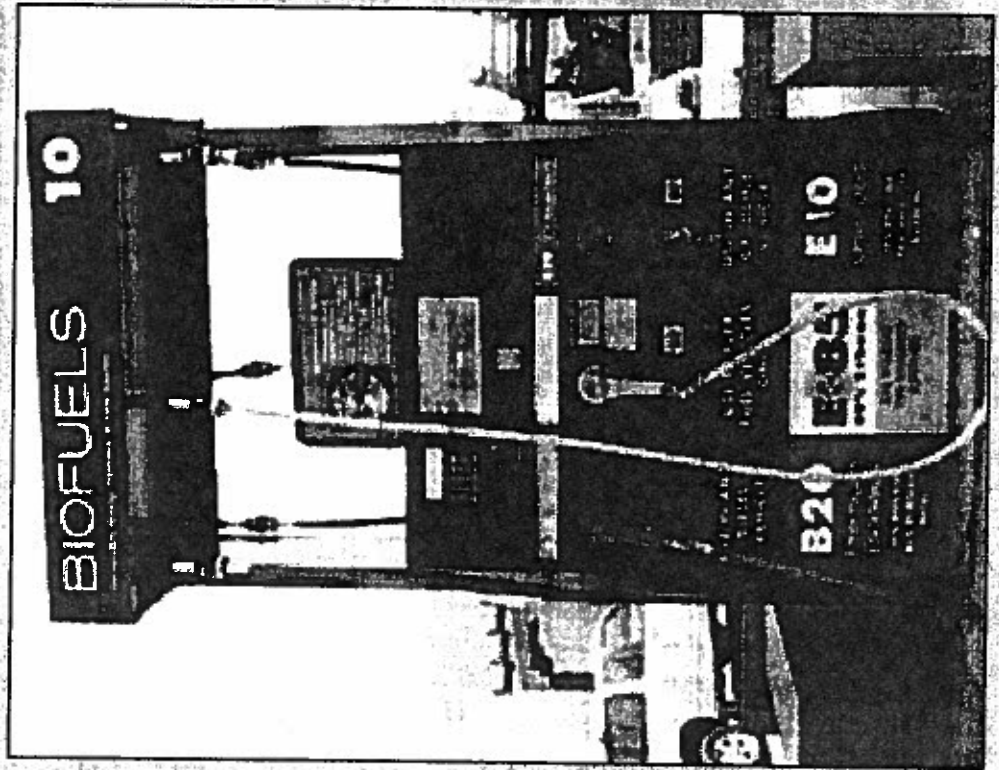
**Know what's below.  
Call before you dig.**



# Pipeline Challenges

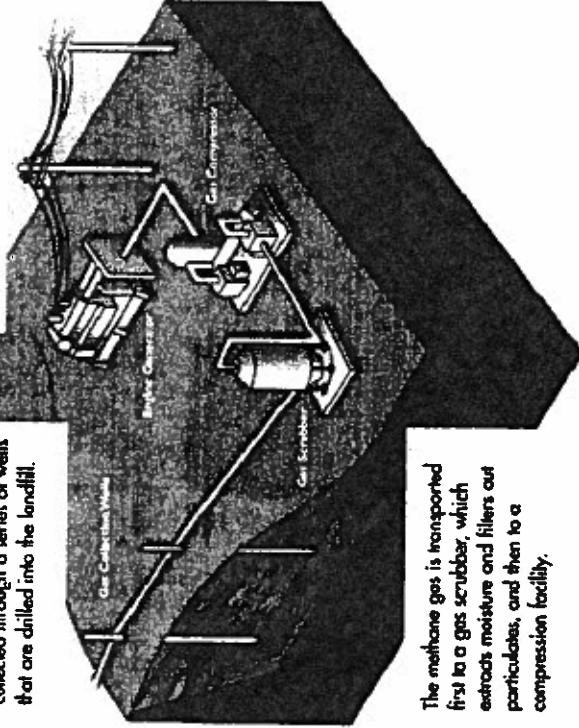


# Pipeline Challenges



Finally, the gas is used to fuel turbines or engines to produce electricity. For direct-use applications, landfill gas is delivered offsite to industrial customers and used as an alternative fuel source.

Methane gas is naturally created as garbage decomposes in a landfill. The gas is captured and collected through a series of wells that are drilled into the landfill.



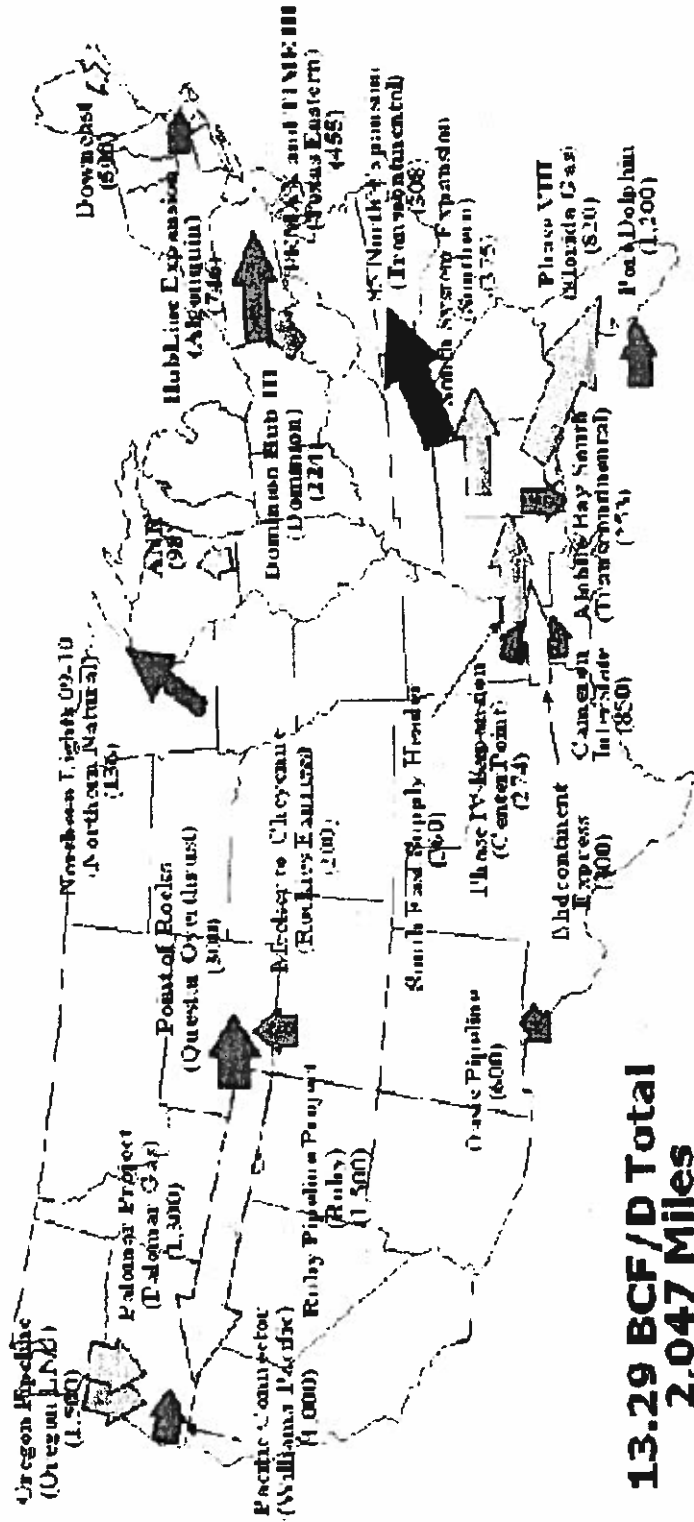
The methane gas is transported first to a gas scrubber, which extracts moisture and filters out particulates, and then to a compression facility.

**W**  
WASTE MANAGEMENT



# Pipeline Challenge 1200

## Major Pipeline Projects Pending (MMcf/d)



U.S. under a pipeline construction boom

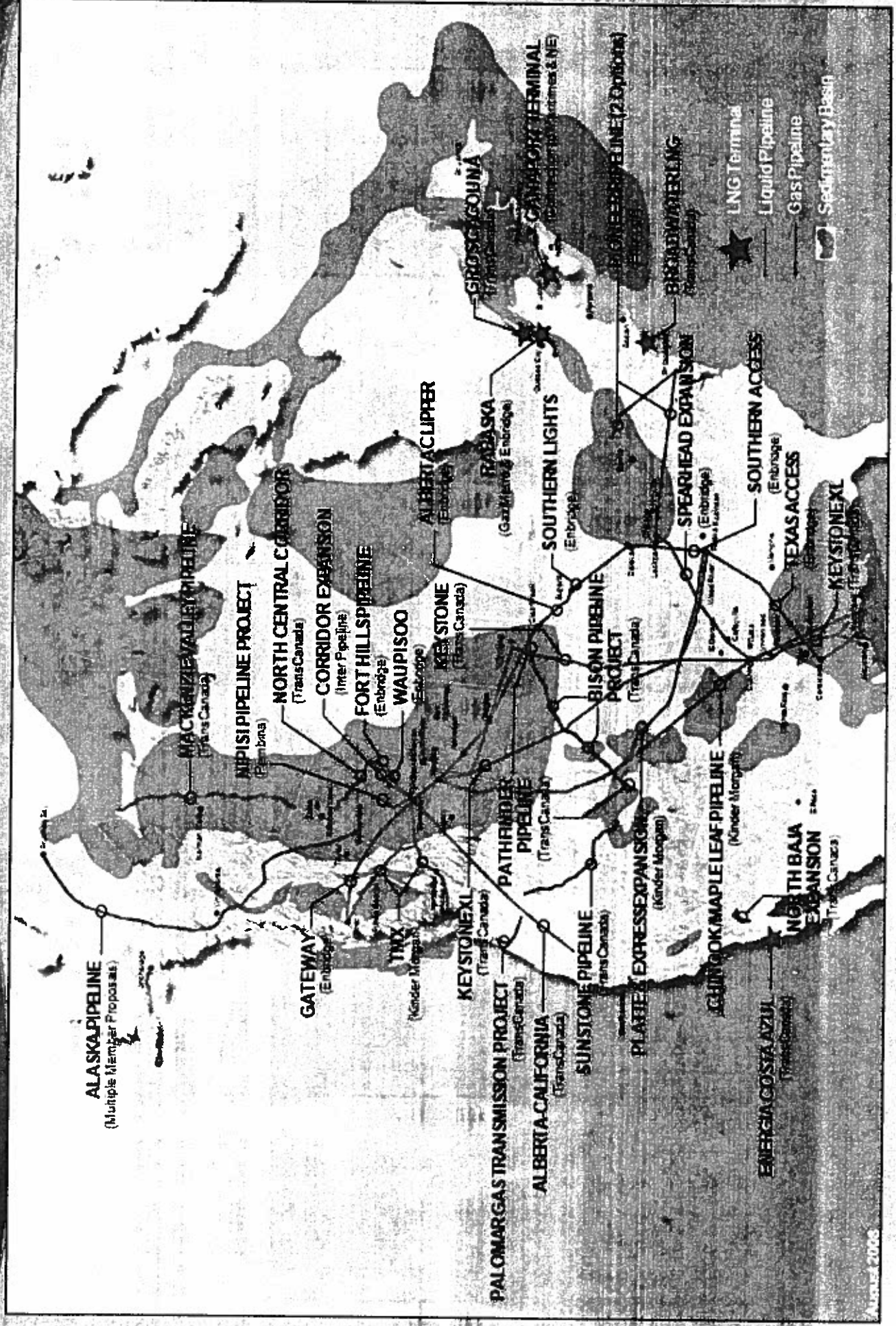
FERC approved 8,080 miles of new pipeline since 2003

Major construction for distribution systems 169k miles



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

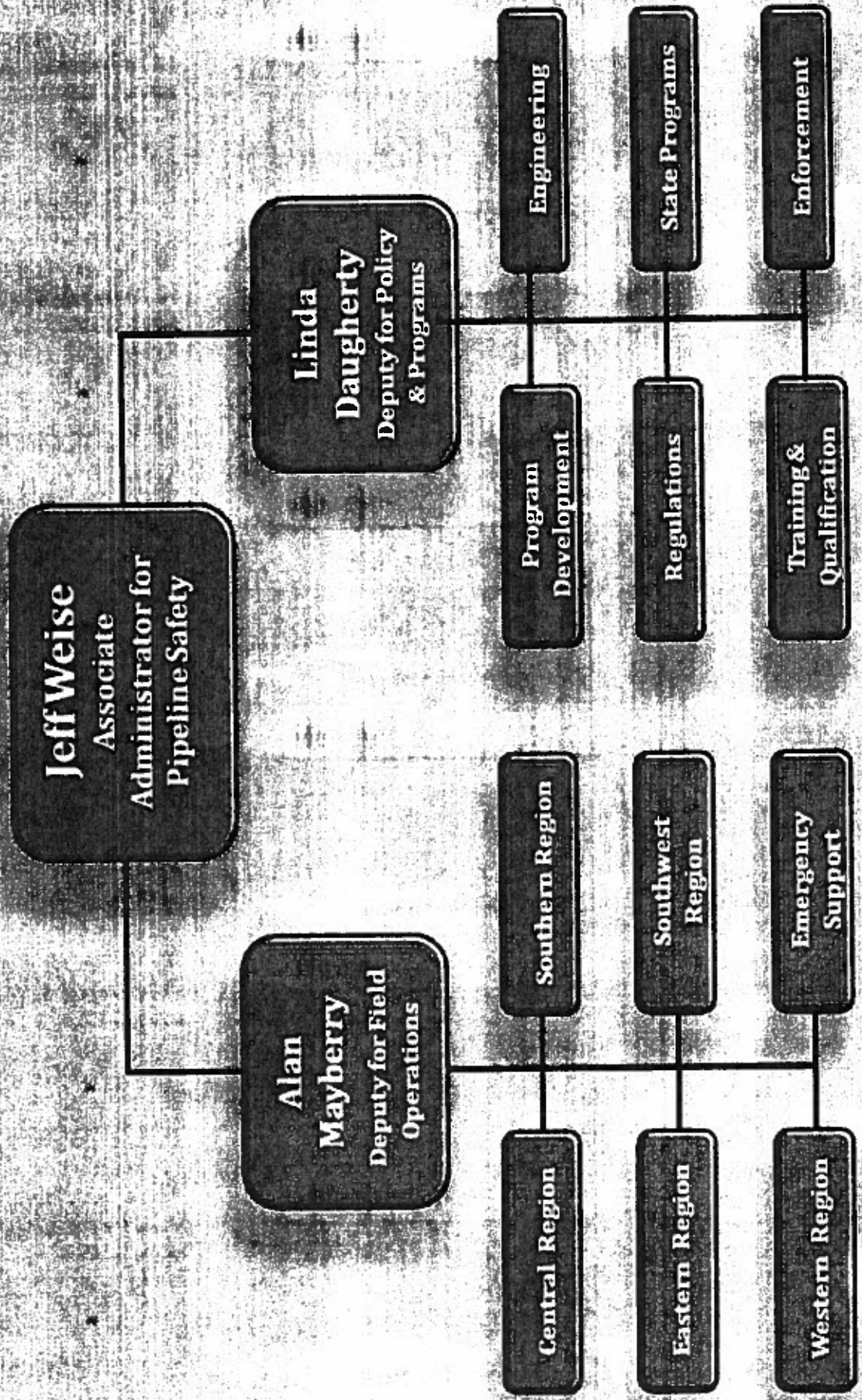
# Pipeline Challenges 1200





# Office of Pipeline Safety

2008

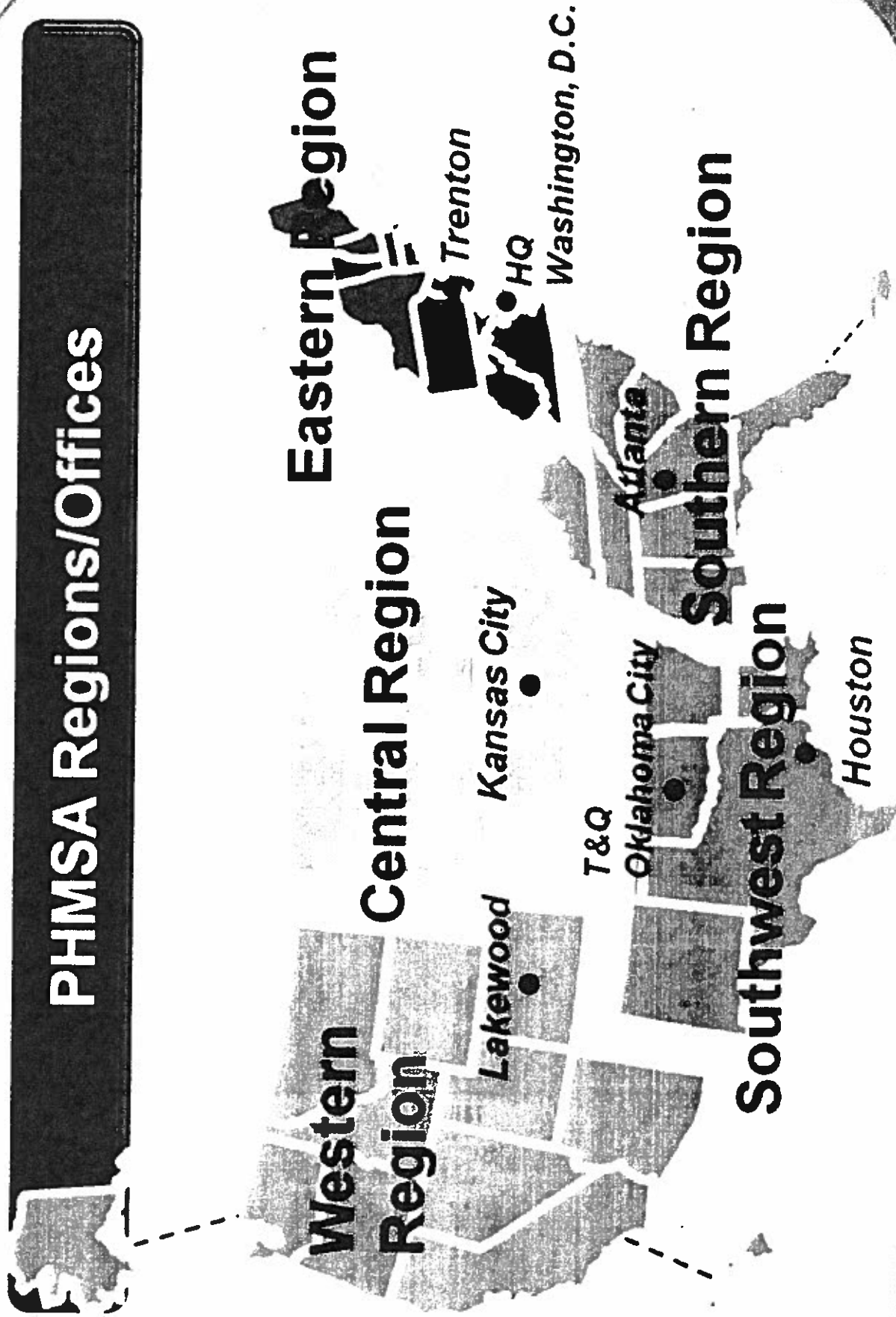




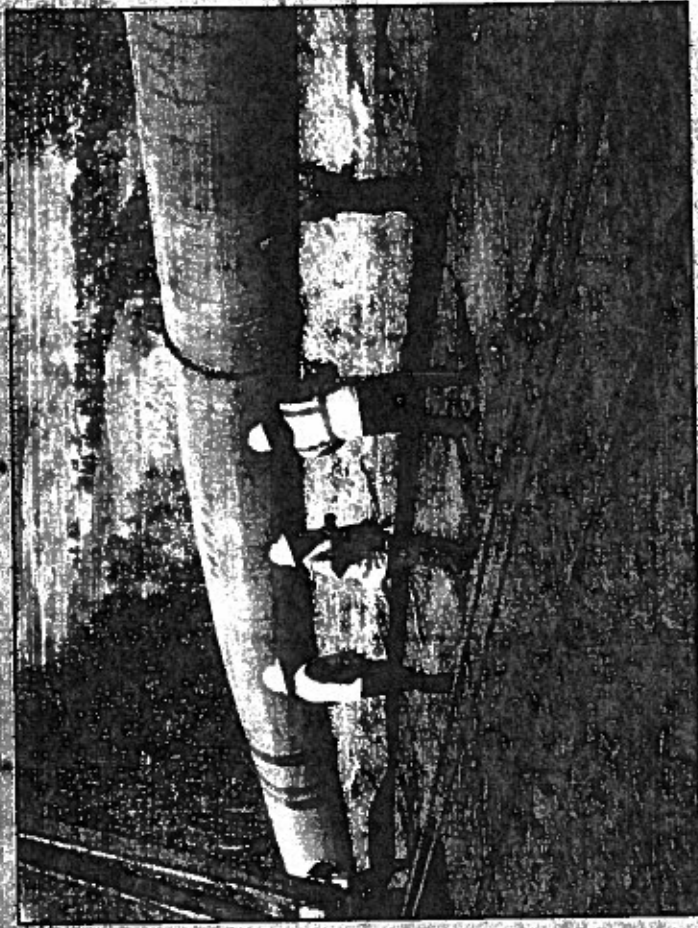
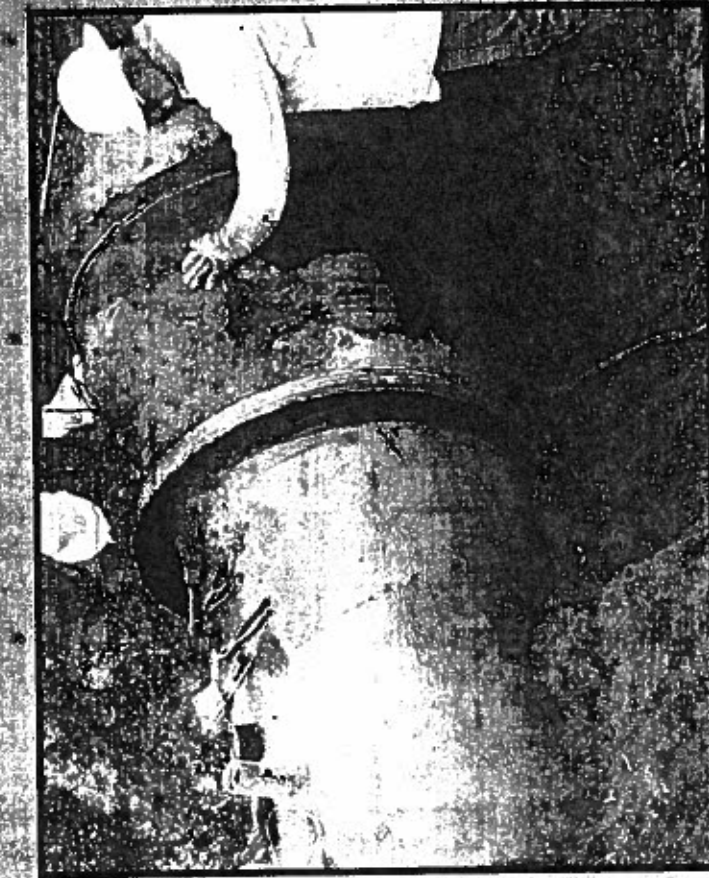


U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

# PHMSA Regions/Offices



# Pipeline Inspectors



**93 Federal PHMSA Inspectors**

**420 State Pipeline Safety Inspectors**



## Program Development

- ✓ National Pipeline Mapping System
- ✓ Damage Prevention Programs
- ✓ Public Awareness Programs
- ✓ Community Assistance Technical Services
- ✓ Data Analysis

✓ Data Analysis

Services



# State Programs

- ✓ State Grant
- ✓ One-call Grant
- ✓ Provide Orientation for New Program Managers
- ✓ Monitoring of States
- ✓ Support

✓ Subbof

✓ Monitoring of States