



# **Southern Ute Indian Tribe Air Quality Program**

**Environmental Programs Division  
Air Quality Program**

**Presented by: Chris Ellis and Danny Powers  
November 10, 2015**

# Air Quality Program Overview

- **Ambient Air Quality Monitoring**
- **Air Quality Management**

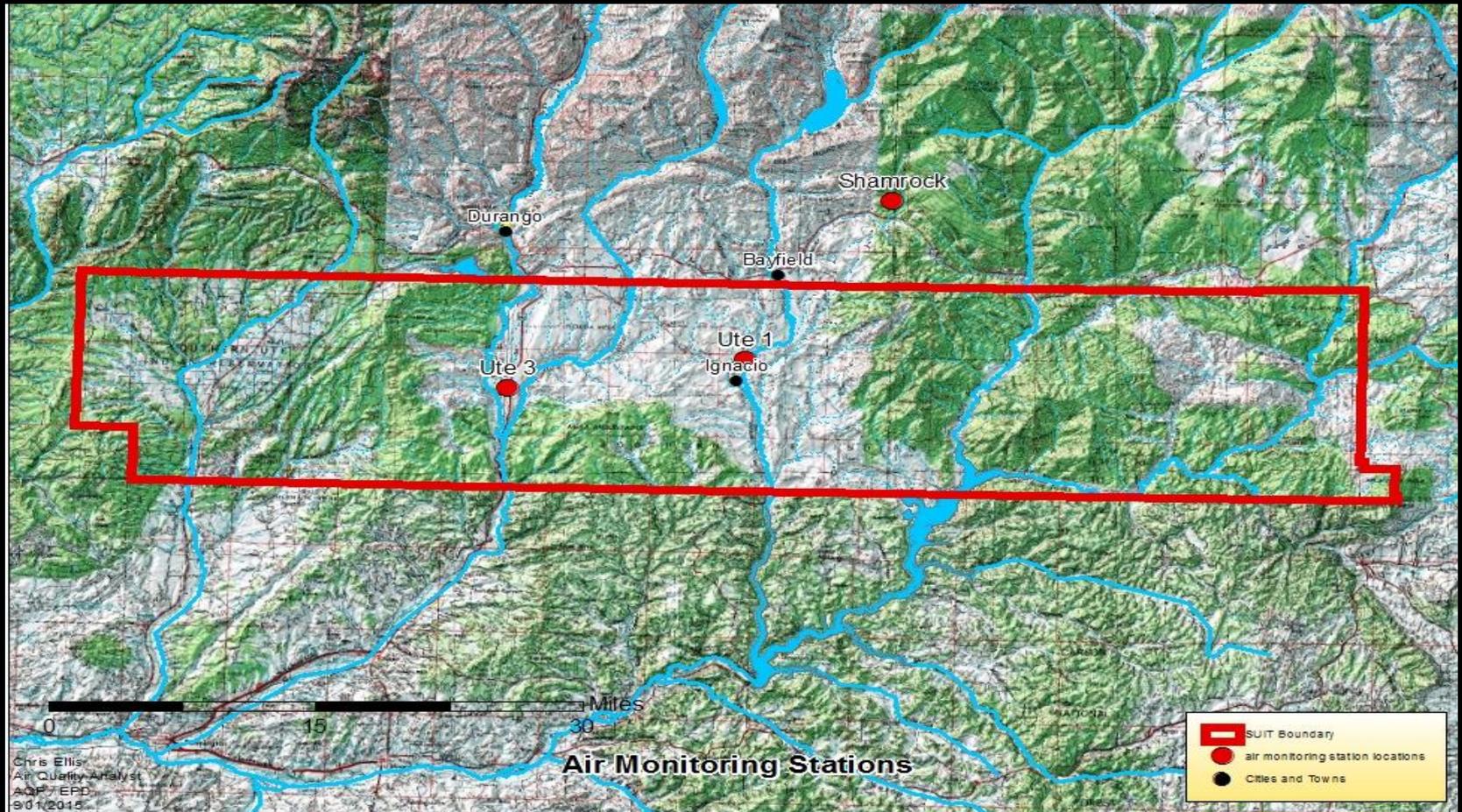


Buckskin Charlie - Jeremy Wade Shockley/Southern Ute Drum

# Air Quality Monitoring

- Two ambient air monitoring stations
  - Ute 1 and Ute 3
- Monitor for the following gaseous pollutants
  - Ozone, Nitrogen Dioxide, and Carbon Monoxide
- PM2.5 monitoring
- Meteorological Monitoring
  - WS, WD, RH, ambient temp., solar radiation, precipitation

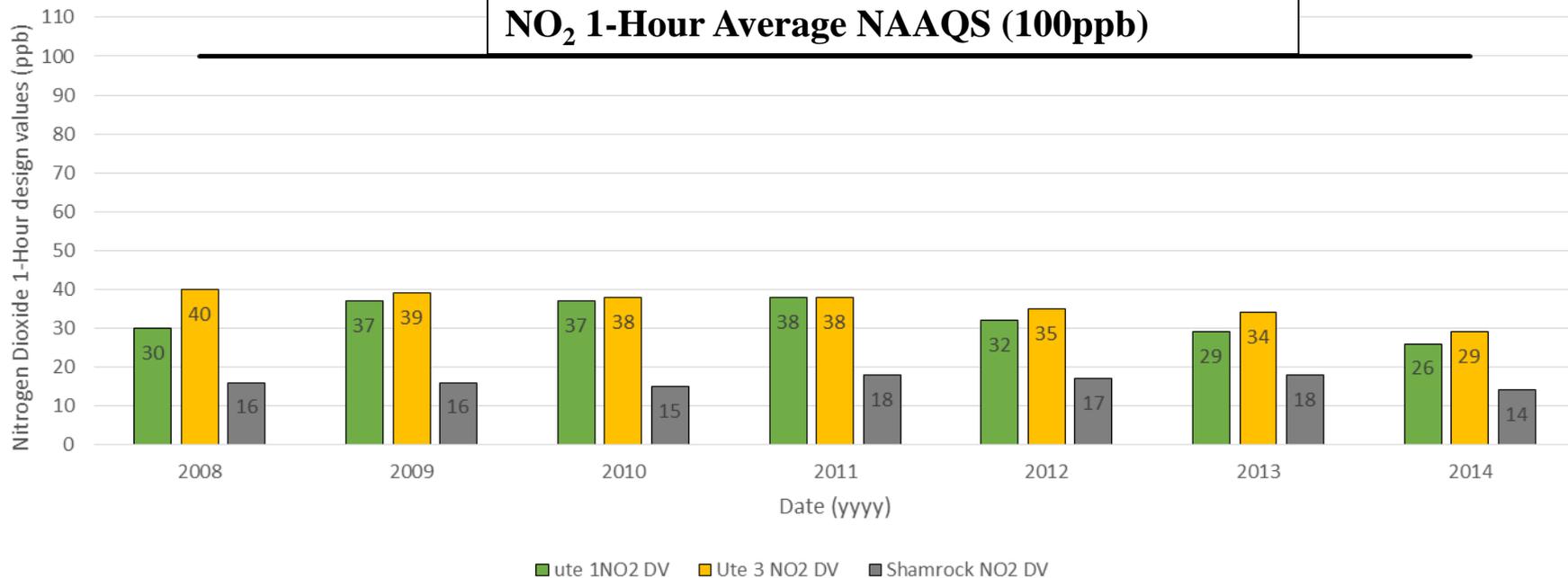
# Ambient Air Monitoring Station Locations



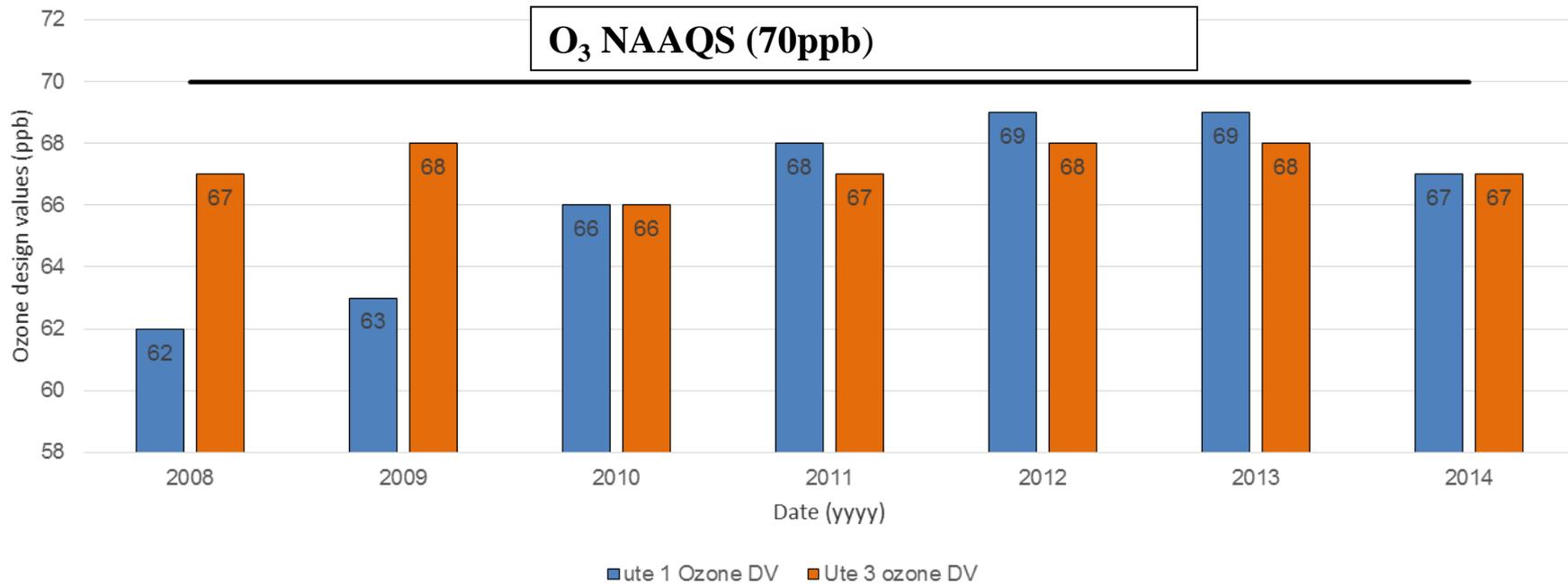
# 2008 to 2014 Ambient Air Monitoring Data Results/ NAAQS Comparison



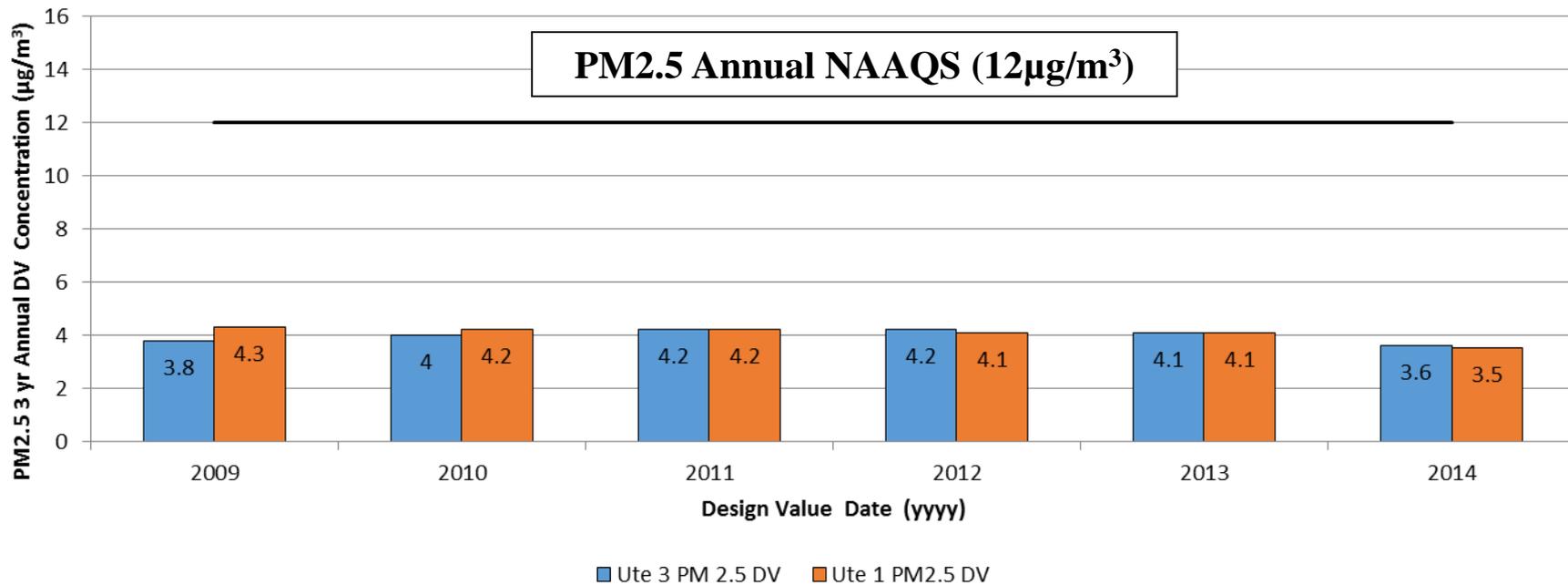
## NO<sub>2</sub> 1-Hour Average NAAQS (100ppb)



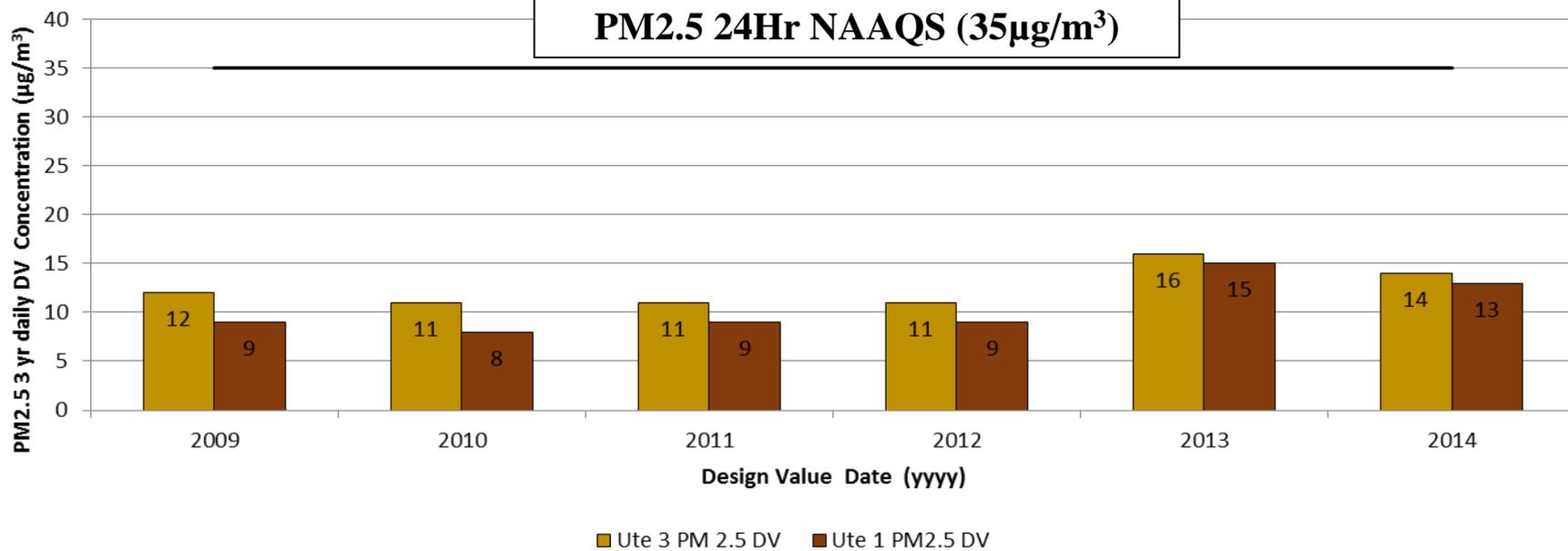
## O<sub>3</sub> NAAQS (70ppb)

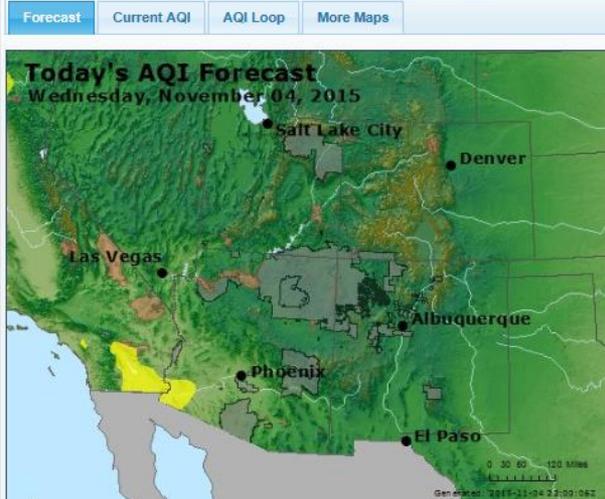


### PM2.5 Annual NAAQS (12 $\mu\text{g}/\text{m}^3$ )



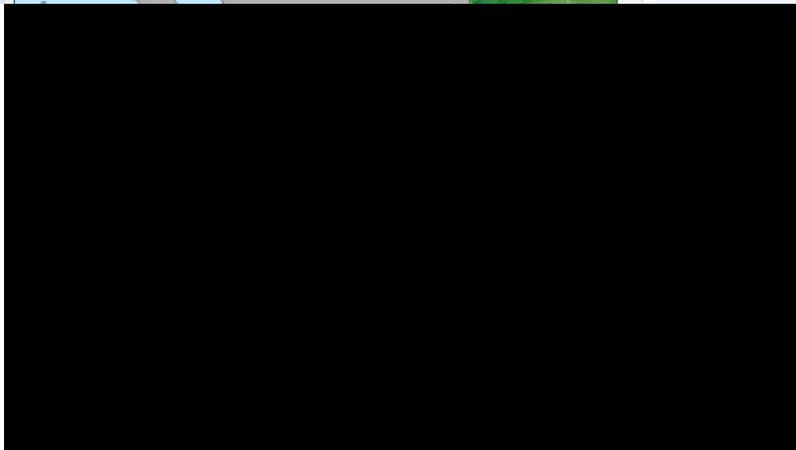
### PM2.5 24Hr NAAQS (35 $\mu\text{g}/\text{m}^3$ )





Click on the city name for more detailed information.

	FORECAST		CURRENT AQI
	Wed Nov 4	Thu Nov 5	
<a href="#">Colorado River Valley</a>	Good	Good	3
<a href="#">Colorado Springs</a>	Good	Good	32
<a href="#">Denver</a>	Good	Good	37
<a href="#">Fort Collins</a>	Good	Good	25
<a href="#">Four Corners Area</a>	Good	Good	36
<a href="#">Grand Junction</a>	Good	Good	6
<a href="#">Greeley</a>	Good	Good	22
<a href="#">Mesa Verde National Park</a>	n/a	n/a	36
<a href="#">Rocky Mountain National Park</a>	46	44	29
<a href="#">Southern Ute Indian Reservation</a>	Good	Good	20



Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>..air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

# Reporting to AirNow

- AQI
- AirNow.gov

# SUIT's Role in Air Quality Management on the Southern Ute Indian Reservation

- ❑ SUIT/CO Environmental Commission
- ❑ Reservation Air Code
- ❑ Title V Operating Permit Program
- ❑ Program Development

# SUIT/CO Environmental Commission



- Commission created by Intergovernmental Agreement (IGA) between Tribe and State in 1999 and supported by Federal legislation
- IGA established a unified air quality program within the exterior boundaries of the Reservation
- 3 State-Appointed and 3 Tribally-Appointed Commissioners
- Prescribes air quality control programs for the reservation
- Programs administered by the Reservation Air Program (SUIT AQP)

# Reservation Air Code

- Mechanism for codification of air programs for the Reservation
- Currently contains:
  - General Provisions
  - Title V operating permit program
  - New Source Performance Standards
  - National Emission Standards for Hazardous Air Pollutant standards

# Title V (Part 70) Operating Permit Program



# Program Approval and Implementation

- ❑ March 2, 2012— EPA approved the Tribe's Title V Operating Permit Program Application and Treatment As a State Application
- ❑ Authorized full permitting, compliance, and enforcement authority under Title V
- ❑ Completed transition of all permits from EPA in March, 2015
- ❑ Began compliance inspections in 2014

# What is a Title V Program?

- ❑ Required by Title V of the CAA
- ❑ Operating Permit Program for “Major Sources”
- ❑ Incorporates all “applicable requirements” into one permit to improve compliance
- ❑ Requires source to self-report compliance
- ❑ Program funded by Emission Fees

# Program Elements

- ❑ Permitting
  - ❑ Currently 37 Title V sources on the SUIR
- ❑ Compliance
  - ❑ Each permitted source inspected every other year
- ❑ Enforcement
  - ❑ SUIR Enforcement Policy and Procedures Manual outlines procedures to bring non-compliant sources into compliance

# Who's Subject?

## ❑ “Major Sources”

Sources with the Potential to Emit:

- ❑ **100** TPY of a single Criteria Pollutant

**NO<sub>x</sub>, SO<sub>2</sub>, CO, PM<sub>2.5</sub>, PM<sub>10</sub>**

OR

- ❑ **10** TPY of a single Hazardous Air Pollutant (HAP)

OR

- ❑ **25** TPY of combined Hazardous Air Pollutants

**188 Listed HAPs**

- ❑ Must apply for permit within 1-year of becoming major source

# Types of Title V Sources on the Southern Ute Reservation

- ❑ 37 Sources, including:
  - ❑ 32 Natural Gas Compressor Stations
  - ❑ 3 Natural Gas Treatment Plants
  - ❑ 1 Natural Gas Processing Plant
  - ❑ 1 Municipal Solid Waste Landfill

# Typical Emissions Sources at Natural Gas Production Facilities

- ❑ Compressor Engines
  - ❑ Reciprocating Internal Combustion
  - ❑ Turbines
- ❑ Tri-Ethylene Glycol Dehydration Units
- ❑ Tank vents
- ❑ Fugitive Emissions

# Reciprocating Compressor Engine – NO<sub>x</sub>, CO, VOC, HAP (formaldehyde)



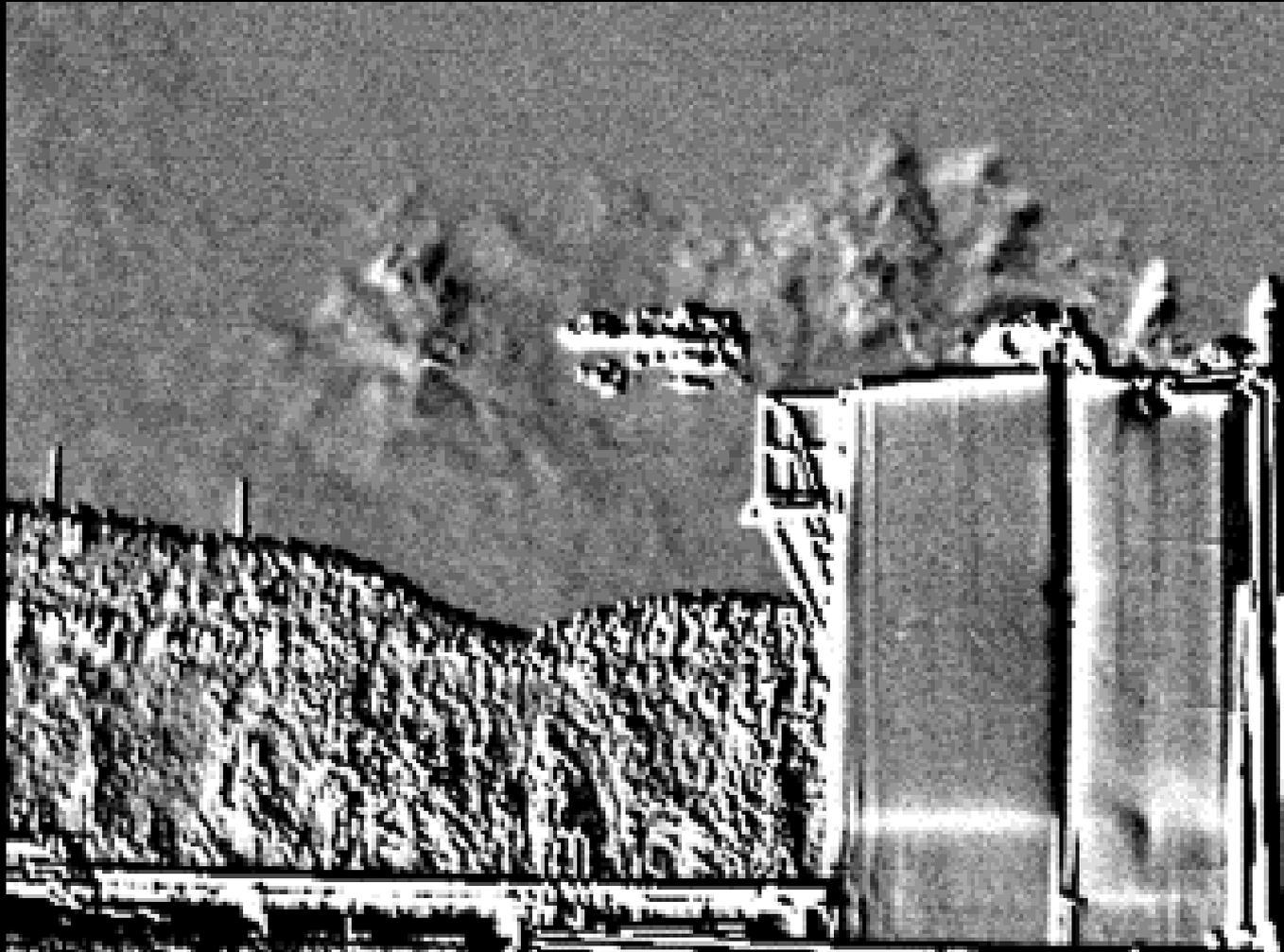
# Turbine - NO<sub>x</sub>, CO, VOC, HAP (formaldehyde)



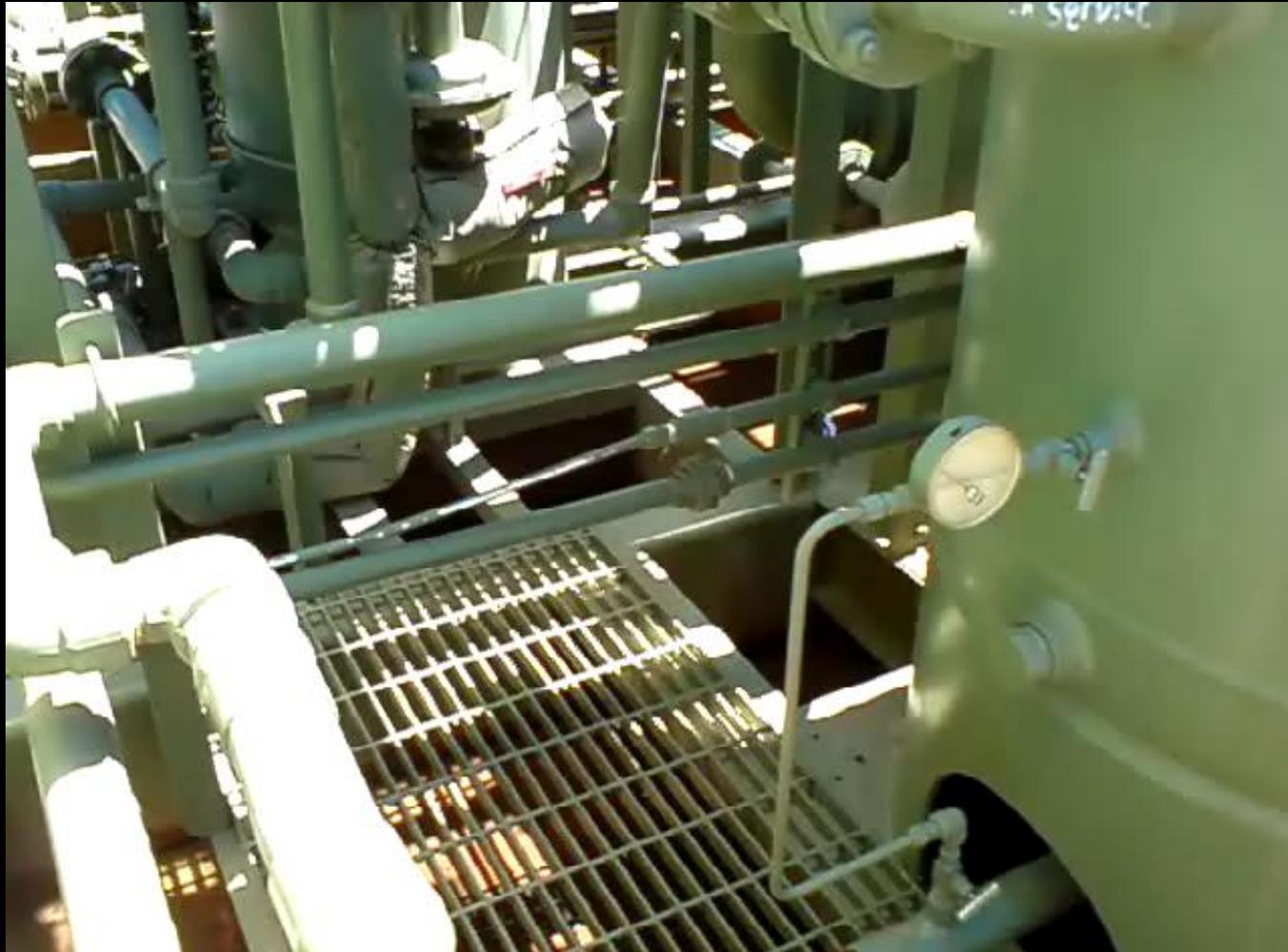
# Tri-ethylene Glycol Dehydrator – VOC and HAP (BTEX)



# Tank Emissions – VOC and HAP (BTEX)



# Fugitive Emissions – VOC and HAP



# Benefits of the IGA and the Tribe's Part 70 Program

- ❑ Unified regulatory authority simplifies permitting on the SUIR
- ❑ Local presence allows greater interaction and more frequent source compliance inspections
- ❑ Title V specific staff allows timely permit issuance, compliance assistance, and response to inquiries
- ❑ Improved Air Quality

# Program Development/Next Steps

- ❑ Development of comprehensive emission inventories for Southern Ute Reservation
- ❑ Monitoring the development of the Federal Tribal Minor New Source Review Program for Oil and Gas Production sector
- ❑ Continuing to identify and understand sources of air emissions on the Reservation



# THANK YOU

Southern Ute Indian Tribe

Environmental Programs Division

Air Quality Program

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