

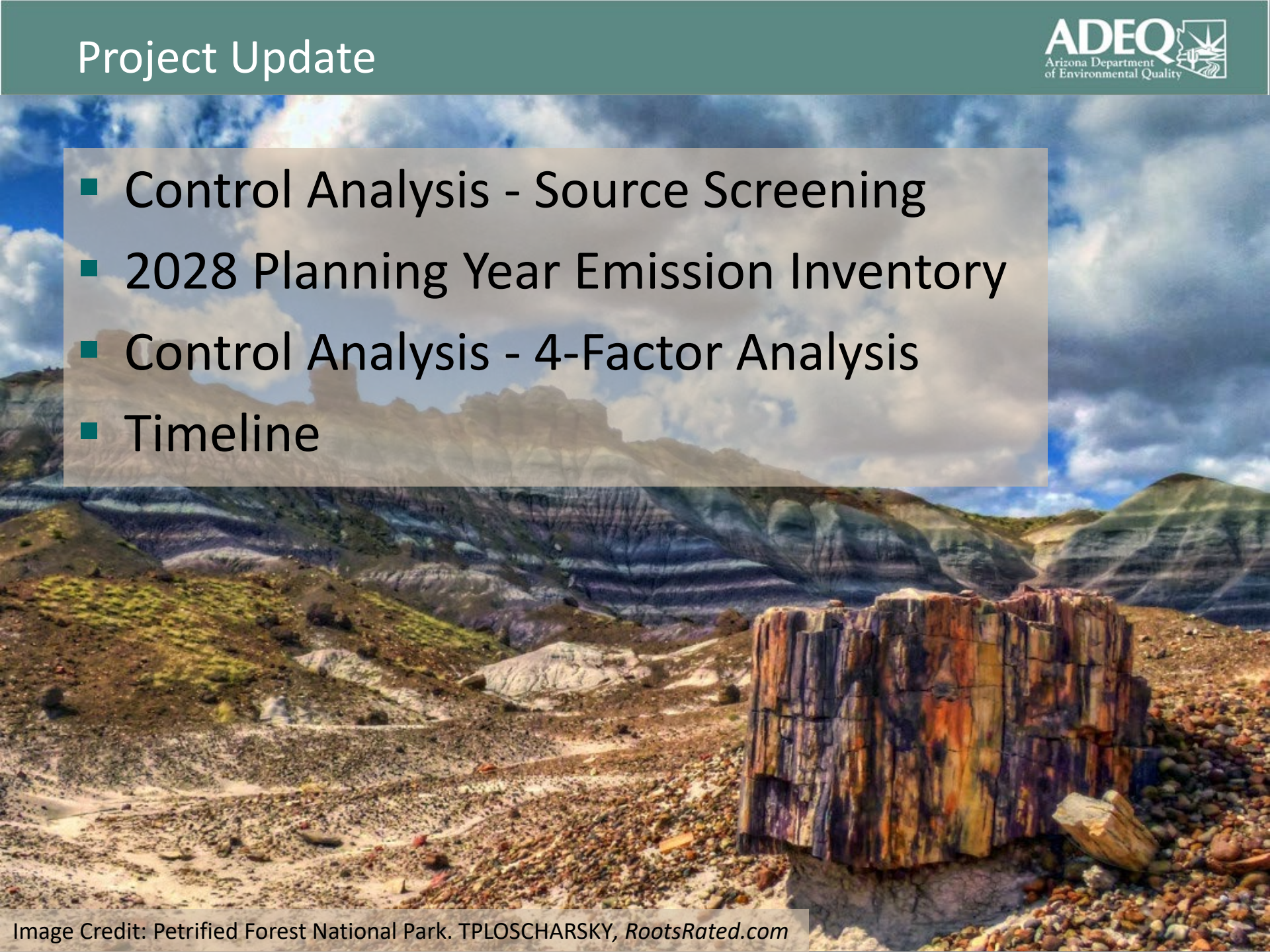


2021 Arizona Regional Haze SIP 3rd Stakeholder Meeting

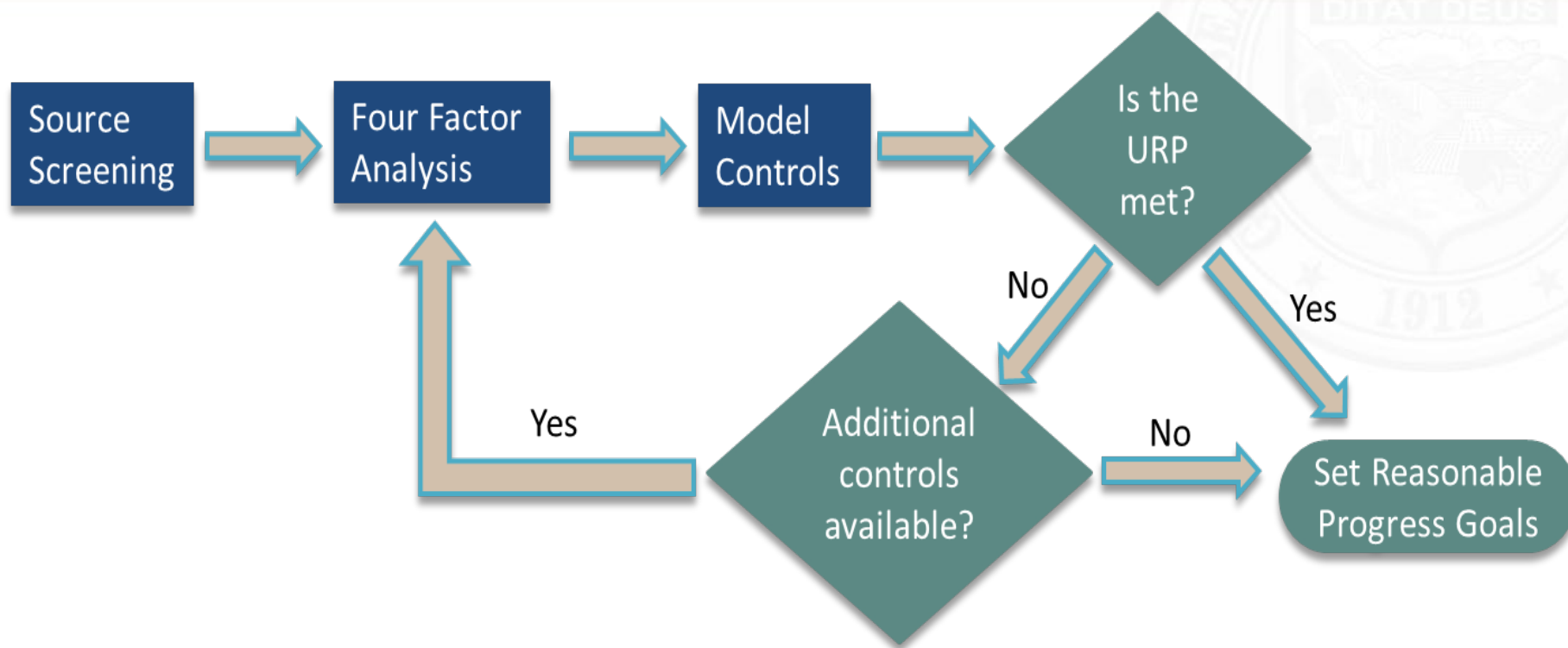
August 19th, 2019

Stakeholder Values	Design Principles
Reasonable progress toward visibility goals	Develop a control strategy that ensures continued progress towards State visibility goals.
EPA approval of SIP	Involve EPA early and often in development cycles for controls and SIP revision.
Produce accurate modeling	Perform model evaluation and calibration using the most recent, complete, and accurate datasets available.
Consider visibility improvement as focus of control analysis	When developing a control analysis methodology, evaluate visibility as a potential screening and/or reasonable progress consideration.
Follow the goals of the Regional Haze roadmap	Where reasonable, ensure the State process is in-line with EPA's recommendations.
Take credit for existing programs	Include existing controls and emission reduction programs in modeling and control analysis.
Affordability for industry and general public	Collect stakeholder feedback on and evaluate the cost of controls during the control analysis. Choose those controls that balance environmental benefit with cost.
Account for international transport	Evaluate available modeled international impacts and attempt to account for transport in visibility analysis.
Cost equity between sources	Stakeholders to lead conversations considering cost equity.
Reach out to sources for future emissions projections	Allow stakeholders ability to evaluate projected emissions and methodologies and provide feedback.

- Control Analysis - Source Screening
- 2028 Planning Year Emission Inventory
- Control Analysis - 4-Factor Analysis
- Timeline



Control Analysis Flow



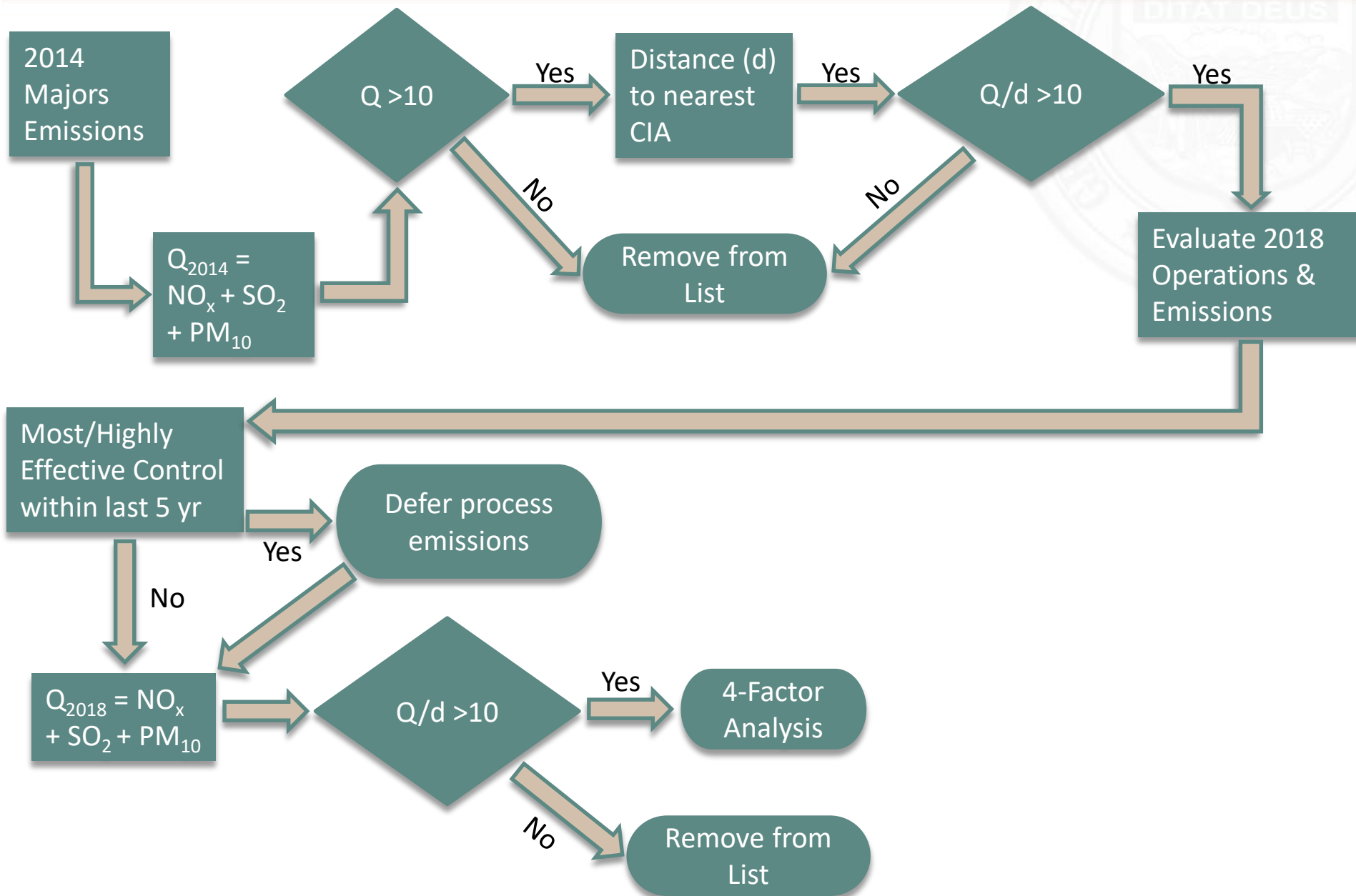
Regional Haze 4 factors:

1. Cost of compliance
2. Time necessary for compliance
3. Energy and non-air quality environmental impacts
4. Remaining useful life of the source

(Optional) – Visibility impact modeling

- Impetus for Q/d:
 1. Surrogate for baseline visibility impact
 2. Utilized in approved Round 1 FIP and SIP actions
 3. Federal Land Manager recommended approach
 4. WRAP recommended approach
 5. Recognized in 2016 EPA Regional Haze guidance
- Stakeholder feedback:
 - Drop Q/d threshold from 20 to 10
 - Consider more recent emissions than 2014
 - Do not target previously controlled sources

Point Source Screening Flowchart




Q/D Methodology Changes

Screening Step	Initial Approach	Revised Approach	Support for change
Q/D Threshold	20	10	<ul style="list-style-type: none">•Stakeholder feedback in support of 10 threshold•10 is more in-line with other States
Treatment of Effectively Controlled Sources	None	Remove process emissions that were BART, Reasonable Progress, BACT, or NAAQS SIP controlled in last 5 years.	<ul style="list-style-type: none">•Leverages EPA's exclusion of most and highly effectively controlled sources•Focuses control measure analysis on previously uncontrolled sources•Reduces risk of operational uncertainty for sources
Emission Year Dataset	2014	Evaluation of 2014 and 2018 to account for sources that have undergone significant operational changes in recent years	Stakeholders would like to account for recent control installations at facilities

Point Source Screening Results

Facility
ASARCO – Hayden Smelter
ASARCO – Mission Complex
ASARCO – Ray Complex
CalPortland – Rillito
Drake Cement
EPNG – Williams Compressor
EPNG – Willcox Compressor
FMMI – Miami Smelter
FMMI – Morenci
FMMI – Sierrita Mine
Phoenix Cement – Clarkdale
TEP - Springerville
TEP – Sundt

- The current list represents sources that will need to undergo a 4-factor analysis.
- Sources that have recently installed effective controls will be deferred for future consideration. 

Nonpoint Source Screening Results

Source Sector	SCC	2014 Emissions (tpy)			
		NO _x	PM ₁₀	SO ₂	Q
★ Non-Residential Construction Dust	2311020000	0	15,536	0	15,536
Locomotives – Mobile	2285002006	18,045	541	11	18,597
★ Mining & Quarrying	2325000000	0	44,753	0	44,753
★ Paved Road Dust	2294000000	0	14,501	0	14,501
★ Unpaved Road Dust	2296000000	0	107,924	0	107,924
Vegetation and Soil – Biogenics	2701220000	13,192	0	0	13,912

★ Sources for which ADEQ is currently evaluating controls. Additional sectors will be evaluated for controls as time permits.

Emission Inventory Development Timeline

August 1st, 2019

- 2028 Emission Inventory projection methods posted on webpage for stakeholder review

August 31st, 2019

- ADEQ provides 2028 on-the-books and on-the-way emission inventory to WRAP (*Note: these are not enforceable emission limits*)

December 1st, 2019

- Source supplied 4-factor analyses due to ADEQ for review

January 15th, 2020

- ADEQ provides 2028 controlled emission inventory to WRAP

4-Factor Analysis (Point Sources)

- ADEQ informed sources subject to 4-factor analysis on 7/16/2019
- ADEQ is accepting, by December 1st 2019, source developed 4-factor analyses for consideration
- ADEQ plans to work with sources in the development of 4-factor analyses to ensure products are accurate, comprehensive, and approvable
- ADEQ will also provide sources with a list of facility specific processes to consider for the 4-factor analysis
 - Process list will need source review in order to ensure most and highly effective controls are accounted for

4-Factor Analysis (Point Sources) Resources

Previous 4-factor analyses:

- [Arizona Regional Haze Federal Implementation Plan](#)

Control Technology resources:

- [RACT, BACT, LAER Clearinghouse](#)

Cost of Controls:

- [EPA's Cost Manual](#) (costs will be updated as needed)

Regional Haze Guidance:

- [2016 Draft Guidance, Chapter 7](#)
- Final guidance will take precedence, when available

- Nonpoint analysis will consider available control measures
- The analysis will follow the requirements of a 4-factor analysis
- ADEQ will consider areas of influence around coarse mass impacted monitors
 - This area of influence is currently set at 50 km; however, ADEQ will accept adequately justified feedback for other distances

■ Nonpoint sector control evaluation will follow:

Step 1

- List sector controls currently in place

Step 2

- Research available sector controls

Step 3

- Evaluate technical feasibility of available controls

Step 4

- Evaluate 4-factors for remaining controls
- Cost of compliance will be evaluated for initial cost, annual cost, and cost per ton (\$/ton) of emissions reduction

- **2014 Base year modeling**
 - Status: Completed
 - Purpose: Model Calibration
- **Representative year modeling**
 - Status: Data supplied to contractor, modeling underway
 - Purpose: Additional model calibration, platform for 2028 projections
- **2028 On-the-Books & On-the-Way modeling**
 - Status: State & WRAP emission projection underway - 8/31 deadline
 - Purpose: Evaluate visibility with currently planned controls
- **2028 Control Scenario Modeling**
 - Status: Control analysis underway - 1/15/2020 deadline for model inputs
 - Purpose: Evaluate visibility with 4-factor controls
- **ADEQ supplemental modeling**
 - Status: ADEQ will work towards a contract in early 2020
 - Purpose: More detailed source apportionment for Arizona sources

Arizona Stakeholder/Planning Process

Planning Task	End Date	Tentative Stakeholder Feedback Deadline	Stakeholder Input
Source Screening	Aug 31 st , 2019	Q2 – 2019	Methodological approach
2028 Emission Inventory	Sept 1 st , 2019	Aug 23 rd , 2019	Facility emission & control information
Control Measure Analysis	Jan 15 th , 2019	Dec 1 st , 2019	4-Factor submissions & supporting information
2028 Control Scenarios Modeling	Mar 2020	Dec 1 st , 2019	Controlled modeling parameters
Public Comment Period	May 2021	May 2021	General Stakeholder feedback

SIP Submittal Date is 7/31/2021

EPA Reform Roadmap Schedule

- ~~Dec 2018 – Finalized tracking metric~~
- Spring 2019 – Finalized guidance & natural visibility
- Summer 2019 – Revised visibility modeling
- ??? – Revised Rule

Thank you

Questions?

Please contact:

Ryan Templeton - (602) 771-4230 – Templeton.Ryan@azdeq.gov

Elias Toon – (602) 771-4665 - Toon.Elias@azdeq.gov

ADEQ RH 2021 Planning Webpage - <http://www.azdeq.gov/2021-regional-haze-sip-planning>