Unbundling Advanced Topics

ONRR Royalty Valuation Guidance – February 2023

Disclaimer

This presentation is guidance and not binding on ONRR. It does not provide legal advice and should not be construed as stating ONRR's legal interpretation or position. Any reliance on this presentation does not limit ONRR in its compliance activities or in the appealable decisions and orders it may issue.

Polling Question 1

How long have you been performing oil and gas royalty reporting?

A. 0 – 2 Years
B. 2 – 5 Years
C. 5 – 10 Years
D. Over 10 Years

Agenda

- Marketable Condition
- Transportation and Processing Allowances
- Exercise
- Method Review
- ONRR Unbundling Cost Allocations
- FAQs

Polling Question 2

Who needs to unbundle? Lessee's with:

A. Percent of Proceed (POP) sales contracts
B. Non-arm's-length transportation and/or processing contracts
C. Fee based transportation and/or processing contracts
D. A and C
E. All of the above

ONRR Royalty Equation

Royalty Due = [volume x unit value x royalty rate] – [allowances x royalty rate]

Where does unbundling come in?

Allowances!

Allowances

- May not take an allowance for transporting or processing lease production that is not royalty-bearing
- Allowable transportation costs should be allocated across all the products being transported
- Allowances should not include any costs associated with marketing or placing the production into marketable condition

What Is Unbundling?

Unbundling is the process of taking gas transportation and/or processing fees and determining the ***allowed*** and ***disallowed*** costs for royalty reporting and payment.

- For training purposes, we will only discuss products recovered from processing gas production:
  - Residue gas, natural gas liquids (NGLs), condensate
  - Includes coalbed methane

Why Do We Unbundle?

- Marketable Condition Rule
  - The lessee must place gas in marketable condition and market the gas for the mutual benefit of the lessee and the lessor at no cost to the Federal Government.
- ONRR's Marketable Condition Definition
  - Marketable Condition is defined as "lease products which are sufficiently free from impurities and otherwise in a condition that will be accepted by a purchaser under a sales contract typical for the field or area."

Regs: 30 CFR 1206.20, 1206.146, 1206.174(h)

Options For Unbundling

- Use an ONRR Unbundling Cost Allocation (UCA), if you have a federal lease and there is a UCA applicable to your situation
- Develop a ***reasonable*** unbundling method
- Take no allowances

How Do You Unbundle?

- You need to:
  - Determine marketable condition
  - Separate all fees
    - Transportation, processing, and fractionation
  - Determine the allowed portion of fees charged for: transportation, compression, sweetening, dehydration, processing, and fractionation
    - Gather information on transportation and processing facilities

Non-Arm's-Length versus Arm's-Length

Non-arm's-length agreements

- Lessee to use actual capital and operating costs

Arm's-length agreements

- Lessee to use actual contract charges

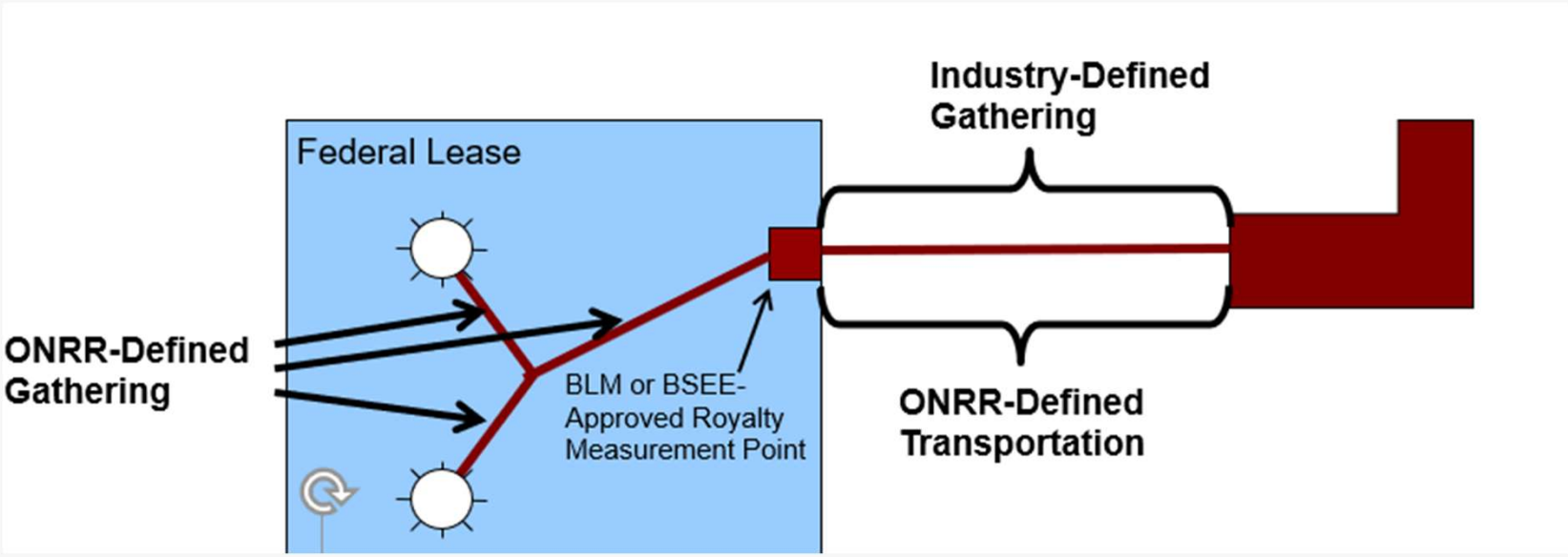
Regs: 30 CFR 1206.20 Definition "Affiliate" and "Arm's Length Contract"

Non-Arm's-Length and Arm's-Length Similarities

- Both types of agreements need to:
  - Determine the allowed and disallowed portions of their cost/charges
  - The lessee should only take allowances based on the allowed portion of the costs

Regs: 30 CFR 1206.20 Definition "Affiliate" and "Arm's Length Contract"

Gathering and Transportation



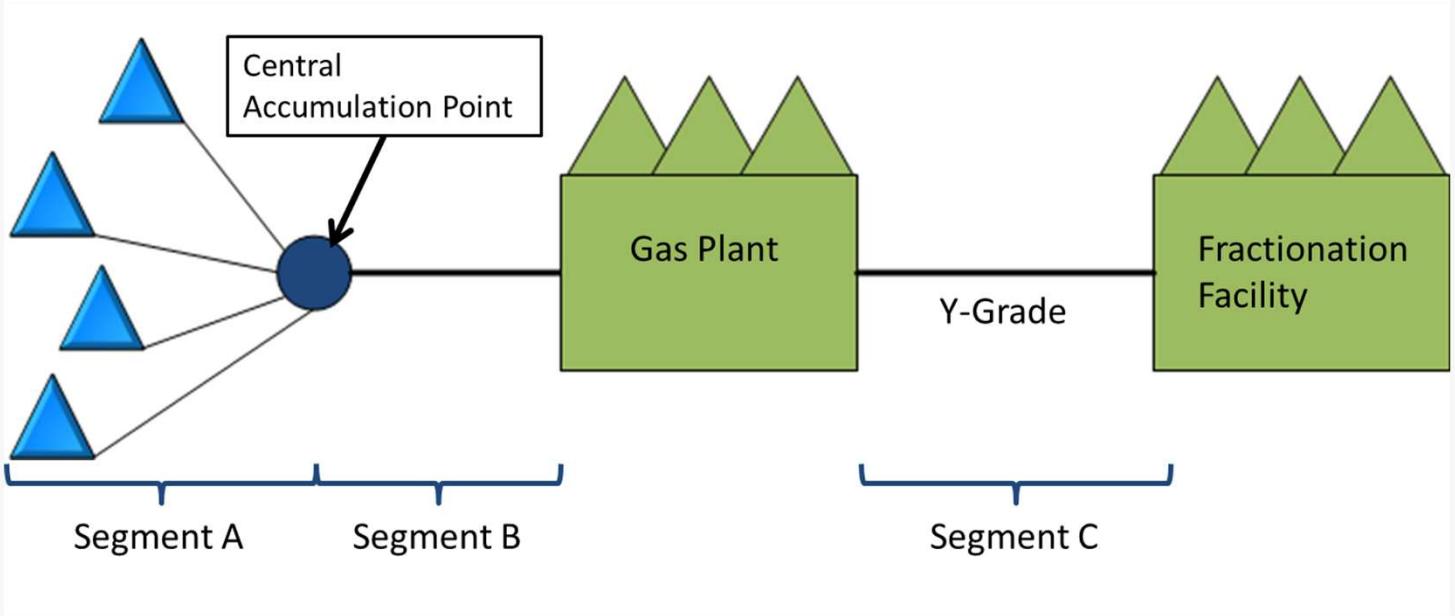
Transportation Allowances

- Marketable condition applies
  - Cannot deduct compression, sweetening, or dehydration unless it exceeds marketable condition
  - A portion may be allowed if marketable condition is exceeded
  - Reminder transportation allowances cannot exceed 50% after January 1, 2017

Regs: 30 CFR 1206.20, 1206.152 (e) (1)

Polling Question 3

If gas is in marketable condition at the wellhead (pressure, water content, and acid gas), what pipeline segments are disallowed?



A. Segment A
B. Segment B
C. Segment C
D. Segments B & C
E. All of the above

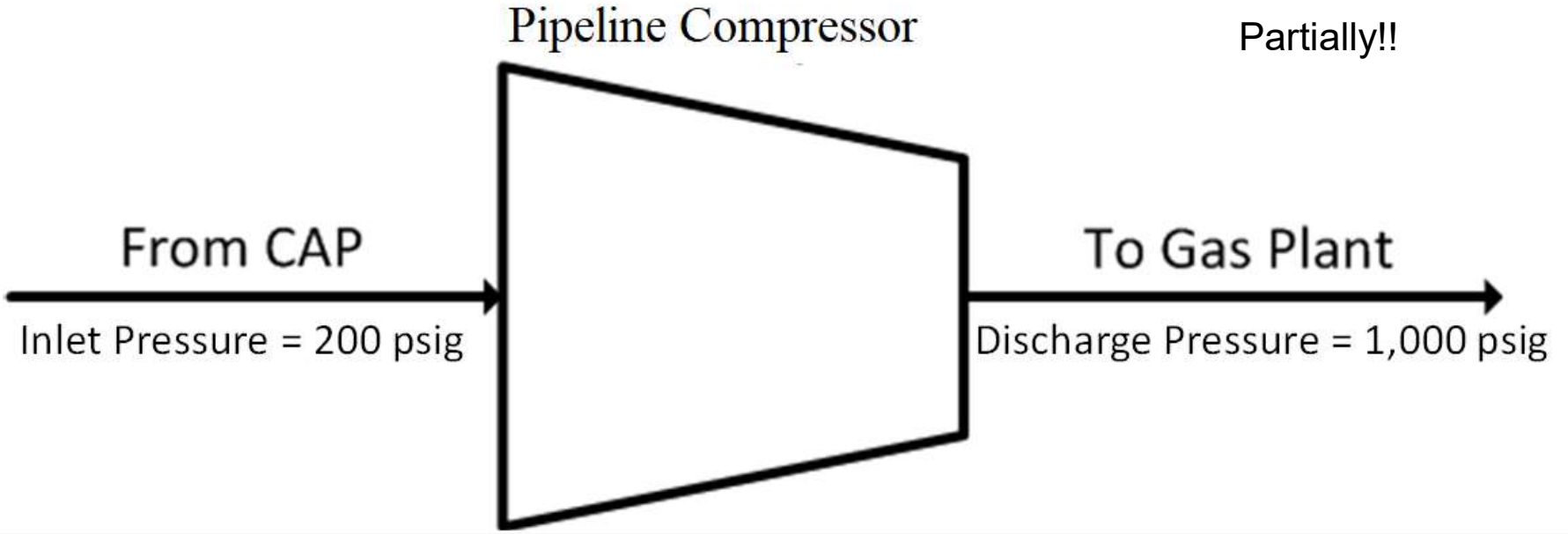
Example showing production flowing from wells through a central accumulation point to a gas plant and then another pipeline from the gas plant to a fractionation facility

Transportation Example #1

Marketable Condition = 900 psig

Is the pipeline compressor allowed?

Partially!!



Gas production moving through 1 compressor

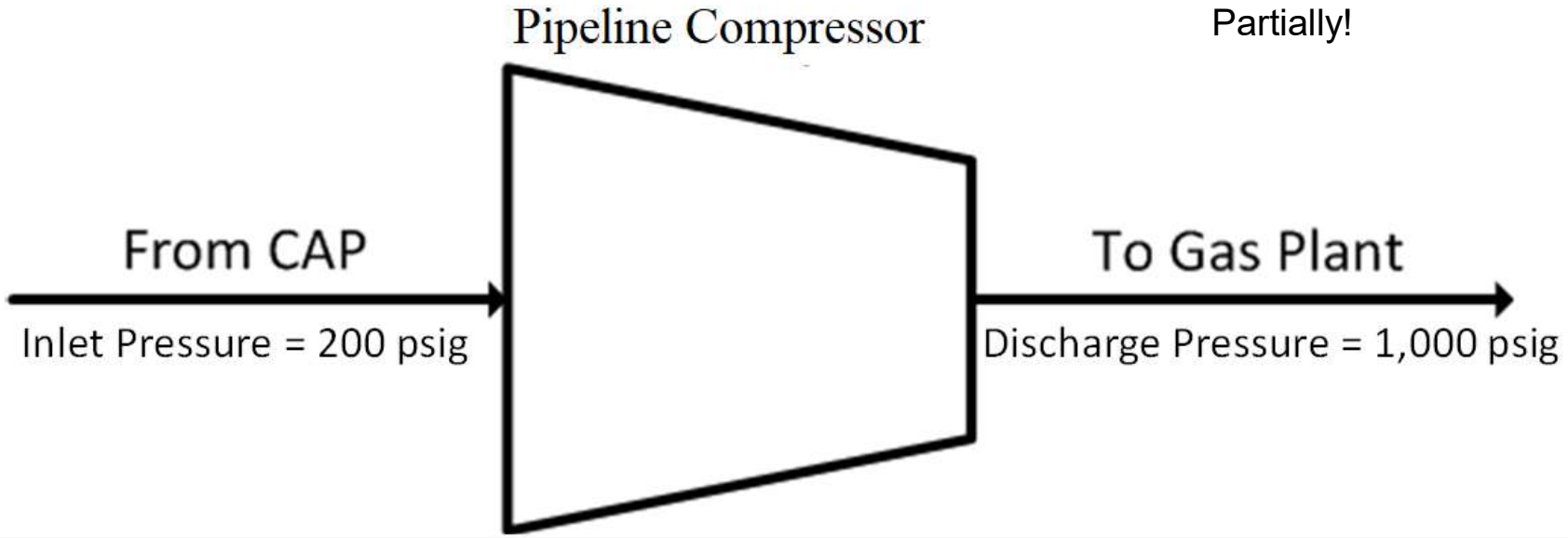
NOTE: This is only an example

Transportation Example #1 (cont'd)

Marketable Condition = 900 psig

Is the pipeline compressor allowed?

Partially!



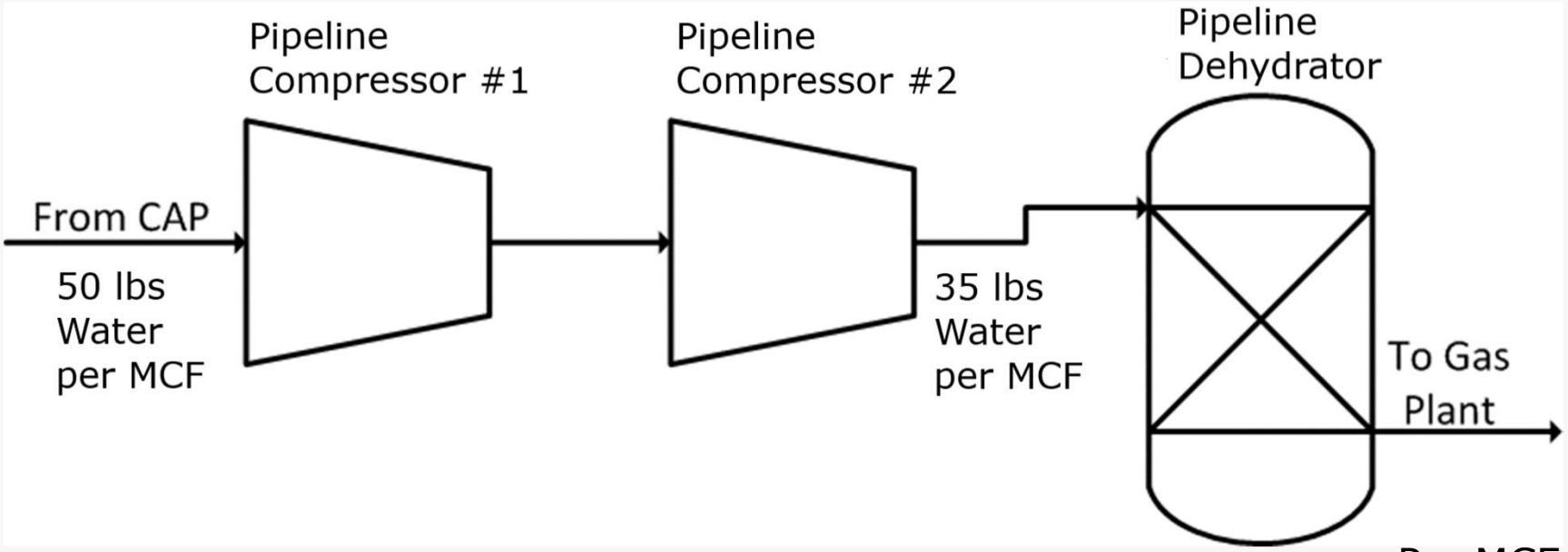
How much is allowed?

$$\frac{\text{Discharge Pressure} - \text{Marketable Condition}}{\text{Discharge Pressure} - \text{Inlet Pressure}} \times 100 = \frac{1{,}000 - 900}{1{,}000 - 200} \times 100 = 12.5\%$$

NOTE: This is only an example

Transportation Example #2

Marketable Condition = 7 lbs H_2O Per MCF



Are the dehydration costs allowed? No!

CAP = Central Accumulation Point

Note: This is only an example

Gas production moving through 2 pipeline compressors and a dehydrator

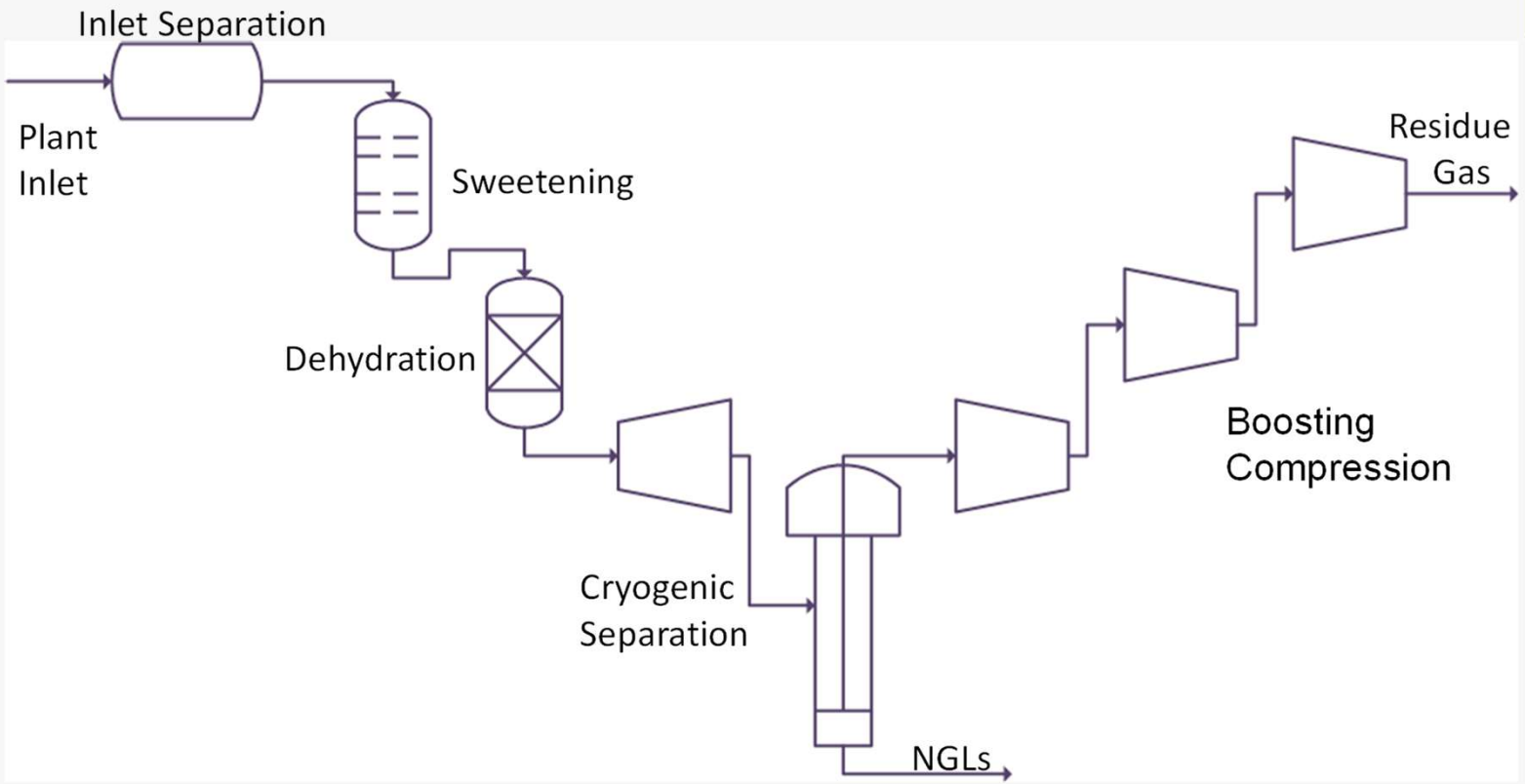
Processing Allowances

Processing allowance means a deduction in determining royalty value for the reasonable, actual costs the lessee incurs for processing gas.

- After January 1, 2017, a lessee's processing allowance may not exceed 66 2/3%

Regs: 30 CFR 1206.20, 1206.159

Processing Plant Diagram



NOTE: This is an example only

An example of a processing plant diagram

Where Do I Start?

- Gas composition
  - Most times found on plant statement under ***Analysis***
  - Shows gas composition in mole percent

Gas Analysis	
Component	mol %
Helium	0
Nitrogen	1.204
Carbon Dioxide	4.151
H_2S	0.251
Other Inerts	0
Methane	66.88
Ethane	14.56
Propane	6.547
Iso Butane	0.951
Norm Butane	2
Iso Pentane	0.756
Norm Pentane	0.87
Hexane +	1.83
Total	100

NOTE: This is an example only

Where to Find Marketable Condition

- Marketable Condition Regulatory Definition
  - "lease products which are sufficiently free from impurities and otherwise in a condition that will be accepted by a purchaser under a sales contract typical for the field or area."
- Could be found in FERC tariffs for the mainline pipeline
  - There may be multiple pipelines where residue gas can be delivered. Ask processor which pipelines your gas is delivered to

Regs: 30 CFR 1206.20

FERC Tariff

3. QUALITY

3.1 Specifications. Unless otherwise agreed pursuant to Sections 3.2 and 3.3 below, Shipper warrants that Gas Tendered hereunder at each Point of Receipt and Point of Delivery will comply with the following quality specifications:

(a) At a pressure of 14.73 p.s.i.a. and a temperature of 60 degrees Fahrenheit, such Gas shall not contain more than:

(i) .25 grain of hydrogen sulphide per 100 cubic feet,

(ii) 5 grains of total sulphur per 100 cubic feet,

(iii) 10 parts per million (0.001 percent) by volume of oxygen; however, this oxygen quality specification shall not apply at Point(s) of Delivery on the Valley Line and its supporting blending operations (see Section 3.5 below for oxygen specifications applicable to the Valley Line and its supporting blending operations,)

(iv) 3.0 percent by volume of carbon dioxide,

(v) 7 pounds of water vapor per million cubic feet at Point(s) of Receipt and Point(s) of Delivery within the states of Kansas, Oklahoma, and Texas and 5 pounds of water vapor per million cubic feet in all other states.

Transportation System

- Look at the transportation system
  - Is there pipeline compression?
  - What is the length of the pipeline to the processing plant?
  - What is the size of the pipeline?
  - What pressures from the wellhead to the processing plant inlet?
  - Is there any pipeline dehydration or sweetening?

Processing Plant

- What type of plant is it?
  - Cryogenic, lean oil, propane refrigeration, etc.
- What is the size of the plant?
- Is there inlet compression?
- Is there condensate stabilization?
- Is there sweetening?
- Is there dehydration?
  - Is there glycol dehydration and/or mole sieve?
- Is there residue boosting compression?

Allowed and Disallowed Equipment

What processing plant information is needed for unbundling?

Gas Plant Equipment	Allowed/Disallowed
Inlet Separation	Disallowed
Condensate Stabilization	Disallowed
Amine Treatment (Sweetening)	It depends
Dehydration	It depends
Cryogenic	Allowed
Boosting Compression	Disallowed

NOTE: Plants may have other equipment than listed in example above

Disallowed Fees

- Marketing Fees
- Low Volume Fees
- Treating Fees/Off Specification Gas Fees
  - May be partially allowed based on marketable condition
  - If separate fee, it doesn't have to be unbundled
  - If CO_2 or H_2S are sold, royalty is due on that product and a processing allowance may be taken

Handout – Exercise #1

- Using the handout provided for exercise 1:
  - Based on the specification, what equipment is allowed?
    - Cryogenic Separation
    - Acid Gas Treating
  - Is dehydration allowed?
    - Assume it's disallowed, or
    - Come up with a reasonable method and assumptions
      - Get more information
      - Document assumptions

Handout – Exercise #2

- Using the example provided in exercise 2 of the handout:
  - What transportation equipment is allowed?
    - Piping costs
  - What plant equipment is allowed?
    - Inlet Compression
    - Acid Gas Treating
    - Dehydrator
    - Turboexpander
    - Demethanizer
  - What if acid gas treating is charged separately?
    - Would be evaluated separately and not included in unbundling the bundled fees

Handout – Exercise #2 (cont'd)

- How do we unbundle?
  - Assume treating charged separately
  - Fee based contract
    - Charges are broken down
  - Allowed charges
    - $0.03 + $0.08 + $0.20 = $0.31
- What if we didn't have this breakdown?
  - Costs for your equipment, ask for breakdowns, look for publicly available information

Equipment	Charge
Inlet Separation	$0.01
Inlet Compression	$0.03
Dehydration	$0.08
Cryogenic Processing	$0.20
Boosting Compression	$0.10

*Note: These charges are just an example and not actual charges

Resources

- FERC Tariffs: https://etariff.ferc.gov/TariffList.aspx
- EPA website: https://www.epa.gov/
- U.S. Energy Information Administration: https://www.eia.gov/maps/
- Trade Journals
- Books

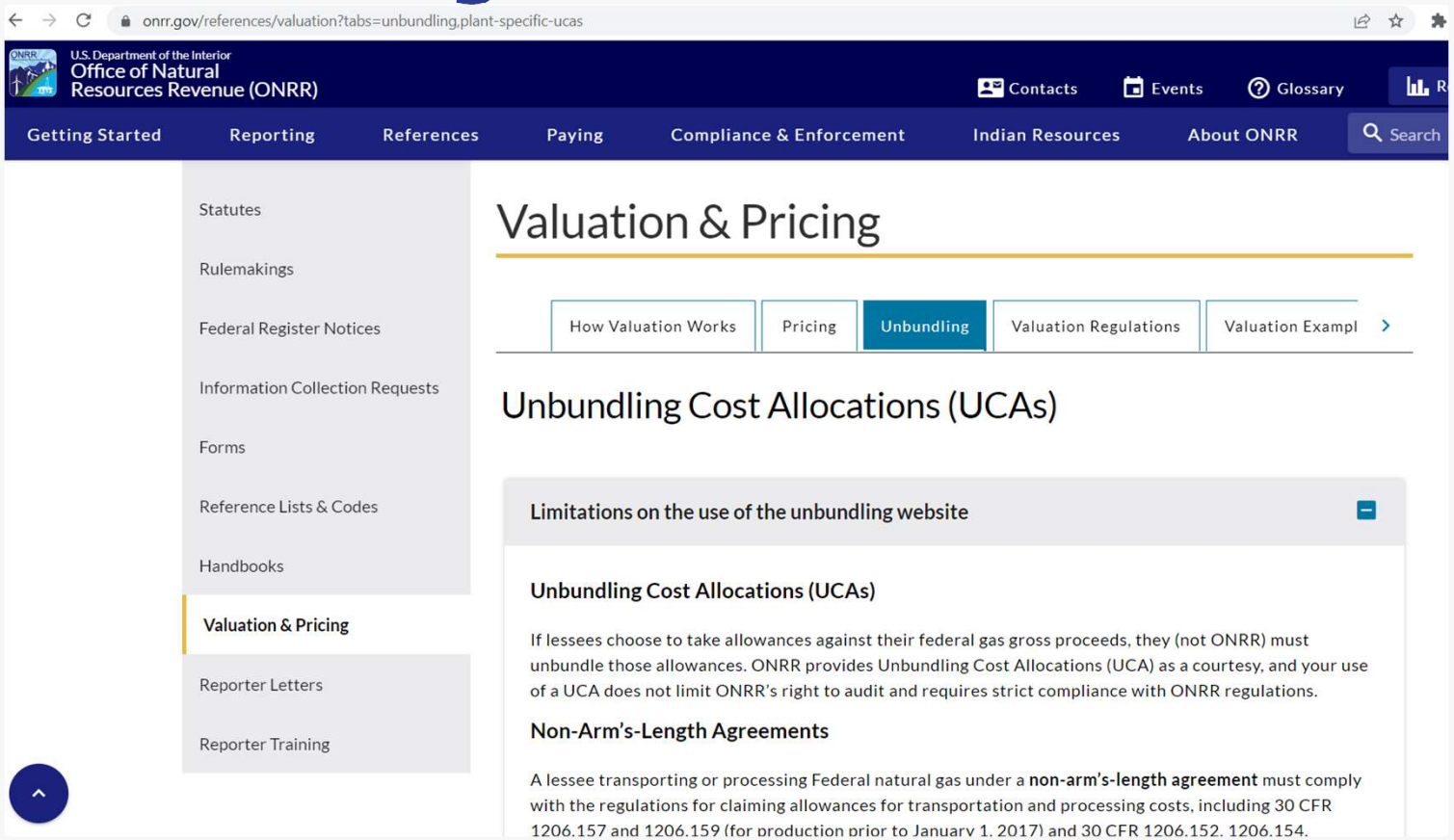
Method Review

- Methods reviewed by Royalty Valuation Guidance, Team C
  - Company may submit an unbundling method for review proactively
    - Team C can provide guidance
    - Still subject to review and audit
  - Method submitted under audit
    - Provide guidance to the auditors

Method Reviews

- What do we look for?
  - Write-up
  - Contracts
  - Statements
  - Assumptions made
  - Analysis
  - Supporting documentation

Unbundling on ONRR.GOV



[ONRR.gov Unbundling Page]

How ONRR Calculates UCAs

- Collect data on gas plant from operator
  - Process flow diagrams, equipment specifications, gas specifications
- Use engineering software to model the gas plant
- Use replacement cost data for equipment
  - Separate into disallowed and allowed equipment
- Determine fuel usage for equipment
  - Separate into disallowed and allowed equipment

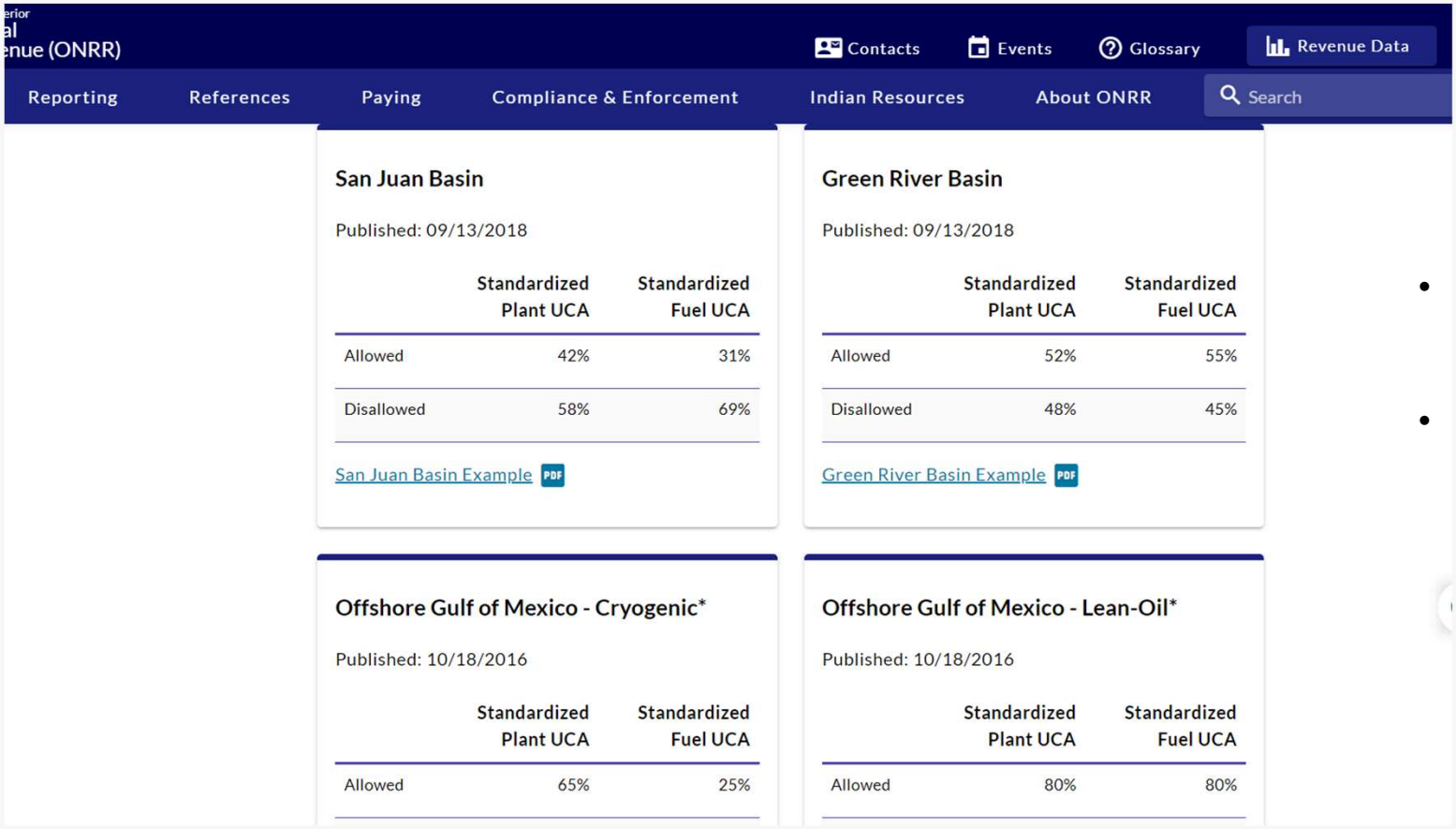
ONRR UCA – Chipeta Gas Plant

CHIPETA GAS PLANT UNBUNDLING COST ALLOCATION							
CHIPETA PLANT COST ALLOCATION							
YEAR	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Allowed Costs	62%	62%	62%	62%	62%	62%	62%
Disallowed Costs	38%	38%	38%	38%	38%	38%	38%
	100%	100%	100%	100%	100%	100%	100%
Fuel Allowed	62%	62%	62%	62%	62%	62%	62%
Fuel Disallowed	38%	38%	38%	38%	38%	38%	38%
	100%	100%	100%	100%	100%	100%	100%
Electricity Allowed	3%	3%	3%	3%	3%	3%	3%
Electricity Disallowed	97%	97%	97%	97%	97%	97%	97%
	100%	100%	100%	100%	100%	100%	100%

NOTE: Electricity has a separate UCA

Chipeta Plant Specific UCA on ONRR.Gov

Standardized UCAs



- Based on geographical area and gas plant technology
- Currently there are ones for:
  - Offshore
  - Green River Basin
  - San Juan Basin

ONRR.gov Standardized UCA Landing Page

FAQs

- If there is a published plant specific UCA, can I use that UCA for a different plant?
  - No
- What should I do if there is a plant specific UCA and a standardized UCA for my basin?
  - You should use the plant specific UCA

Options

- Use an ONRR UCA, if you have a federal lease and there is a UCA applicable to your situation
- Develop a ***reasonable*** unbundling method
- Take no allowances

Abbreviations

Abbreviation	Definition
CAP	Central Accumulation Point
CO_2	Carbon Dioxide
EIA	Energy Information Administration
H_2S	Hydrogen sulfide
UCA	Unbundling Cost Allocation
MCF	One thousand cubic feet of natural gas
ONRR	Office of Natural Resources Revenue
POP	Percent of Proceeds
psig	Pounds per square gauge

Questions??

ONRRUNBUNDLING@ONRR.GOV