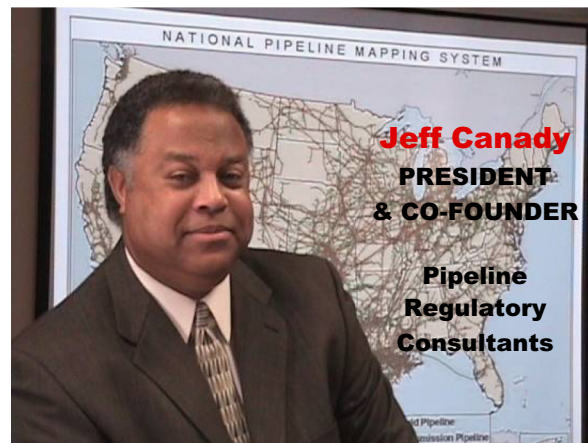
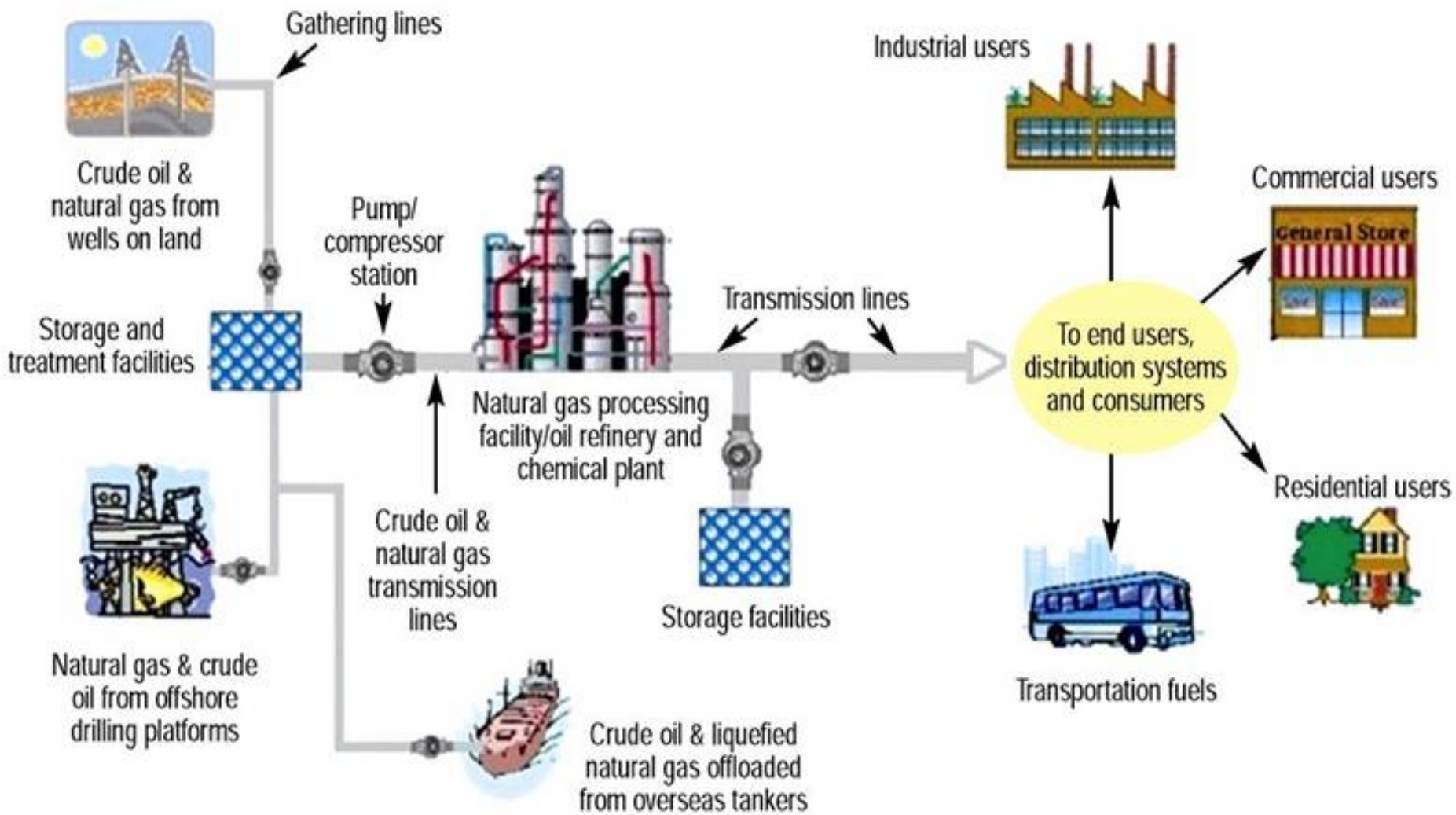




# DOT PIPELINE REGULATION OVERVIEW

GATHERING & TRANSMISSION





# AGENDA

- ❑ DOT PHMSA OVERVIEW
- ❑ GATHERING LINE DETERMINATIONS AS PER PAST PHMSA UNDERSTANDINGS (PHMSA CHARTS)
- ❑ **GATHERING SYSTEM DEFINITION AS PER API- RP 80**
- ❑ **REGULATED GATH & TRANSMISSION SYSTEM RULES AS PER PART 192 – TYPE “A” VERSES TYPE “B”**
- ❑ HOW TO DETERMINE CLASS LOCATIONS AS PER PART 192
- ❑ “PROPOSED MEGA RULE”
- ❑ CODE REQUIREMENTS AS PER PART 192 OR 195



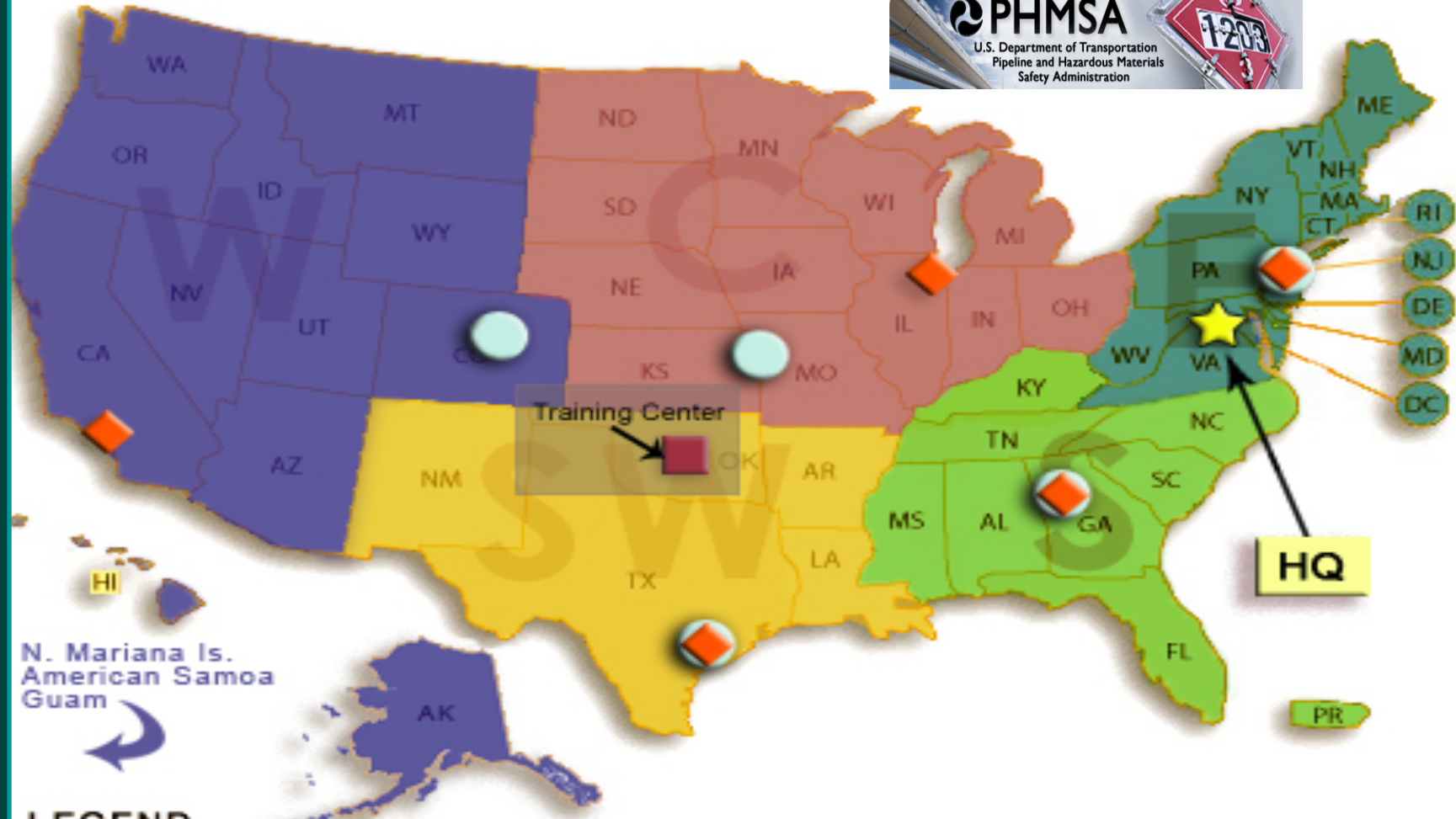
U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration



# Who is PHMSA?

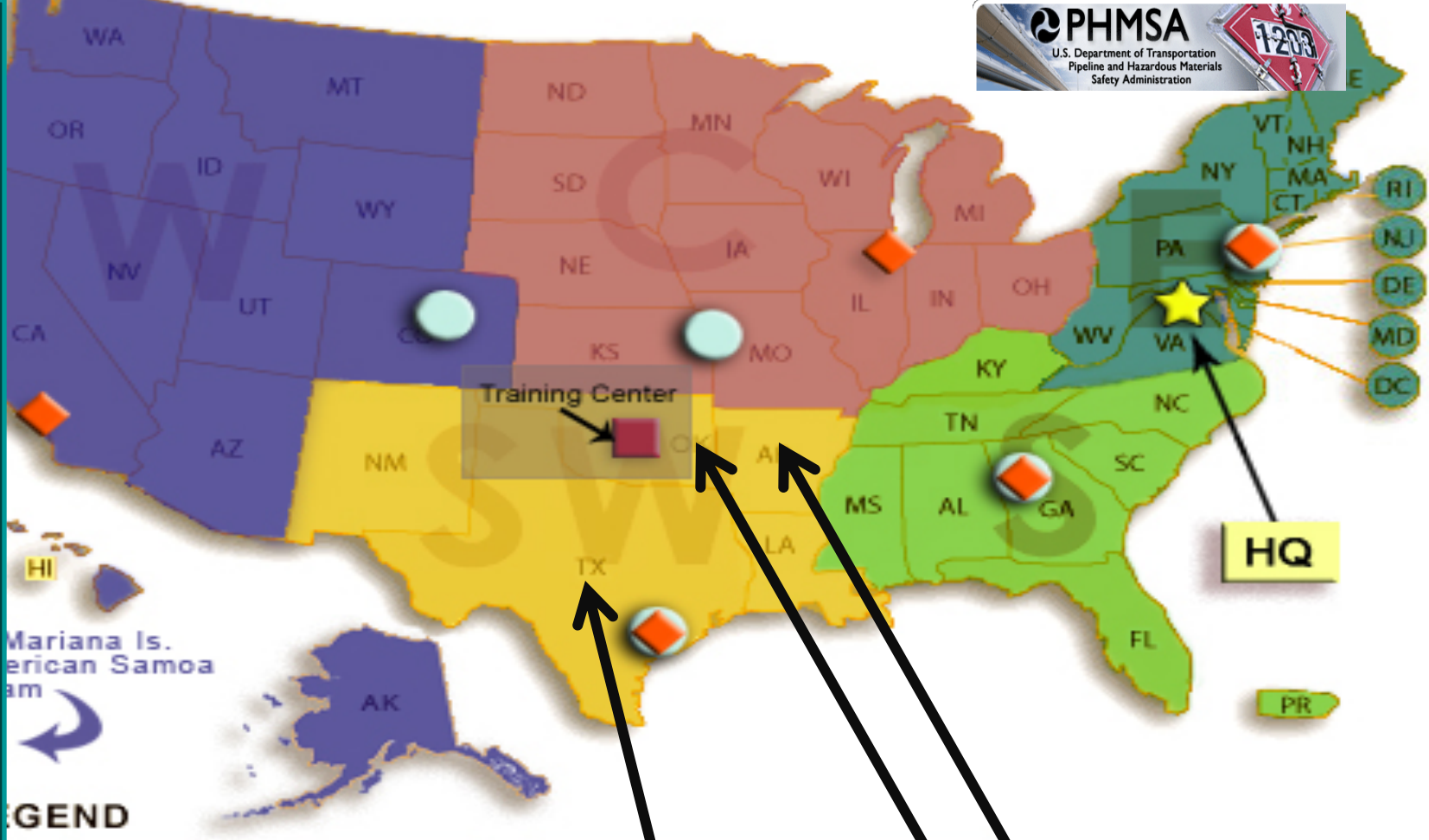


PHMSA is a U.S. Department of Transportation agency that develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's pipeline transportation system and the nearly 1 million daily shipments of hazardous materials by land, sea, and air. PHMSA comprises two safety offices, the Office of Pipeline Safety and the Office of Hazardous Materials Safety.



**LEGEND**

<b>C</b>	Central Region		Hazmat Offices
<b>E</b>	Eastern Region		Pipeline Offices
<b>S</b>	Southern Region		Headquarters
<b>SW</b>	Southwest Region		Training Center
<b>W</b>	Western Region		



**LEGEND**

Central Region	
Eastern Region	
Southern Region	
Southwest Region	
Western Region	

Within each of the PHMSA Regions, you also have State Programs, that act as agents of PHMSA and some states also enforce State specific rules

# PART 192

DEPARTMENT OF TRANSPORTATION  
Pipeline and Hazardous Materials Safety Administration  
OFFICE OF PIPELINE SAFETY



## PIPELINE SAFETY REGULATIONS

### PART 191

ANNUAL REPORTS, INCIDENT REPORTS AND  
SAFETY-RELATED CONDITION REPORTS  
(Current through Amendment 22, as of February 2011)

### PART 192

TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE:  
MINIMUM FEDERAL SAFETY STANDARDS  
(Current through Amendment 117, as of June 2011)

PIPELINE SAFETY DIVISION (PHP-70)  
PO BOX 25082  
OKLAHOMA CITY, OK 73125-5050

(405) 954-7219

Fax (405) 954-0206

Published November 2012

# PART 195

DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
OFFICE OF PIPELINE SAFETY



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

## PIPELINE SAFETY REGULATIONS

### PART 195

TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE  
MINIMUM FEDERAL SAFETY STANDARDS

(Current through Amendment 97)

TRAINING AND QUALIFICATIONS  
PIPELINE SAFETY DIVISION (PHP-70)  
PO BOX 25082  
OKLAHOMA CITY, OK 73125-5050

(405) 954-7219

Fax (405) 954-0206

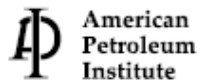
July 2011

# API – RP 80

## Guidelines for the Definition of Onshore Gas Gathering Lines

API RECOMMENDED PRACTICE 80  
FIRST EDITION, APRIL 2000

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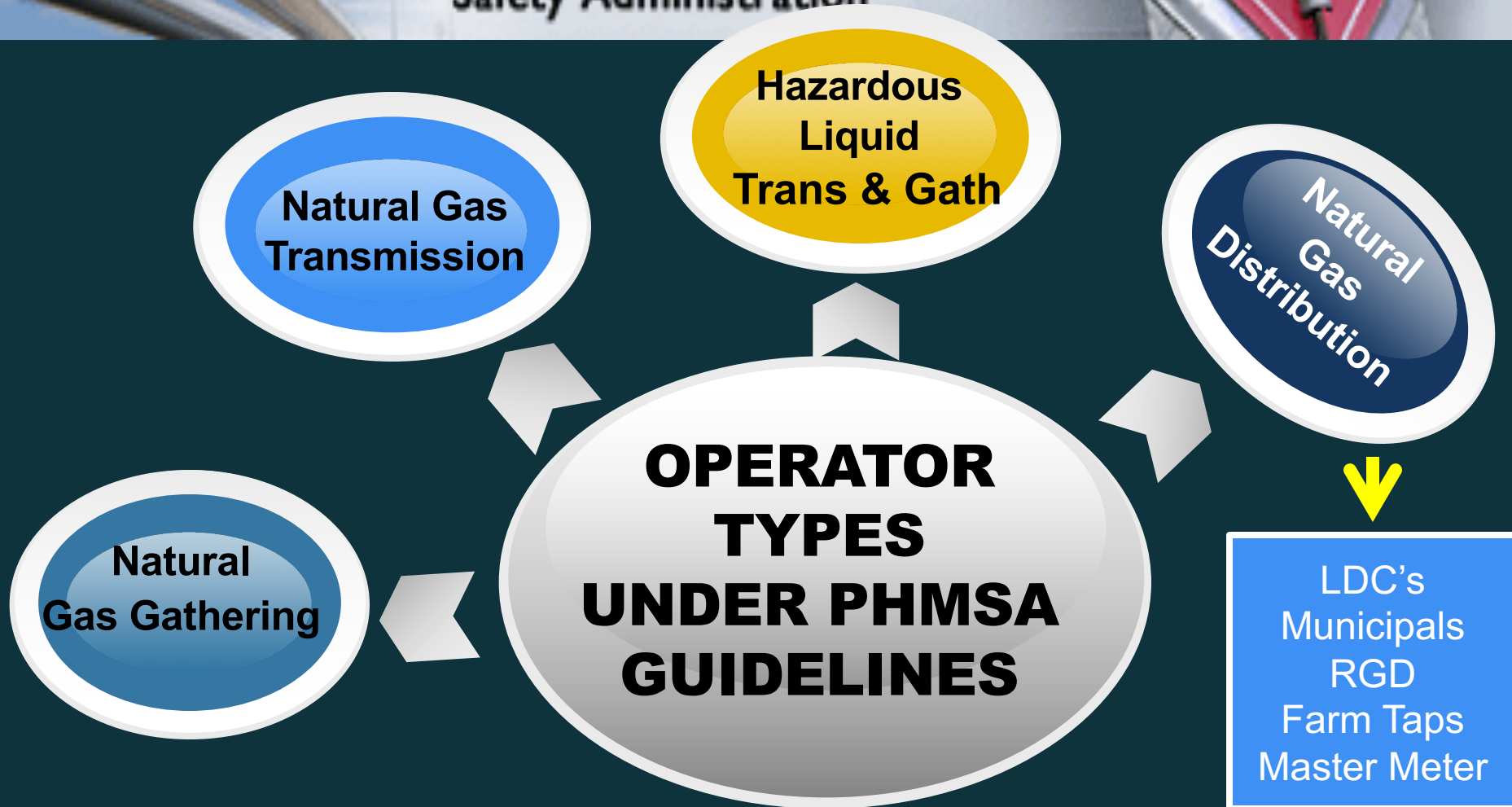


**Helping You  
Get The Job  
Done Right.™**

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No further reproduction or networking is permitted. Distributed by Thomson Reuters (Information) LLC, www.secdatabase.com.

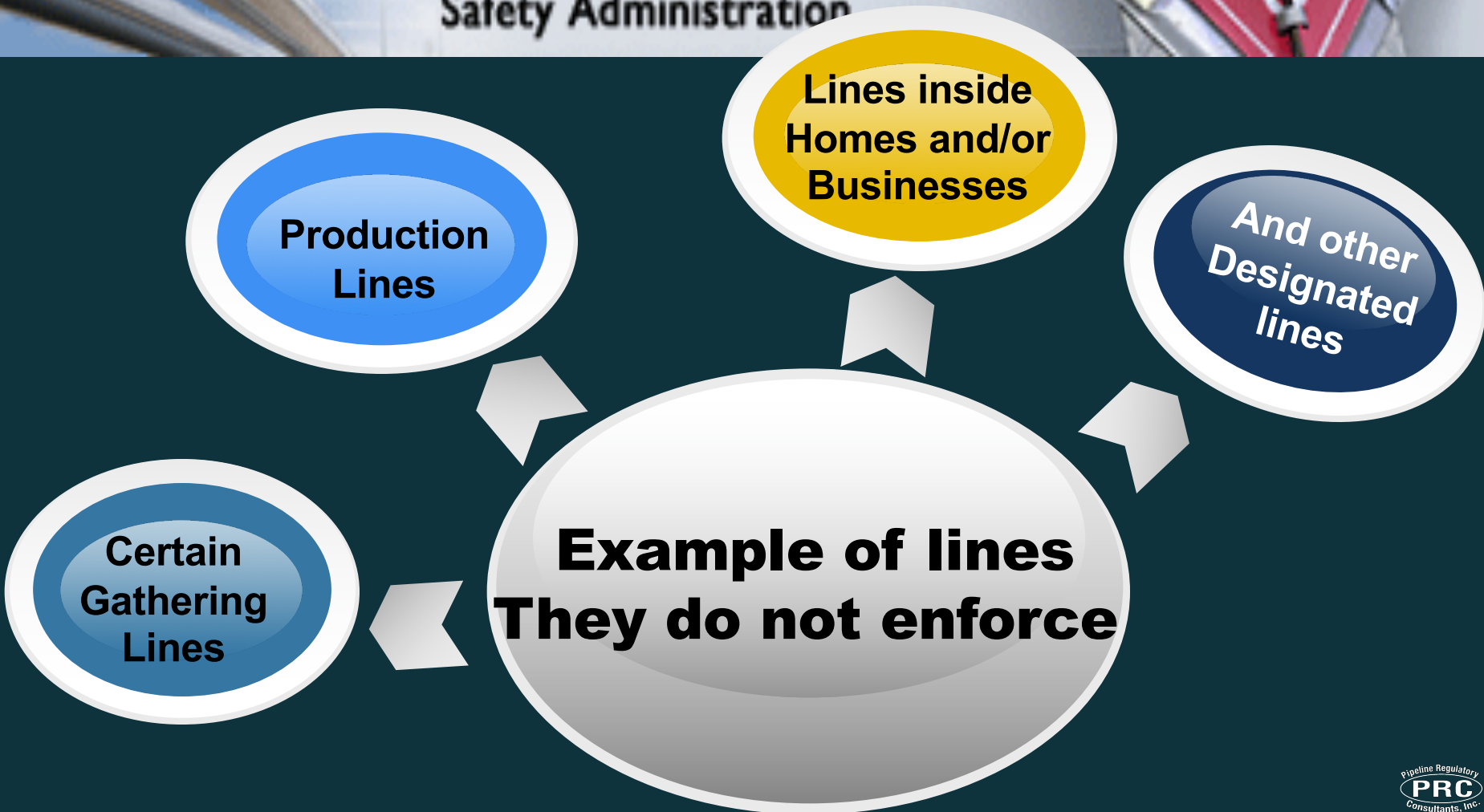


U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration



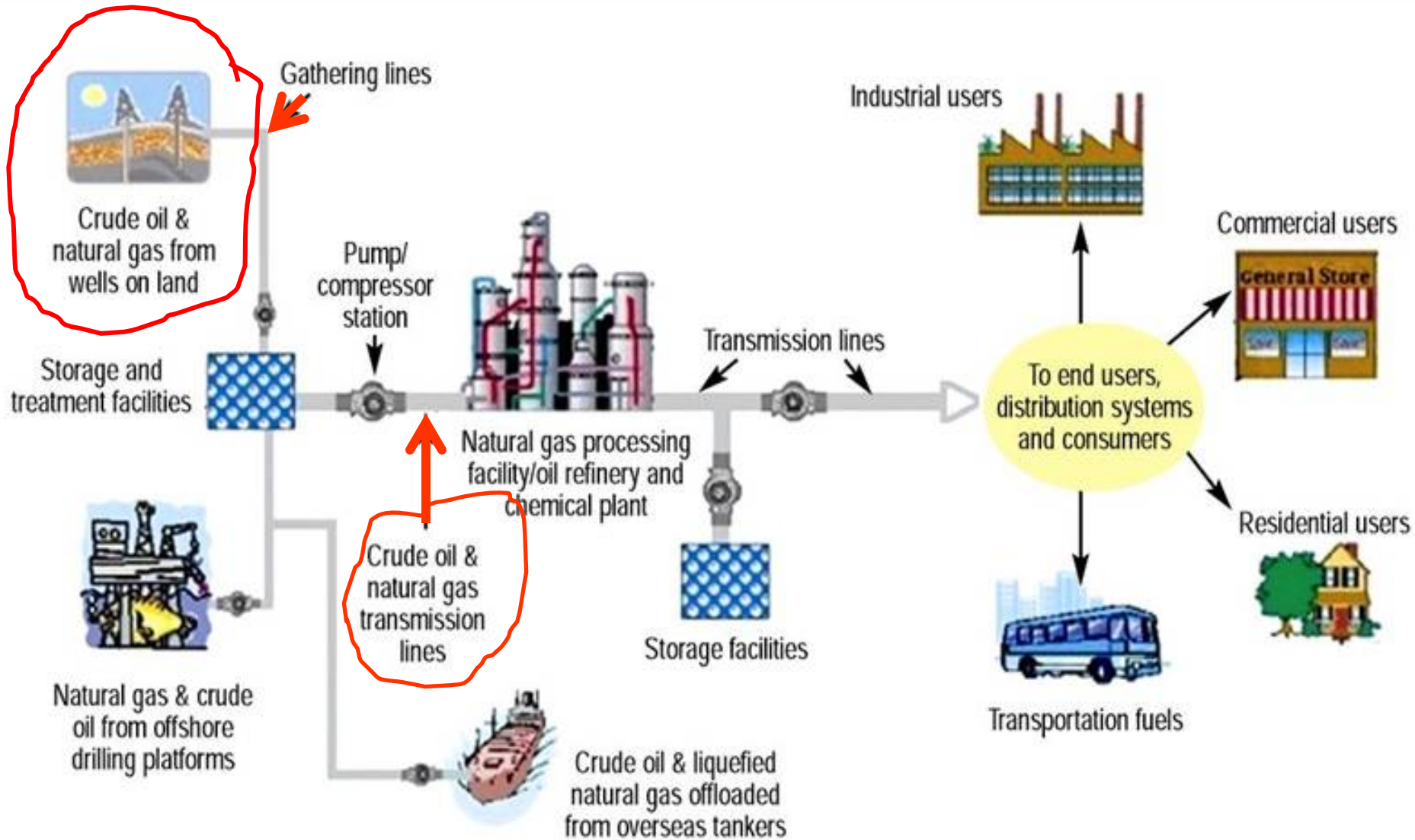


U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration





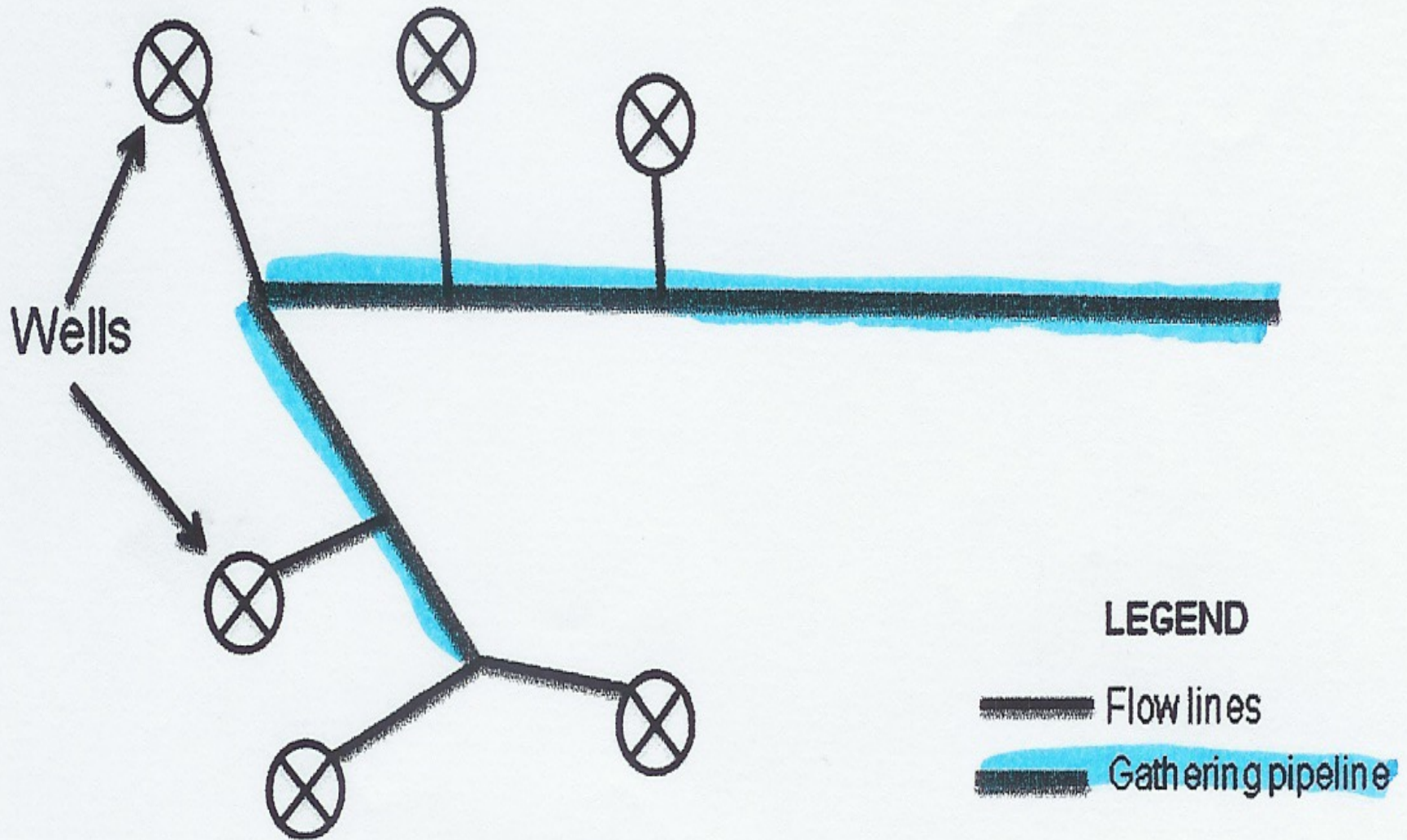
- GATHERING LINE DETERMINATIONS AS PER PAST PHMSA UNDERSTANDINGS (PHMSA CHARTS)**
- GATHERING SYSTEM DEFINITION AS PER API- RP 80**



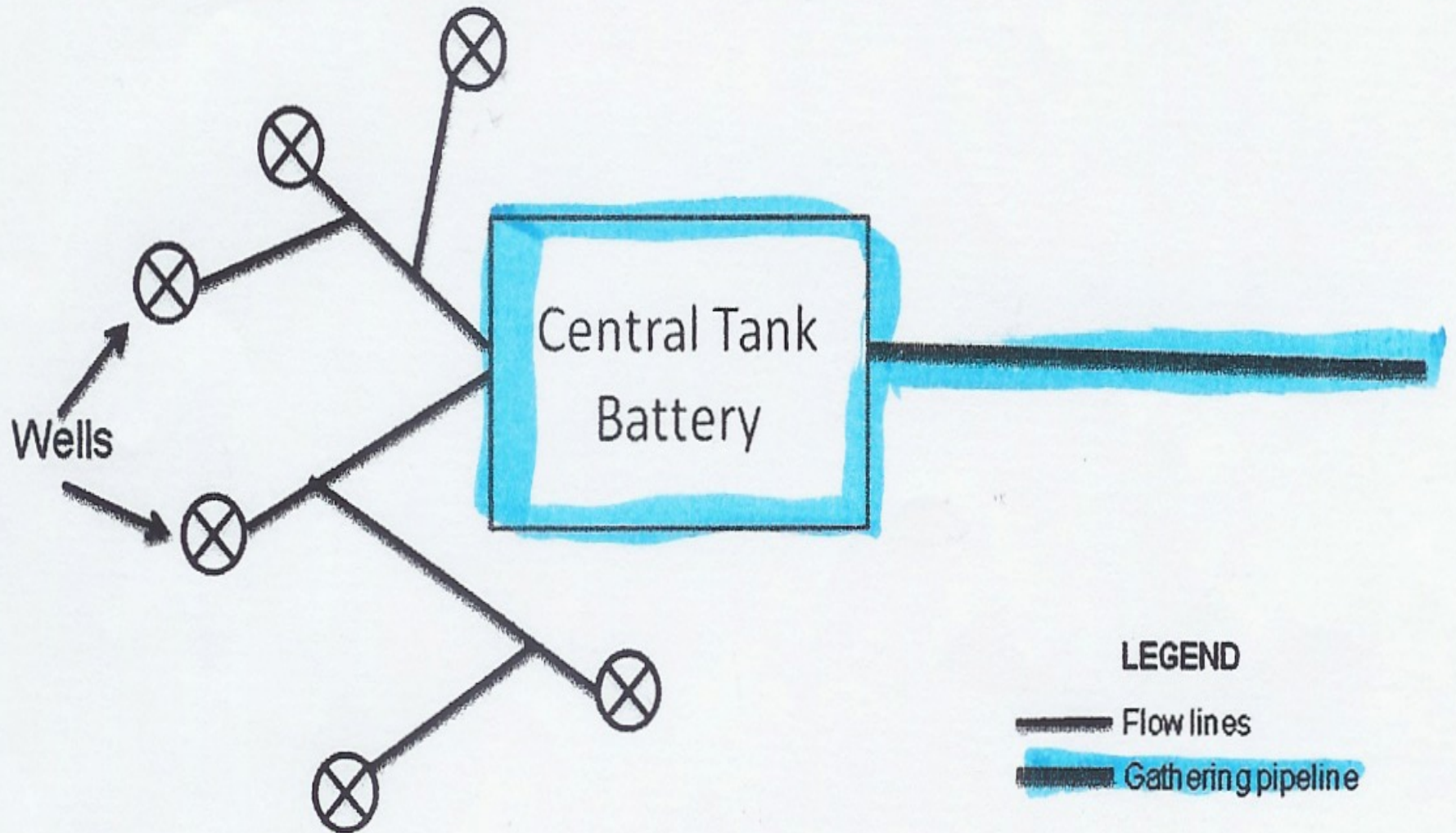


# PHMSA GUIDELINE CHARTS

Wells have separation, heater treaters and stock tanks.



Wells all flow to central tank battery (no equipment for separation on location). Tank battery has separation, heater treaters and stock tanks.



## Guidelines for the Definition of Onshore Gas Gathering Lines

API RECOMMENDED PRACTICE 80  
FIRST EDITION, APRIL 2000

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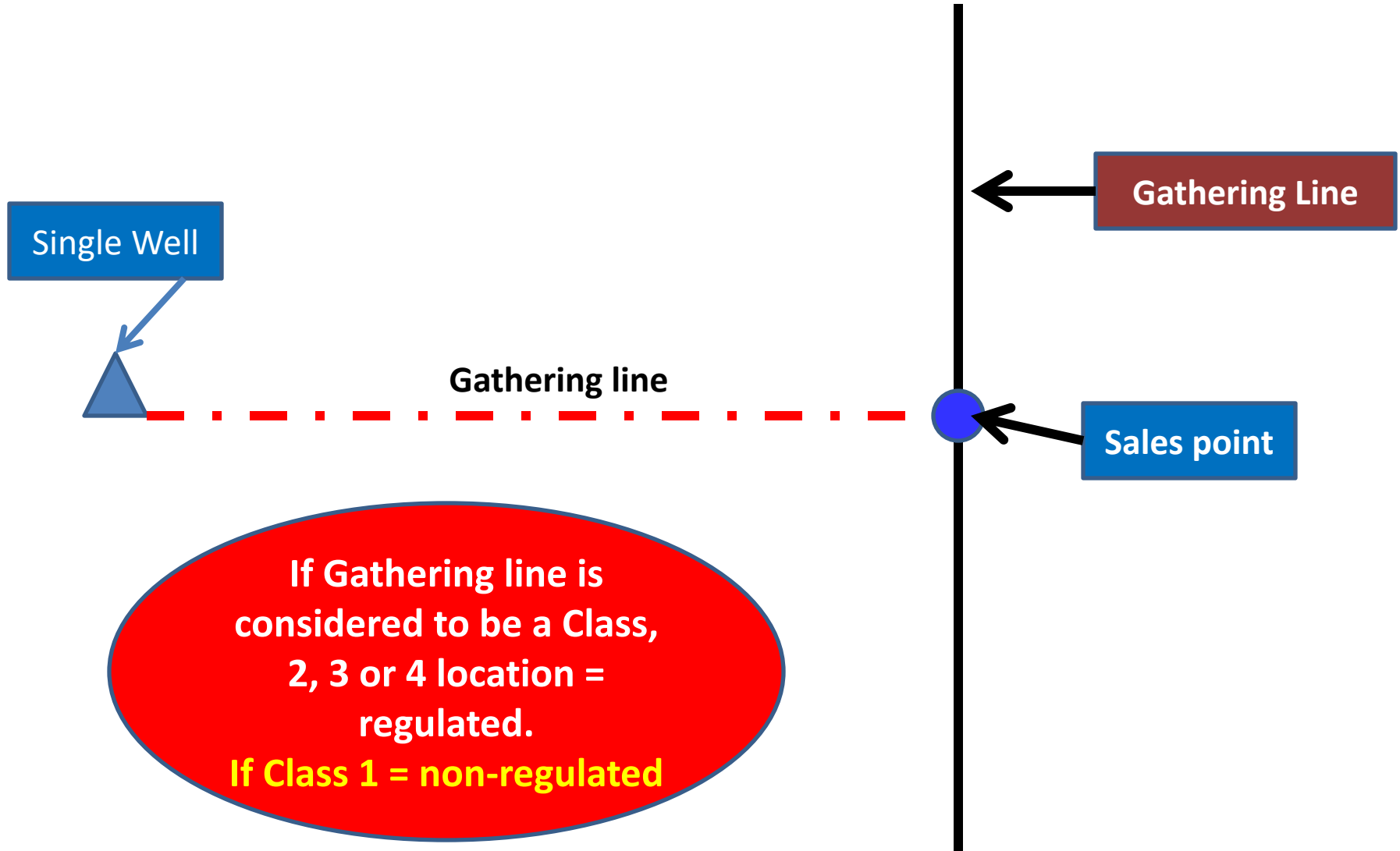
**Helping You  
Get The Job  
Done Right.™**



(a) means any pipeline or part of a connected series of pipelines used to (1) transport gas from the furthermost downstream point in a production operation to the furthermost downstream of the following endpoints, which physically may have intermediate deliveries (to other production operations, pipeline facilities, farm taps, or residential/commercial/industrial end users) that are not necessarily part of the gathering line:

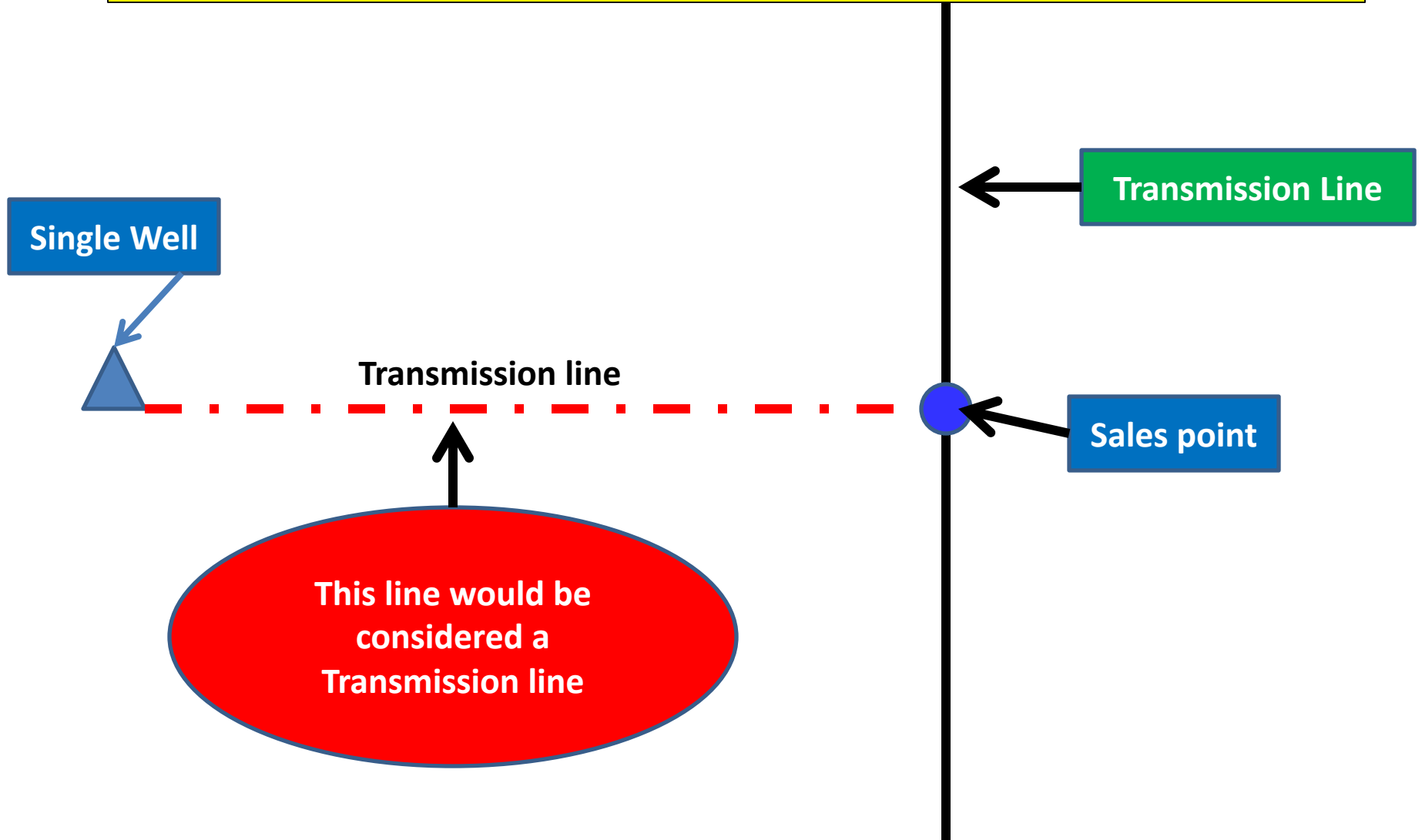
# Jurisdictional Determinations

API = RP 80

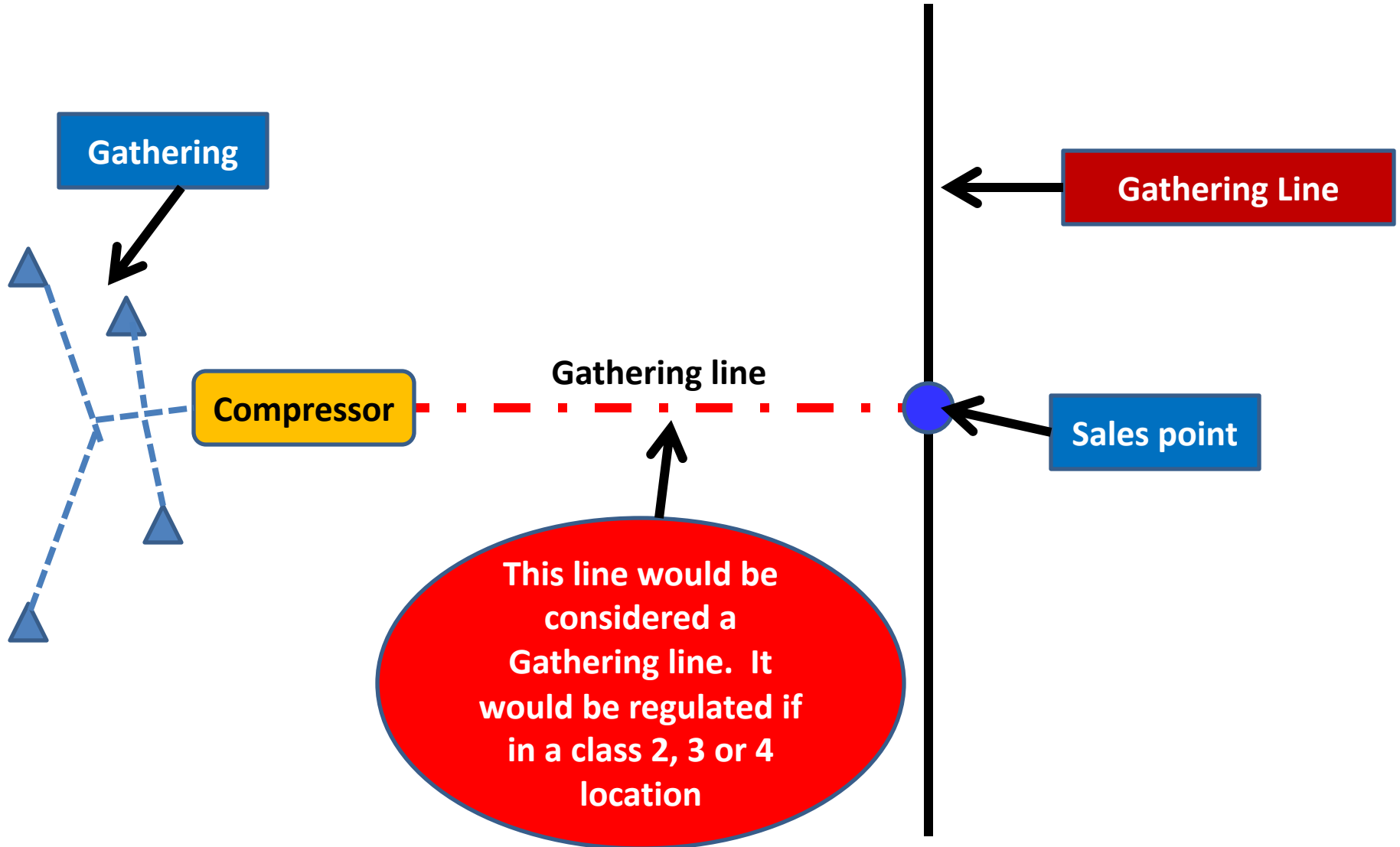


# Jurisdictional Determinations

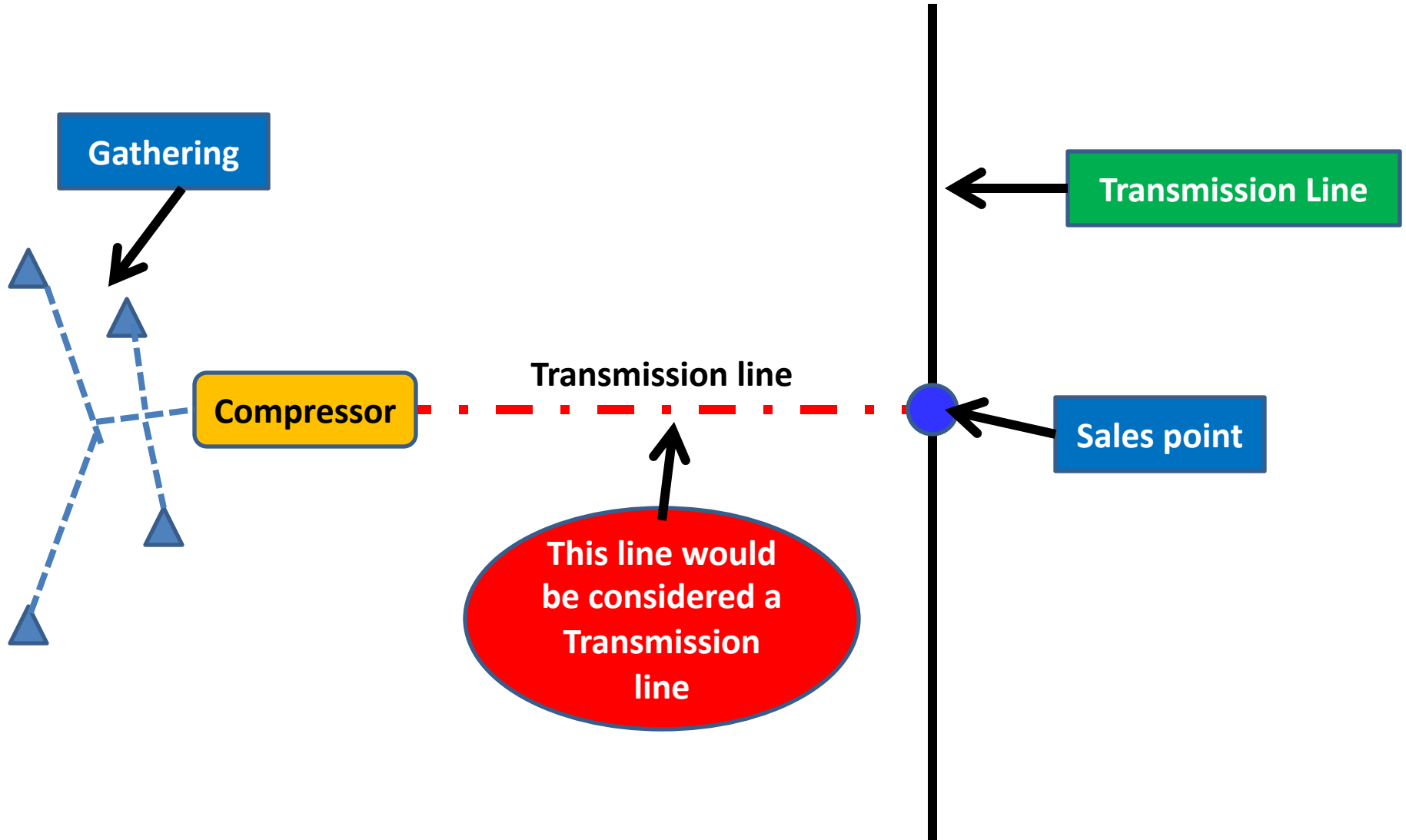
API = RP 80



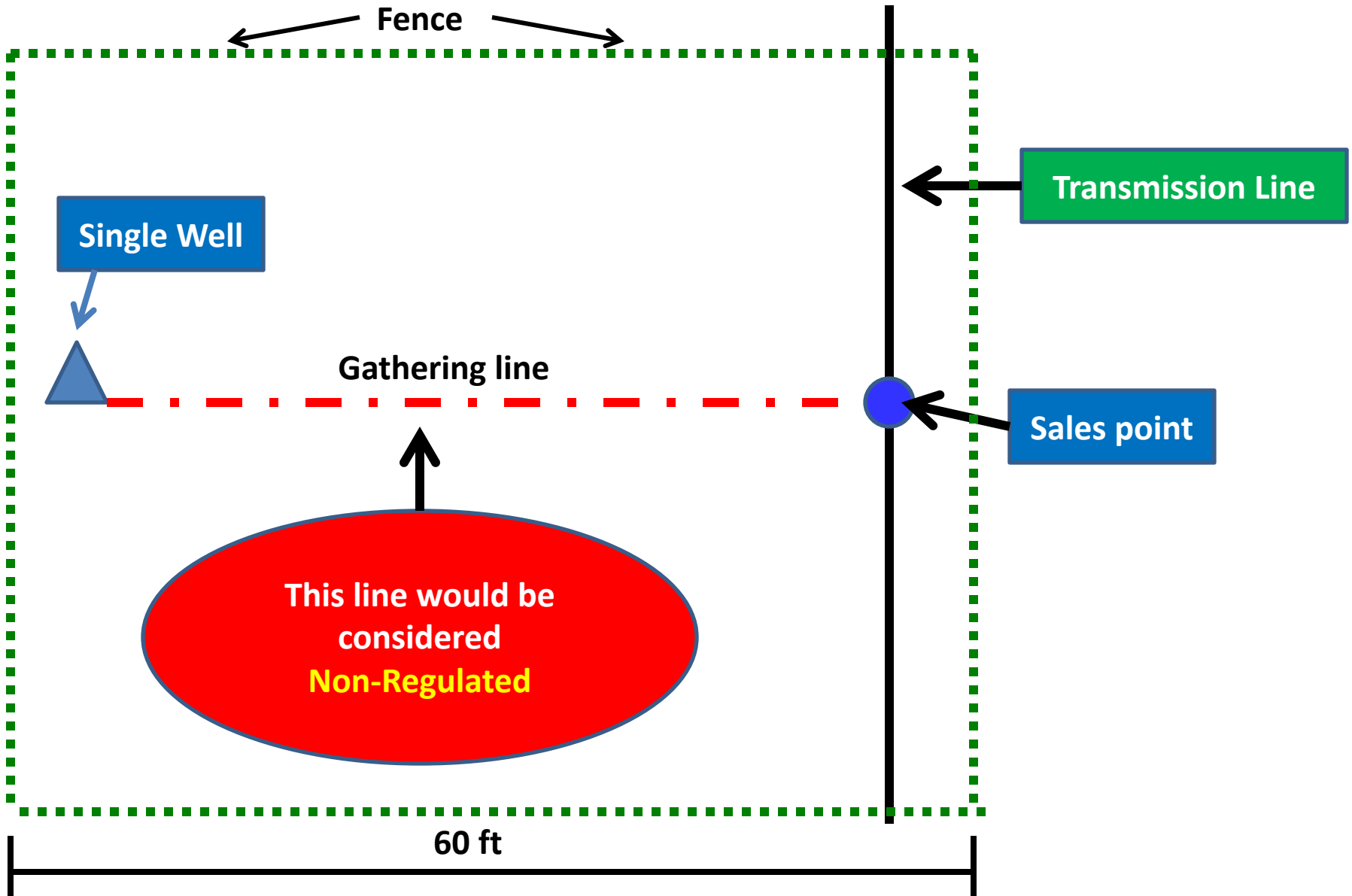
# Jurisdictional Determinations



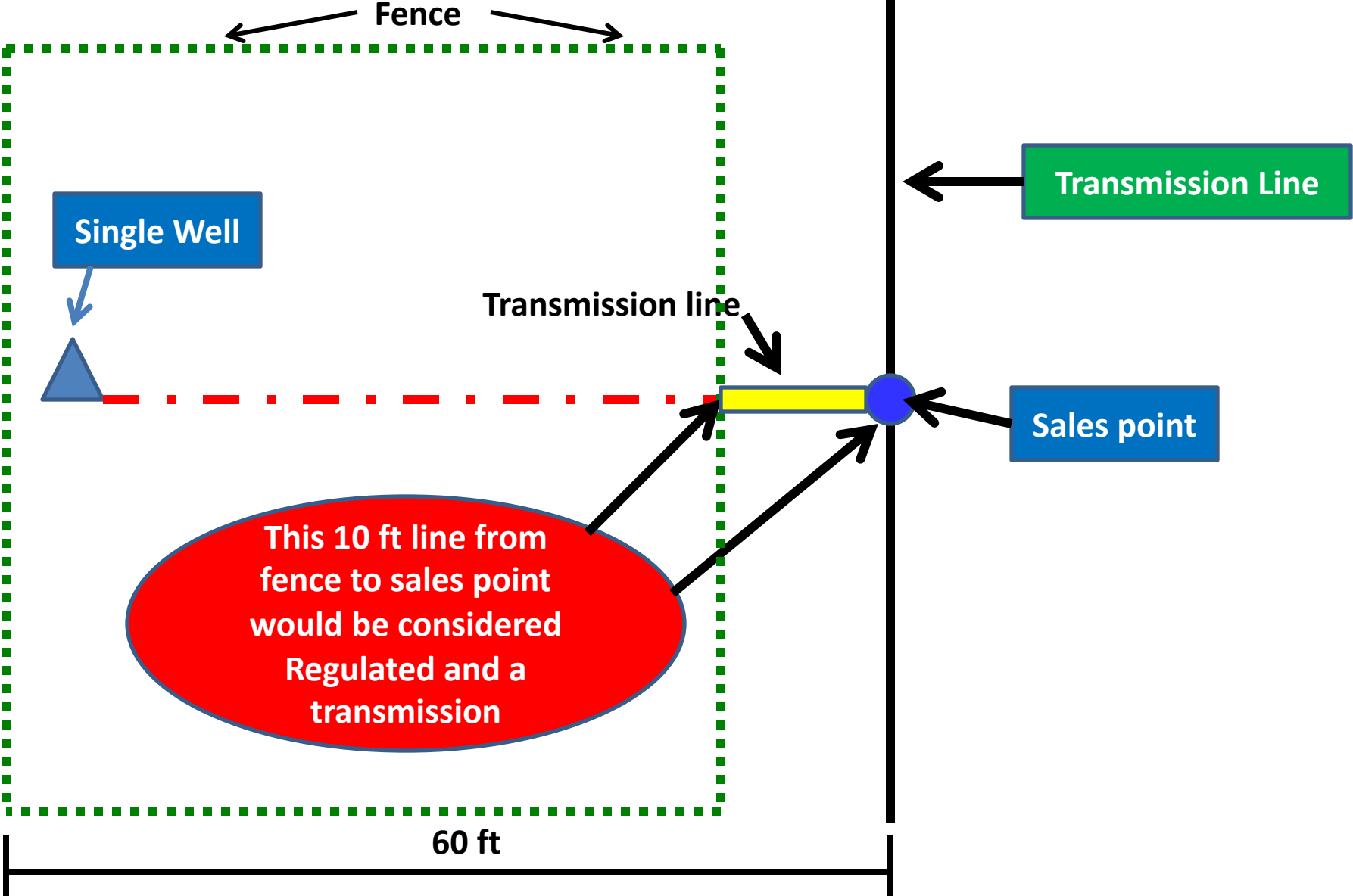
# Jurisdictional Determinations





# Jurisdictional Determinations



# Jurisdictional Determinations



Type	Feature	Area	Safety buffer
<p>A</p> 	<p>—Metallic and the MAOP produces a hoop stress of 20 percent or more of SMYS. If the stress level is unknown, an operator must determine the stress level according to the applicable provisions in subpart C of this part.</p> <p>—Non-metallic and the MAOP is more than 125 psig (862 kPa).</p>	<p>Class 2, 3, or 4 location (see § 192.5).</p>	<p>None.</p>
<p>B</p> 	<p>—Metallic and the MAOP produces a hoop stress of less than 20 percent of SMYS. If the stress level is unknown, an operator must determine the stress level according to the applicable provisions in subpart C of this part.</p> <p>—Non-metallic and the MAOP is 125 psig (862 kPa) or less.</p>	<p><i>Area 1.</i> Class 3 or 4 location.</p> <p><i>Area 2.</i> An area within a Class 2 location the operator determines by using any of the following three methods:</p> <p>(a) A Class 2 location.</p> <p>(b) An area extending 150 feet (45.7 m) on each side of the centerline of any continuous 1 mile (1.6 km) of pipeline and including more than 10 but fewer than 46 dwellings.</p> <p>(c) An area extending 150 feet (45.7 m) on each side of the centerline of any continuous 1000 feet (305 m) of pipeline and including 5 or more dwellings.</p>	<p>If the gathering line is in Area 2(b) or 2(c), the additional lengths of line extend upstream and downstream from the area to a point where the line is at least 150 feet (45.7 m) from the nearest dwelling in the area. However, if a cluster of dwellings in Area 2 (b) or 2(c) qualifies a line as Type B, the Type B classification ends 150 feet (45.7 m) from the nearest dwelling in the cluster.</p>

**You must treat as if it was a transmission line.**

- TYPE "B" REQUIREMENTS**
1. Must have CP according to subpart I.
  2. Damage Prev Program
  3. MAOP
  4. Install & Maintain Markers
  5. Public Awareness Program
  6. Conduct Leakage survey in Class 3 areas

## TYPE "A"

**MAOP produces a hoop stress of 20% or more of SMYS**

- $2 \times 42,000 = (\text{pipe grade}) \times .188 = (\text{wall thickness}) \text{ div by } 6.625 = (\text{pipe O.D. size}) = 2383$  which = **100% SMYS**

$2383 \times 20\% = 20\% \text{ of SMYS or } 477 \text{ psi}$

MAOP = 480 psi      More than 20% of SMYS) =

**Type "A"**

If MAOP would have been 475 = **Type "B"**



# **“NEW PROPOSED MEGA RULE”**



- Primarily be based on pipe size  
As per OCC, Feds wanted 8" Industry wanted 16". Trying to meet in middle.
- Note sure whether Class locations will still apply
- Note sure what inspections will be required

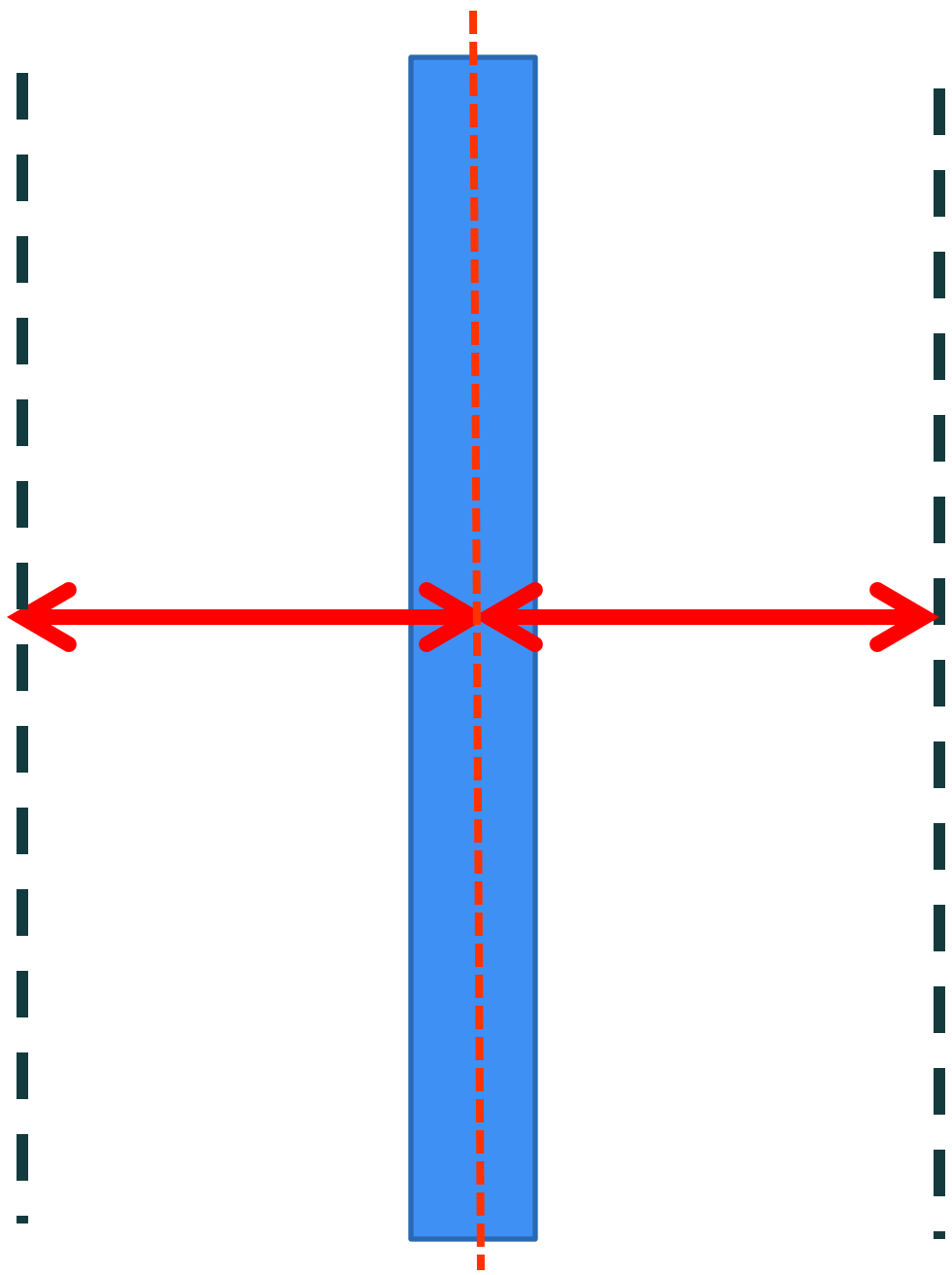




## **Class Location Definition §192.5**

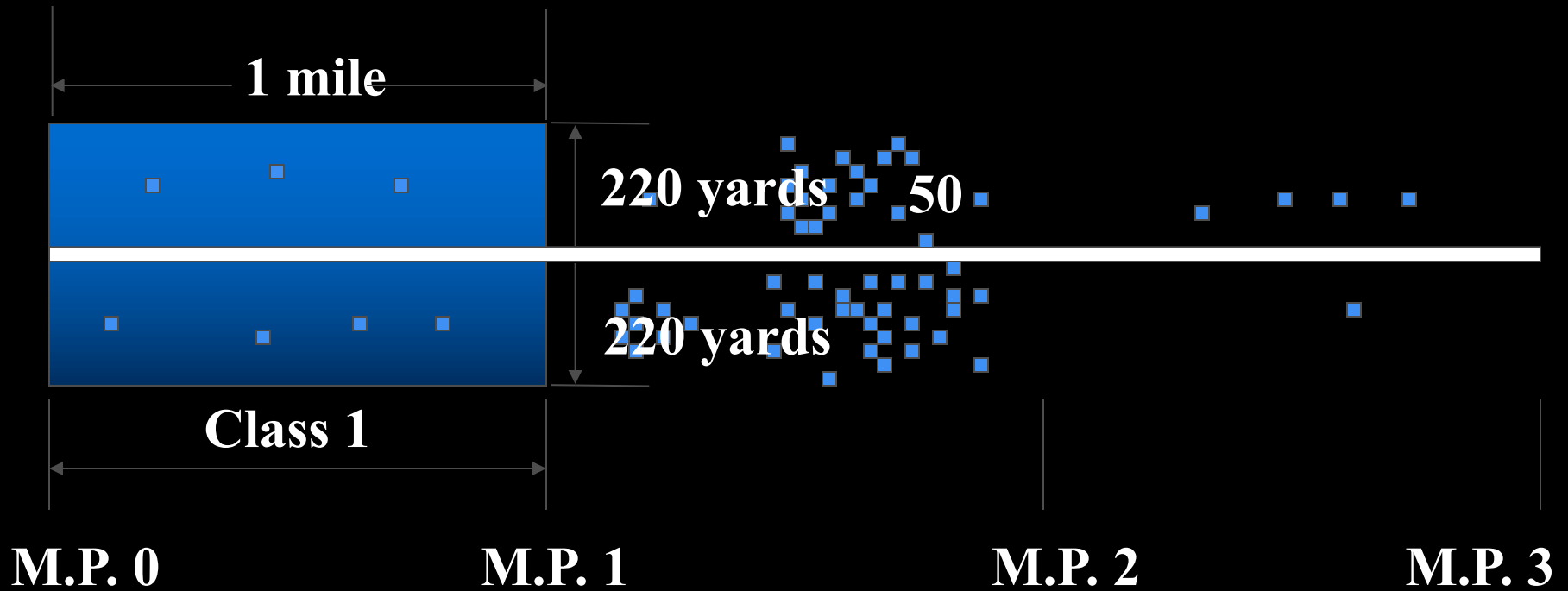
The *class location unit* is an onshore area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline.

The class location is determined by the buildings in the *class location unit*. For the purposes of this section, each separate dwelling unit in a multiple dwelling building is counted as a separate building intended for human occupancy.

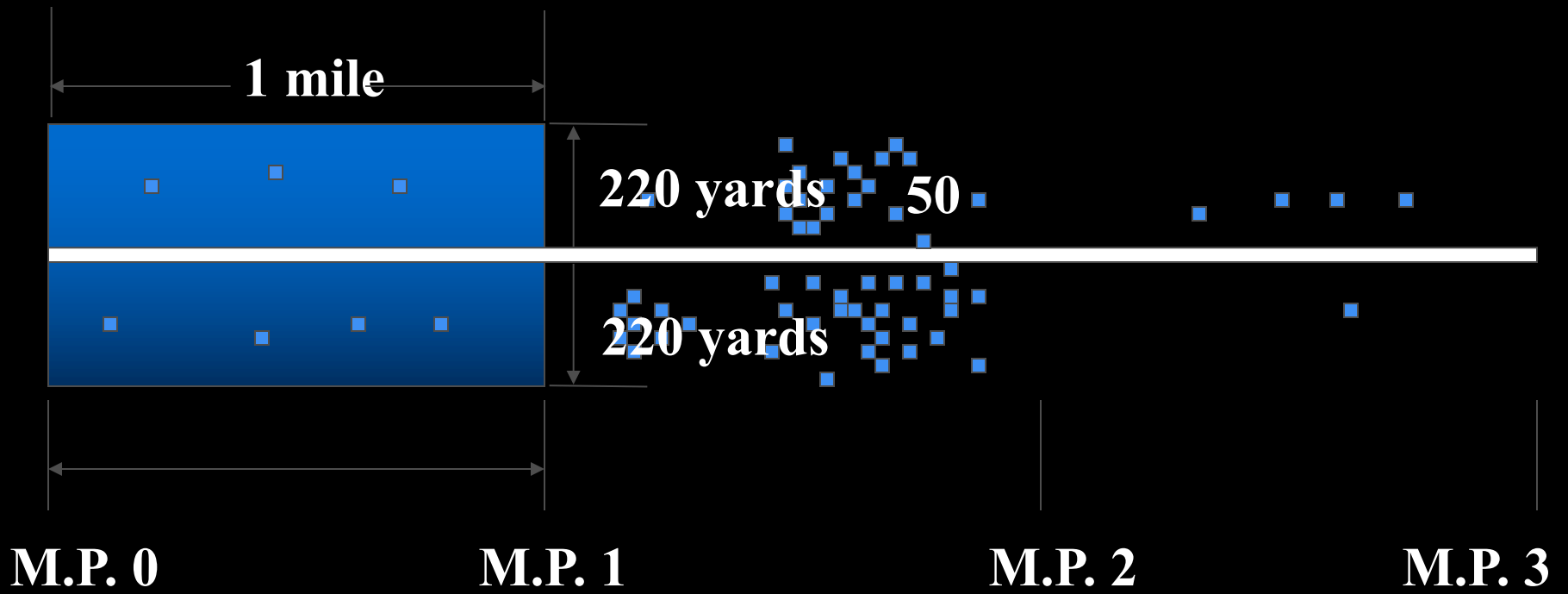


**220 yd  
either side of  
centerline of  
pipeline**

# Class Location Determination

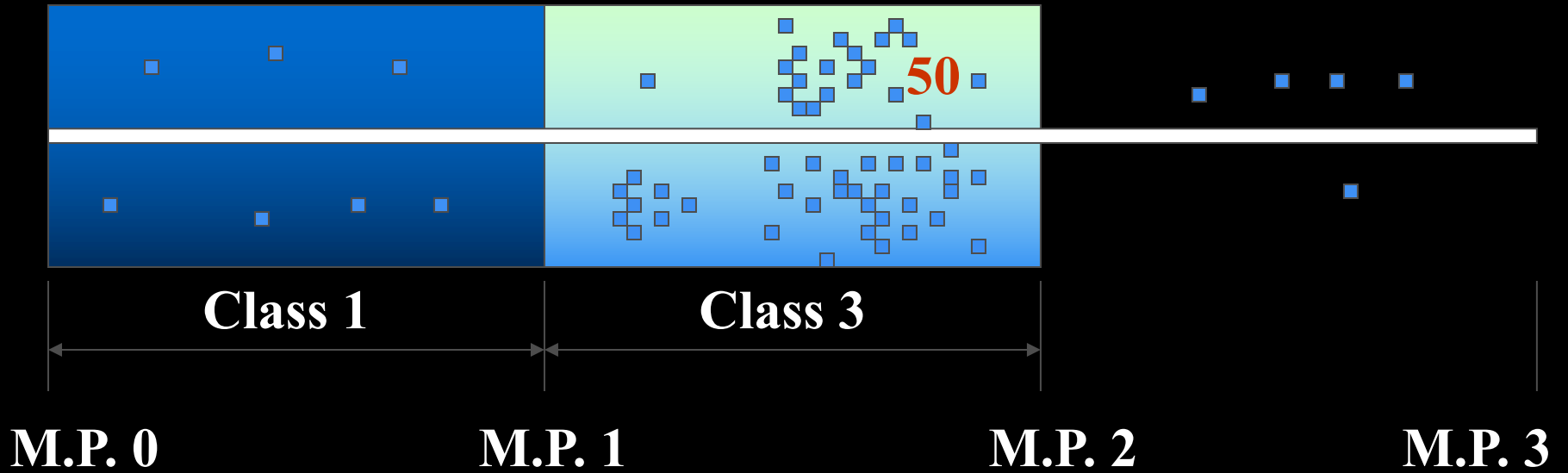


**M.P. = Mile Post**

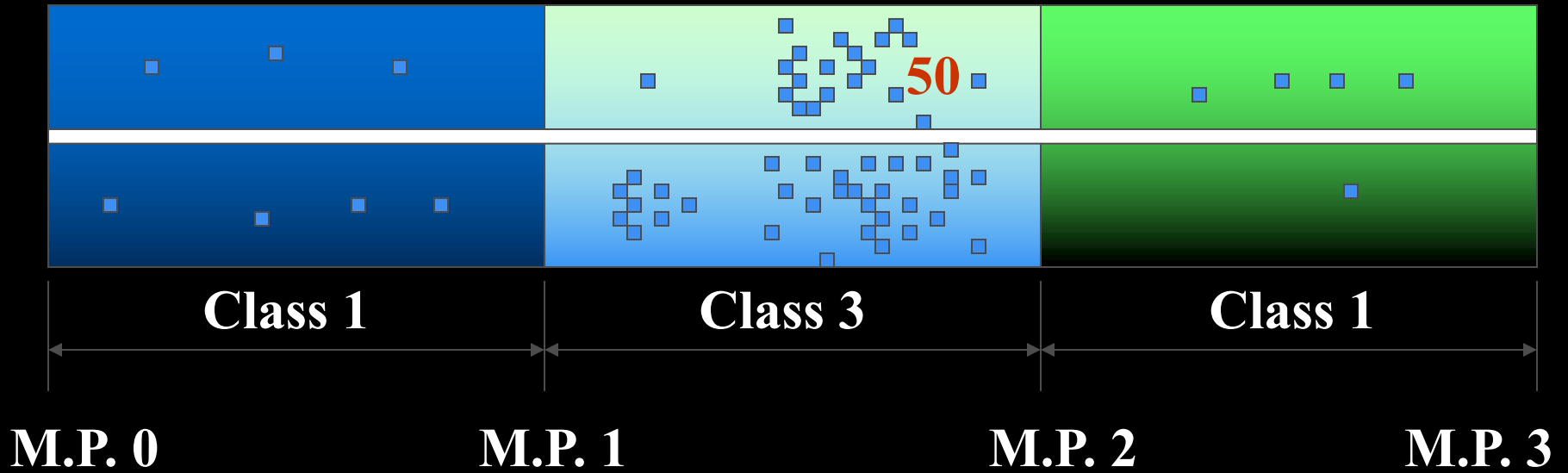


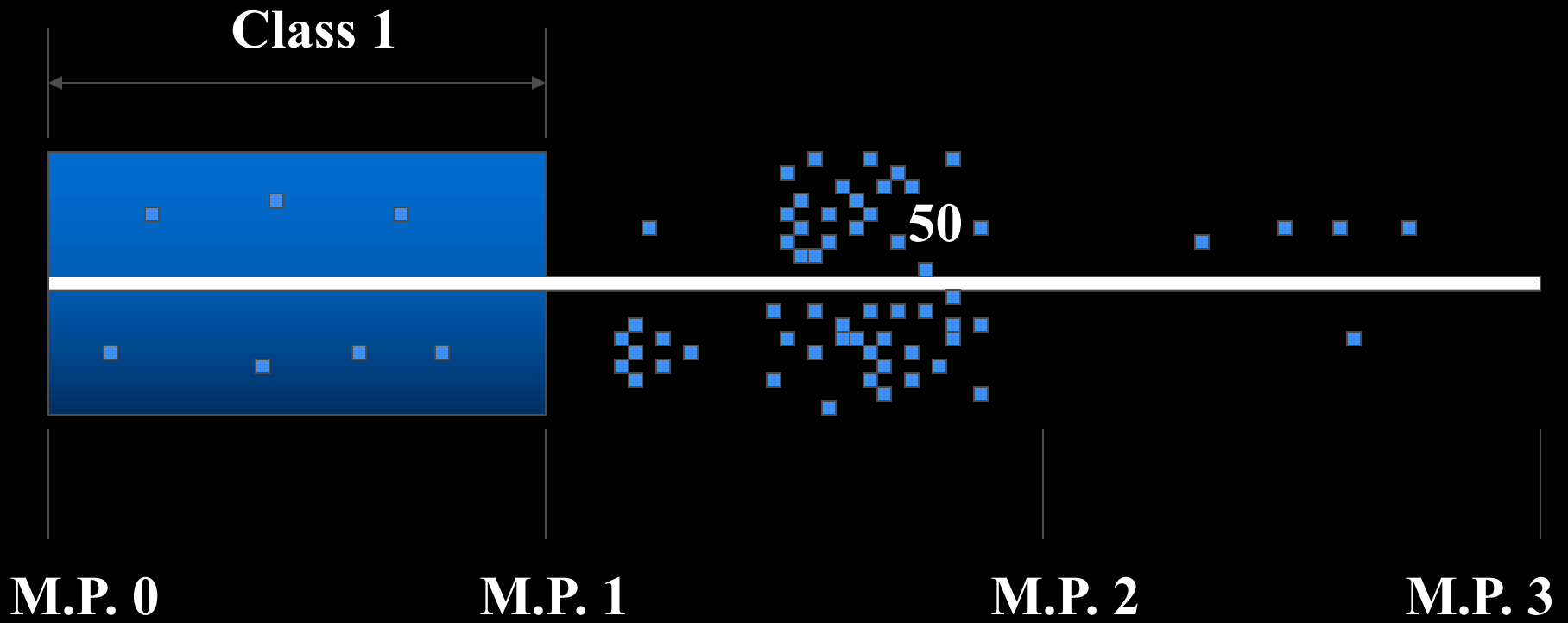
**M.P. = Mile Post**

# Class Location Determination



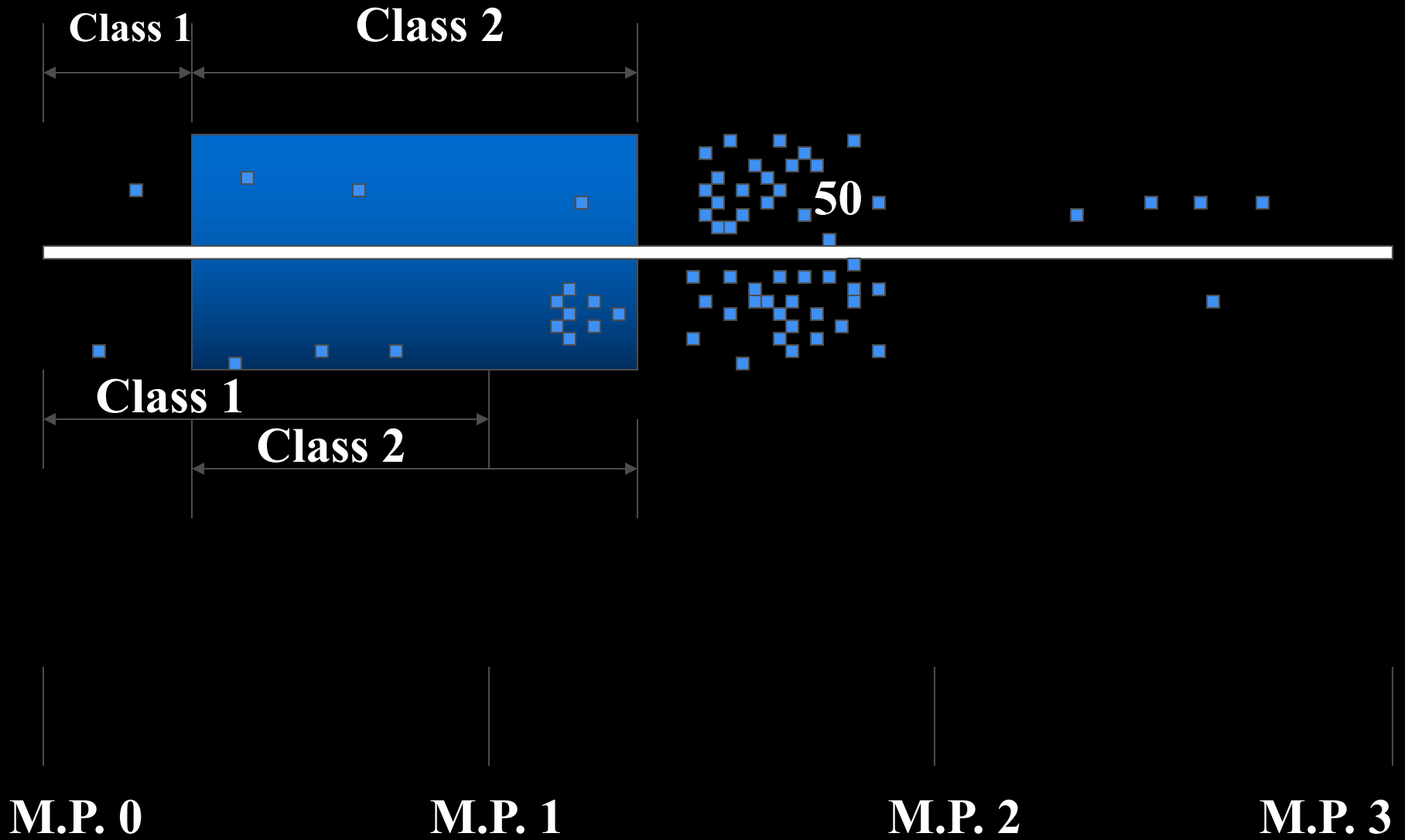
# Class Location Determination



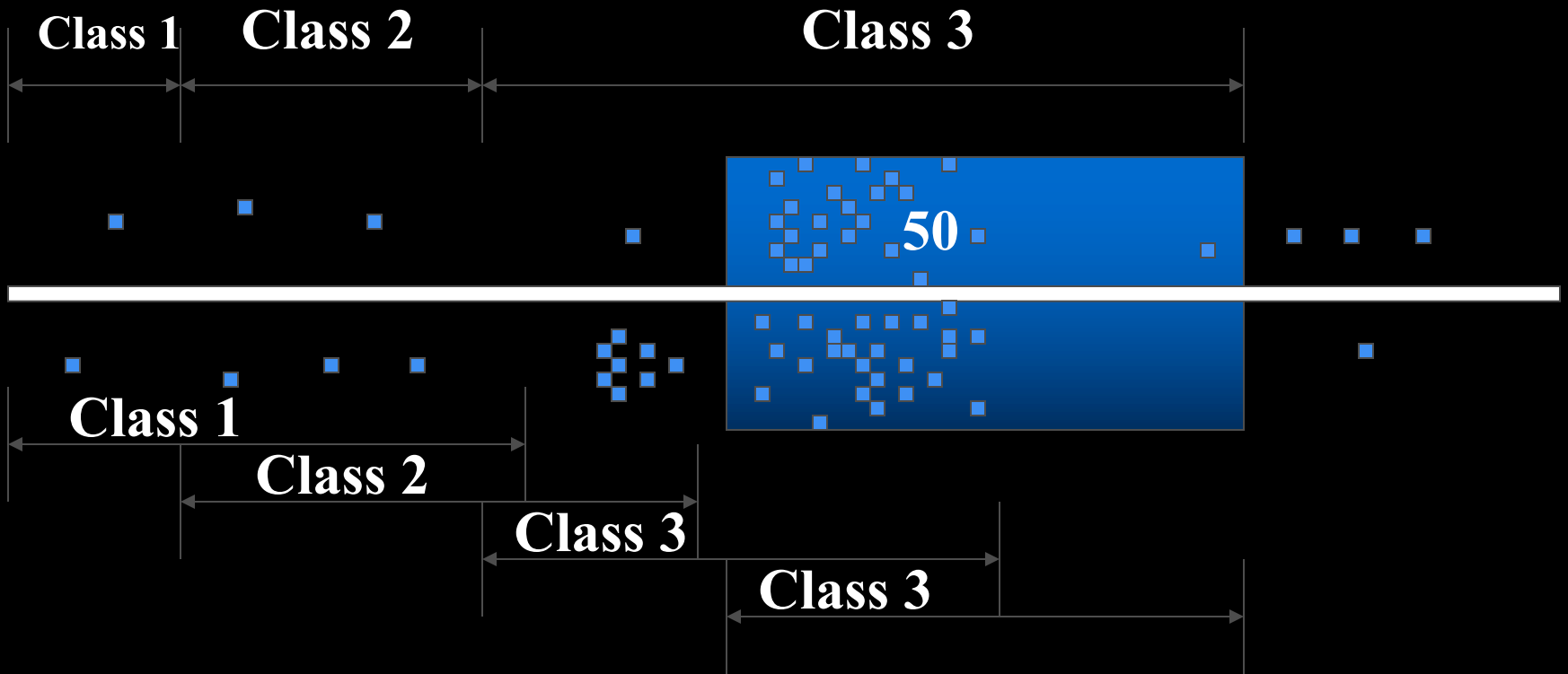


*Continuous Sliding Mile*

# Continuous Sliding Mile



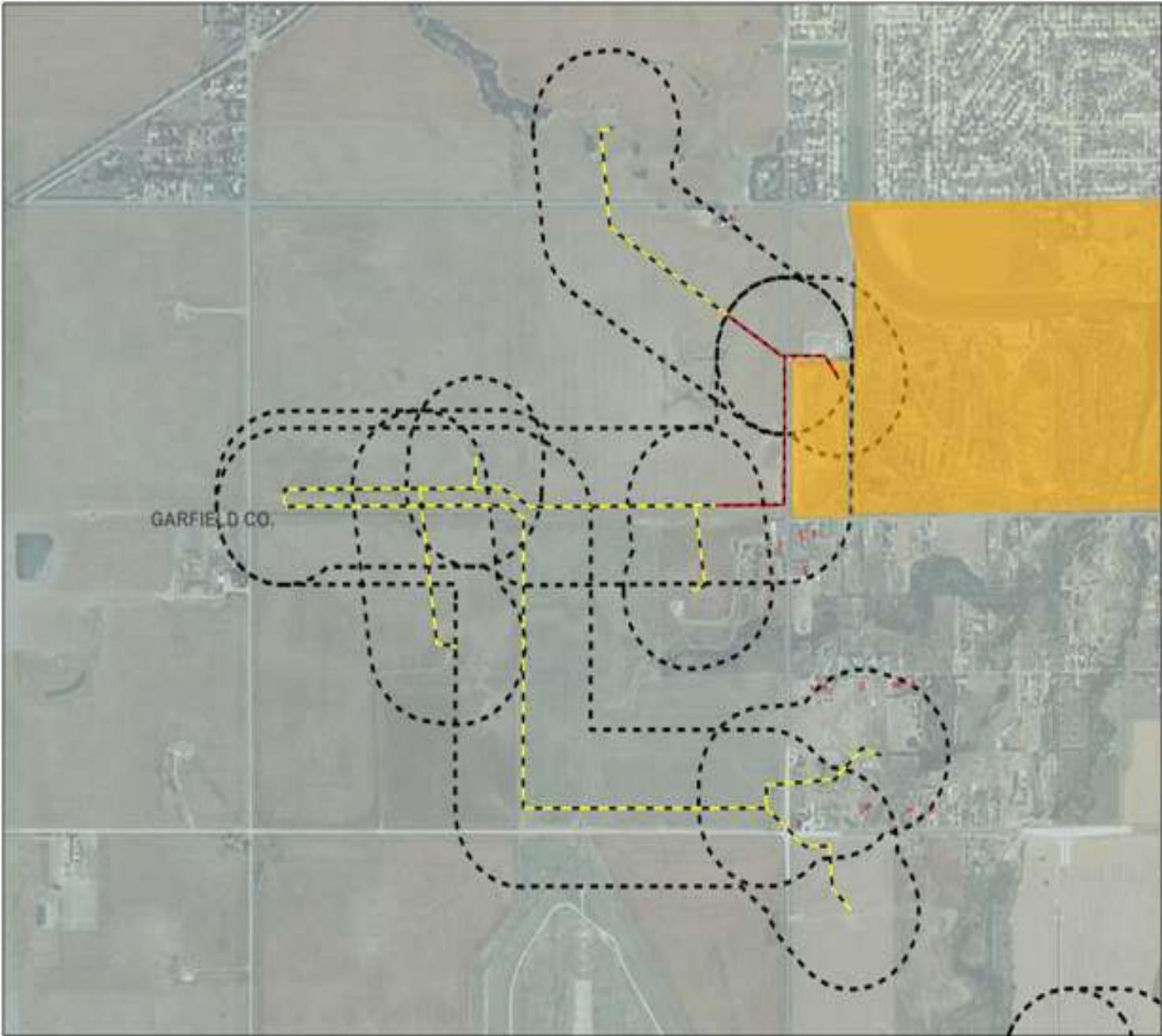
# Continuous Sliding Mile





## Class Location Unit

- ▼ *Class 1*
- ▼ 10 or less buildings intended for human occupancy or an offshore area.



Operator: Connect Terminals, LLC  
 System Name: (Garfield Co.)  
 MAOP:  
 Line Size: 3", 4"  
 Class Location: Class 1, 3  
 Class Location Boundary = 660 Feet  
 Additional Buffer Added = 0 Feet  
 Total Boundary = 660 Feet

**Legend**

- Atlas Pipeline**  
 CLASS
- 1 - Yellow dashed line
  - 2 - Green dashed line
  - 3 - Red solid line
- Structures\_Atlas\_stpin**  
 STRUC\_CODE
- 1 - Single family dwelling
  - 3 - Qualifying business
  - 7 - Not intended for human occupancy
  - 8 - Non-qualifying business
  - 9 - Qualified outdoor public assembly
  - 10 - Multi-family dwelling
  - 11 - School
  - 12 - Non-qualifying church
  - 15 - Qualifying daycare
- 660Ppe660fters



Gas Gathering Class Location Study  
 by Pipeline Regulatory Consultants, Inc.  
 Pipeline Compliance Service

Sheet Name: Segment 2 & 2a  
 Drawn By: R. Jones      Revision: 0  
                                     Revision Date:  
 Sheet #13 of 13      Date of Study: 7/21/13



## Class Location Unit

- ▼ A *Class 2*
- ▼ Greater than 10 but less than 46 buildings intended for human occupancy.





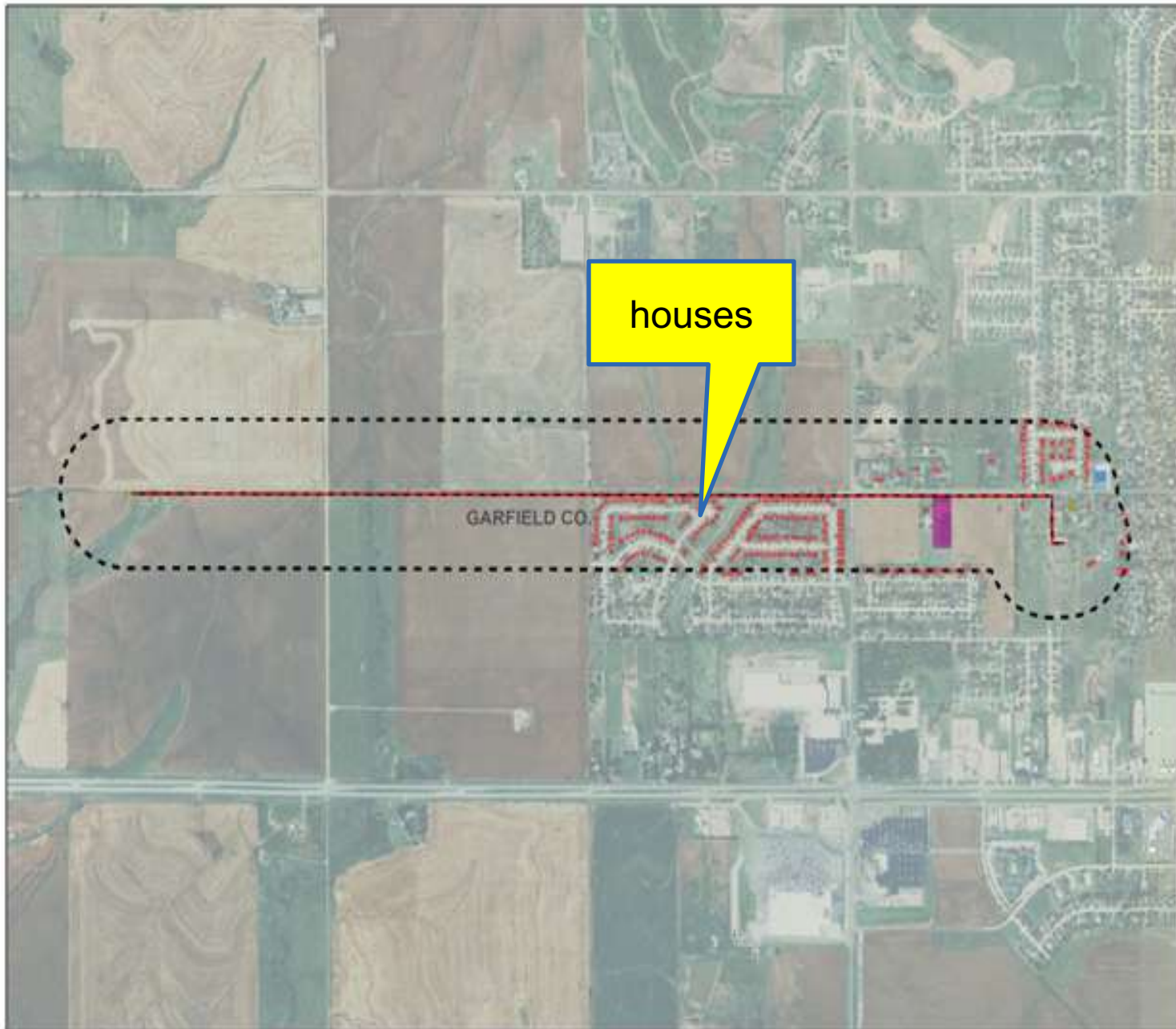
## Class Location Unit

### ▼ *Class 3*

- ▼ 46 or more buildings intended for human occupancy; or



Each individual Apt counted as a separate dwelling



Operator: Connect Terminals, LLC  
 System Name: (Garfield Co.)  
 MAOP:  
 Line Size: 3"  
 Class Location: Class 3  
 Class Location Boundary = 660 Feet  
 Additional Buffer Added = 0 Feet  
 Total Boundary = 660 Feet

**Legend**

**Atlas Pipeline**

**CLASS**

- 1
- 2
- 3

**Structures\_Atlas\_stpin**

**STRUC\_CODE**

- 1 - Single family dwelling
- 3 - Qualifying business
- 7 - Not intended for human occupancy
- 8 - Non-qualified business
- 9 - Qualified outdoor public assembly
- 10 - Multi-family dwelling
- 11 - School
- 12 - Non-qualifying church
- 15 - Qualifying daycare

660PipeBuffer



Gas Gathering Class Location Study  
 by: Pipeline Regulatory Consultants, Inc.  
 Pipeline Compliance Service

Sheet Name: Segment 4

Drawn By: R. Jones      Revision: 0  
 Revision Date:

Sheet #12 of 13      Date of Study: 7/21/13



**Class 3** - where the pipeline lies within 100 yards of either a building or a small,

▼ Well-defined Outside Area

- Playground
- Recreation Area
- Outdoor Theater

▼ Occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period



# Park





**Golf Course**

# Convenient Store



**Welcome**  
**BACK TO SCHOOL**



designed by  freepik.com

# Office Building





## Class Location Unit

**Class 4 - where buildings with four or more stories aboveground are prevalent.**

**(Most states hold to the view that it has to be 2 or more 4 story buildings)**

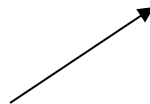


**LEAK SURVEYS AND PATROLS REQUIRED AT  
LEAST 4 TIMES PER YEAR**

**4 STORY BLDGS**



**CLASS 4 LOCATION ENDS 220 YDS  
FROM NEAREST 4 STORY BLDG.**





# CODE REQUIREMENTS FOR REGULATED PIPELINE'S

# GATHERING

## TYPE "A"

- APPLY FOR OPID
- D & A PROGRAM
- MEMBER OF ONE CALL
- DAMAGE PREVENTION – LINE LOCATE
- CONSTRUCTION MANUAL/PROGRAM
- PERIODIC PIPELINE INSPECTIONS
  - LEAKAGE SURVEYS
  - CATHODIC PROTECTION
  - RECTIFIER INSPECTIONS
  - VALVE MAINTENANCE
  - ATMOSPHERIC CORROSION INSP
  - PIPELINE PATROLS
  - RELIEF VALE INSPECTIONS
  - MAOP
- DOT MANUALS
  - OM&E
  - OQ PLAN/PROGRAM
  - PUBLIC AWARENESS PLAN/PROGRAM

## TYPE "B"

- APPLY FOR OPID
- D & A PROGRAM
- MEMBER OF ONE CALL
- DAMAGE PREVENTION – LINE LOCATE
- CONSTRUCTION MANUAL/PROGRAM
- PERIODIC PIPELINE INSPECTIONS
  - LEAKAGE SURVEYS – Class-3 areas
  - CATHODIC PROTECTION
  - RECTIFIER INSPECTIONS
  - LINE MARKERS
  - MAOP
- DOT MANUALS
  - OM&E
  - OQ PLAN/PROGRAM
  - PUBLIC AWARENESS PLAN/PROGRAM

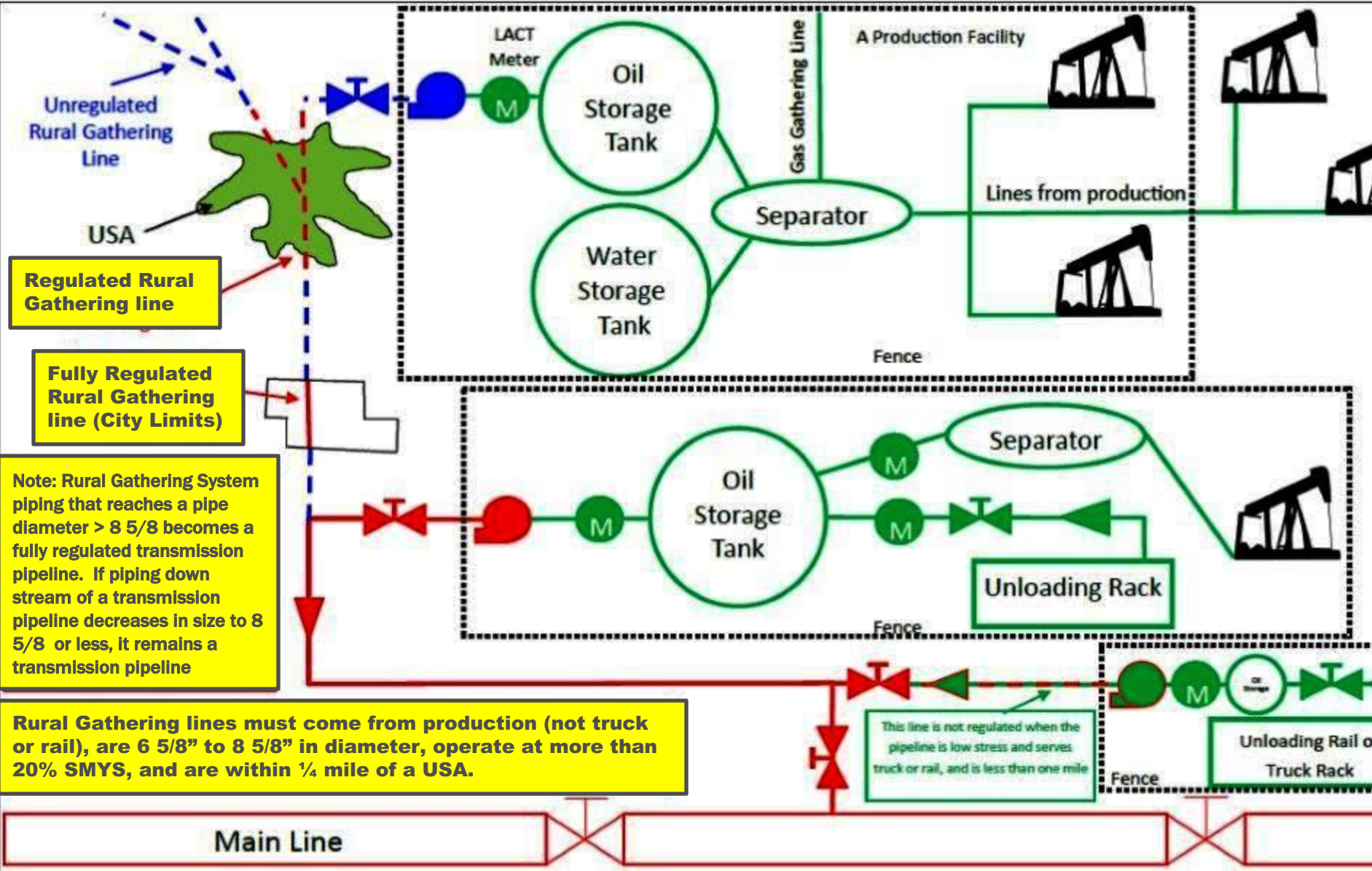
# **GAS TRANSMISSION**

- **APPLY FOR OPID**
- **D & A PROGRAM**
- **MEMBER OF ONE CALL**
- **DAMAGE PREVENTION – LINE LOCATE**
- **CONSTRUCTION MANUAL/PROGRAM**
- **PERIODIC PIPELINE INSPECTIONS**
  - **LEAKAGE SURVEYS**
  - **CATHODIC PROTECTION**
  - **ATMOSPHERIC CORROSION INSPECTIONS**
  - **RECTIFIER INSPECTIONS**
  - **VALVE MAINTENANCE**
  - **PIPELINE PATROLS**
  - **RELIEF VALE INSPECTIONS**
- **DOT MANUALS**
  - **OM&E**
  - **OQ PLAN/PROGRAM**
  - **PUBLIC AWARENESS PLAN/PROGRAM**
  - **GAS IMP PLAN (IF APPLIABLE)**
  - **CONTROL ROOM MANAGEMENT PLAN (IF APPLICABLE)**



# REGULATED HAZARDOUS LIQUID PIPELINES

- *Hazardous liquid means petroleum, petroleum products, or anhydrous ammonia*
- **Most Popular – Crude Oil, Anhydrous Liquid, Propane, Carbon Dioxide, etc.**



**Regulated Rural Gathering line**

**Fully Regulated Rural Gathering line (City Limits)**

Note: Rural Gathering System piping that reaches a pipe diameter > 8 5/8 becomes a fully regulated transmission pipeline. If piping down stream of a transmission pipeline decreases in size to 8 5/8 or less, it remains a transmission pipeline

Rural Gathering lines must come from production (not truck or rail), are 6 5/8" to 8 5/8" in diameter, operate at more than 20% SMYS, and are within 1/4 mile of a USA.

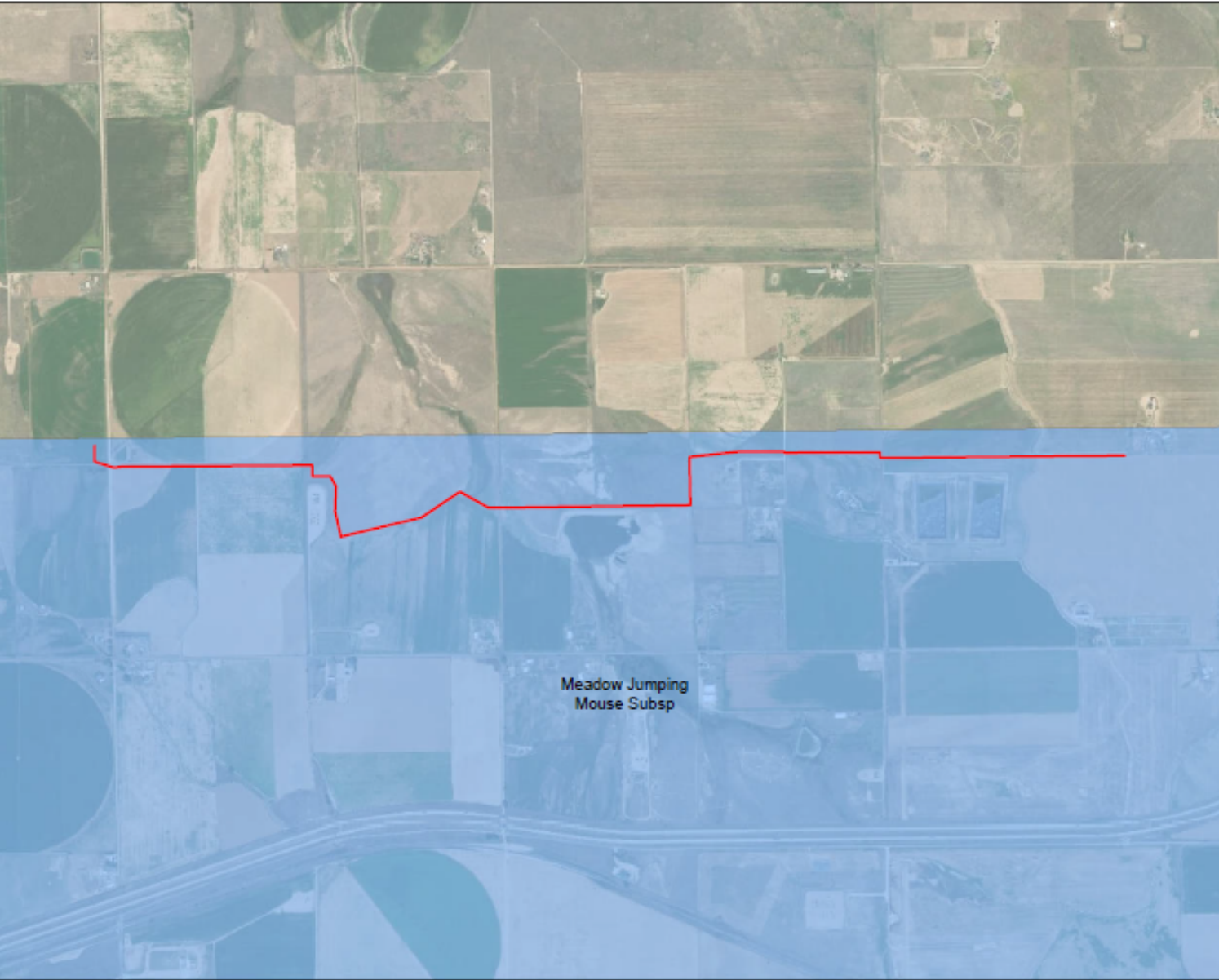
This line is not regulated when the pipeline is low stress and serves truck or rail, and is less than one mile



## **USA's & HCA's = Unusually sensitive areas & HCA's = High Consequence Area**

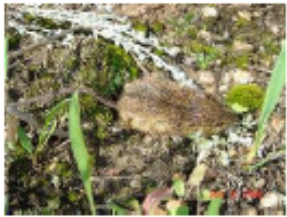
- *USA = Unusually sensitive area – Bird habitats, Water regions, navigable waterways, Endangered species, Populated areas, etc*
- **HCA's = High Consequence Areas – You now have to assess pipeline periodically to determine its integrity**

# ENDANGERED SPECIES - ANIMAL



Operator:  
System Name: Cureton Midstream  
MAOP:  
Line Size:  
Class Location:  
Class Location Buffer  
Additional Buffer Added  
Total Buffer

- Legend**  
— P66-NGL PIPELINE  
Species Occurrence  
**SCOMNAME**  
Meadow Jumping Mouse Subsp



T&E Species Occurrence  
by: Pipeline Regulatory Consultants, Inc.  
Pipeline Compliance Service

Author: R Jones      Date of Study: 5/6/18

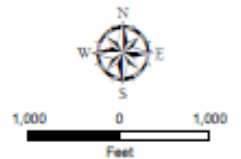


# ENDAGERED PLANT SPECIES



Operator:  
System Name: Cureton Midstream  
MAOP:  
Line Size:  
Class Location:  
Class Location Buffer  
Additional Buffer Added  
Total Buffer

**Legend**  
— P66-NGL PIPELINE  
Colorado\_T&E\_Species\_Range  
COMNAME  
Ute ladies'-tresses

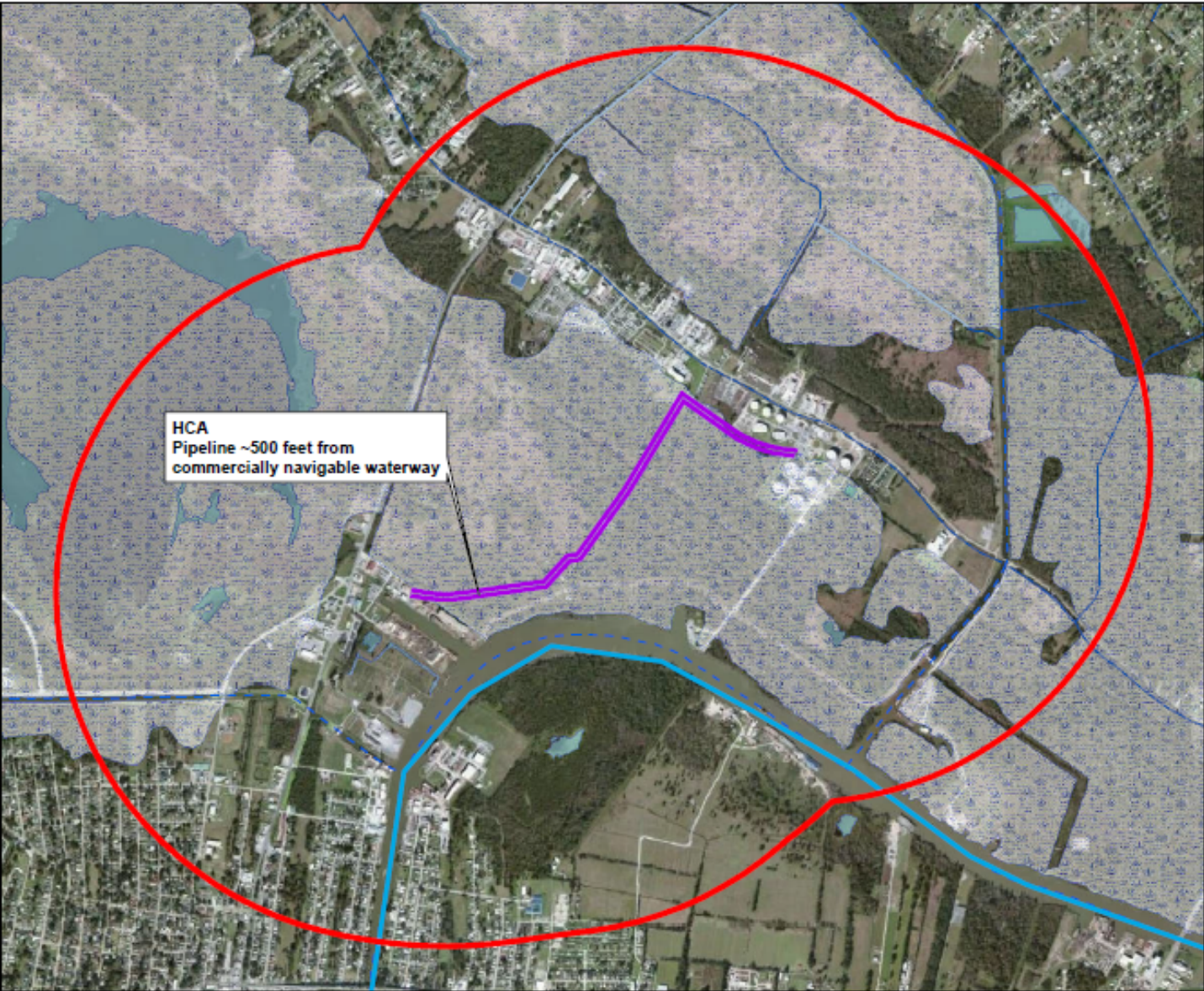


T&E Species Range  
by: Pipeline Regulatory Consultants, Inc.  
Pipeline Compliance Service

Author: R Jones      Date of Study: 5/6/18



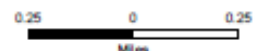
# CRUDE OIL SPILL PATHWAY



HCA  
Pipeline ~500 feet from  
commercially navigable waterway

Operator:  
System Name: (Terrebonne Pa.)  
MAOP:  
Line Size: 12"  
Class Location:  
Spill Dispersion Buffer = feet  
Additional Buffer Added = 0 Feet  
Total Buffer = feet

- Legend**
- █ 1mBuffer
  - █ 5mBuffer
  - █ 10mBuffer
  - █ Pipeline
  - █ Commercially Navigable Waterway
- NHDWaterbody**
- FType**
- Estuary
  - Ice Mass
  - LakePond
  - Playa
  - Reservoir
  - SwampMarsh
- NHDFlowline**
- FType**
- ArtificialPath
  - CanalDitch
  - Connector
  - StreamRiver
  - Underground Conduit

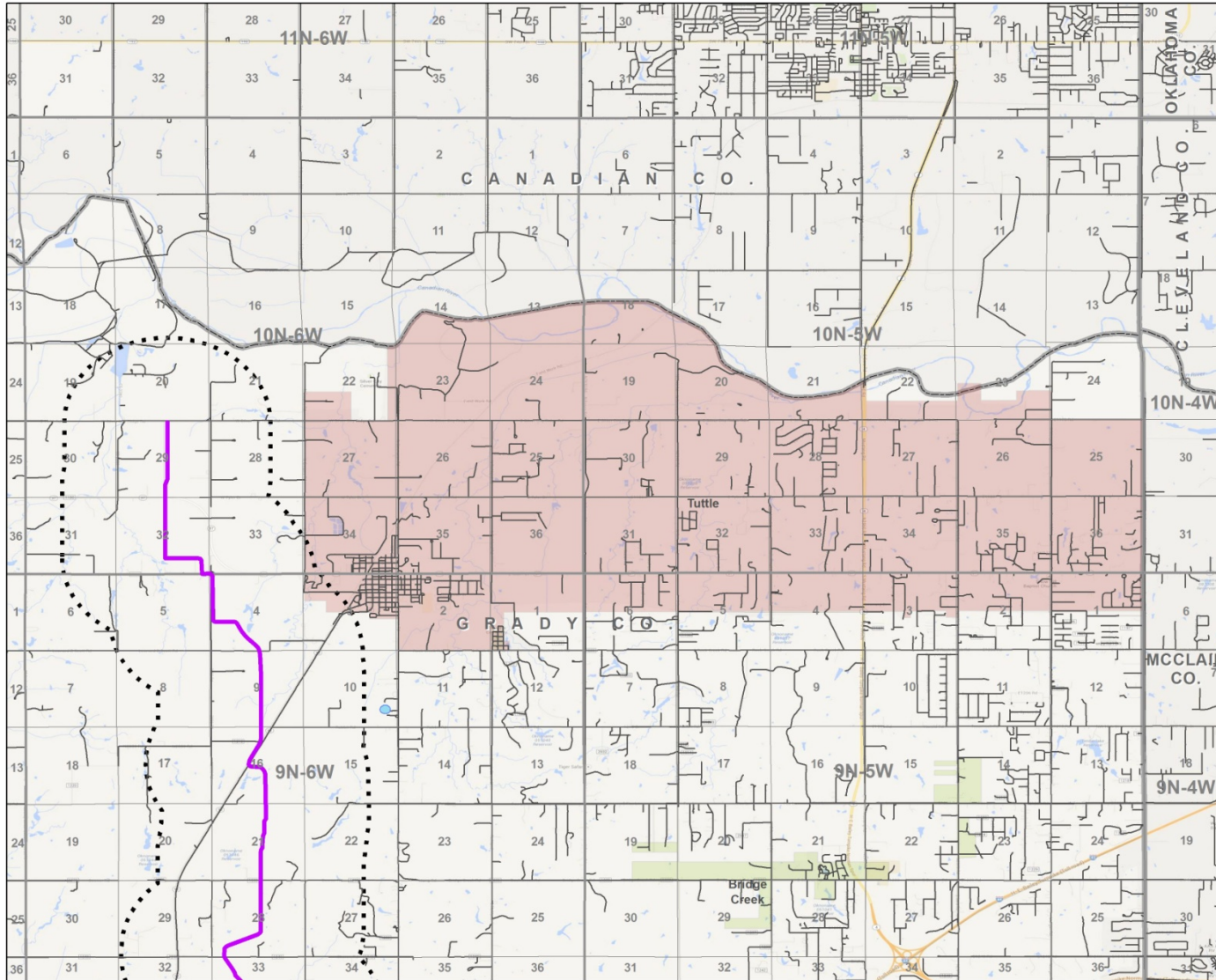


Spill Risk Study  
by: Pipeline Regulatory Consultants, Inc.  
Pipeline Compliance Service

Sheet Name: Flood Map  
Drawn By: R. Jones  
Date of Study: 6/22/18



# PROPANE FLARE JET BUFFER



Operat  
 System Name: (Grady Co.)  
 MAOP: 1200 psi  
 Line Size: 3" steel  
 Class Location:  
 Spill Dispersion Buffer = 5,827 Feet  
 Additional Buffer Added = 0 Feet  
 Total Buffer = 5,827 Feet

## LEGEND

<b>NGL Line</b>		<b>HB_points</b>	
	Type		Blow down
	Type		CP Point
	Section		Exposure
	Township		Tie In
	Drinking Water		Valve
	Street	<b>Structures</b>	
	Spill Dispersion Buffer	Type	
			Apartment
			Business
			Church
			FireStation
			House
			School



Tuttle City Boundary  
 by: Pipeline Regulatory Consultants, Inc.  
 Pipeline Compliance Service

Sheet Name: Tuttle City Boundary  
 Drawn By: R. Jones  
 Revision: 0  
 Revision Date:  
 Sheet #1 of 1  
 Date of Study: 6/8/14



**Any  
Questions**

