

COVID-19 Air Quality Inspection / Compliance Determinations

AAPCA 2021 Fall Business Meeting



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Air Compliance Officer
Facilities Emissions Control Section

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Unit Manager
Vehicle Emission Control Section



- Problem: Covid-19 restrictions and safety concerns for both employees and customers during inspections and compliance determinations
- Solution: Virtual Inspections and File Reviews

Air Compliance Unit



Air Permits Unit



Mobile Source Control Unit



Virtual Inspections

CAT 1 Toward the NW.jpg	JPG File	728 KB	No	731 KB	1%	4/23/2021 1:46 PM
CAT 1 Toward the SE.jpg	JPG File	541 KB	No	544 KB	1%	4/23/2021 1:48 PM
CAT 2 Toward the SE.jpg	JPG File	651 KB	No	651 KB	1%	4/23/2021 1:46 PM
Cat 2 Toward the SW.jpg	JPG File	678 KB	No	679 KB	1%	4/23/2021 1:46 PM
CAT 3 & 4 Due South.jpg	JPG File	727 KB	No	727 KB	1%	4/23/2021 1:50 PM
CAT 4 Due West.jpg	JPG File	825 KB	No	825 KB	1%	4/23/2021 1:47 PM

ARIZONA

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Your Agreement Has Been Sent for Signature!

- **Adobe Sign** has sent **Notice of Inspection Rights Form** to [REDACTED] for signature.
- When [REDACTED] completes **Notice of Inspection Rights Form** all parties will receive a final PDF copy by email.

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Signature
Jan 05, 2021 09:56:47 AM

Continental - facing south
water truck for dust control

Air Compliance Unit

Digital Opacity Camera System Observations (DOCS II)



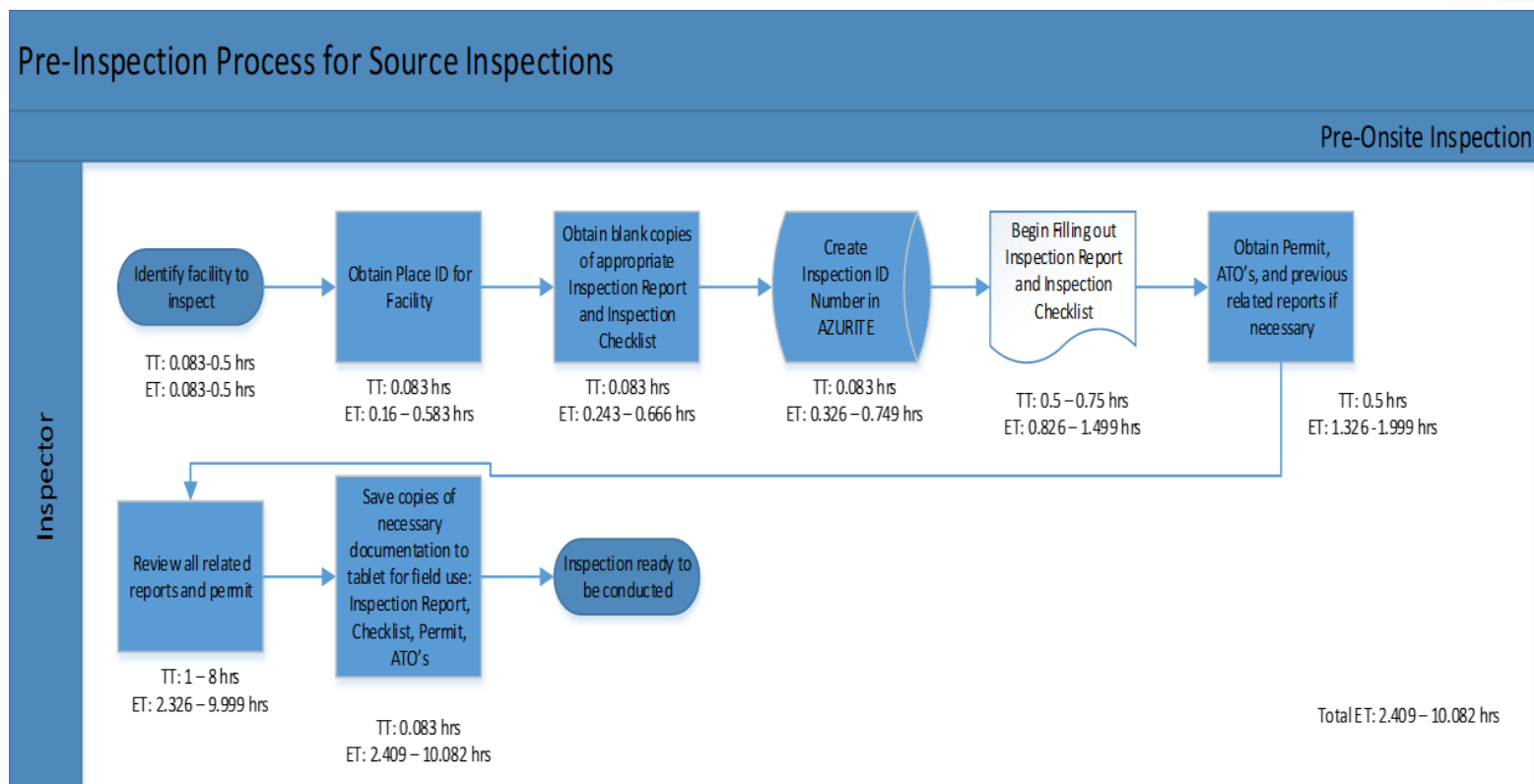
VISIBLE EMISSION OBSERVATION FORM

Method Used Method 9		
Equipment Owner Start [Redacted]		
Facility Name [Redacted]		
EO Street Address [Redacted]		
EO City Tempe	EO State AZ	EO Zip 85284
Process asphalt silo	Unit N/A	Operating Mode operating
Control Equipment N/A		Operating Mode N/A
Describe Emission Point blue asphalt smoke		
Height of Emiss. Pt. Start 37.22 End Same	Height of Emiss. Pt. Rel. to Observer Start 33.22 End Same	
Distance to Emiss. Pt. Start 622.82 End Same	Direction to Emiss. Pt. (Degrees) Start 284.14 End Same	
Vertical Angle to Obs. Pt. Start 2.99 End Same	Direction to Obs. Pt. Start 304 End Same	
Distance and Direction to Observation Point from Emission Point Start 217.48 / 20.61 End Same		
Describe Emissions Start lofting End Same		
Emission Color Start Dust End Same	Water Droplet Plume Attached: () Detached: (X) N/A: (X)	
Describe Plume Background Start sky End Same		
Background Color Start Black End Same	Sky Conditions Start Night End Same	
Wind Speed Start 5 End Same	Wind Direction Start 160 End Same	
Ambient Temp. Start 87 End Same	Wet Bulb Temp. Start 66 End Same	RH Percent Start 53 End Same
Longitude [Redacted]		
Latitude [Redacted]		
Declination [Redacted]		
Notes QC by RGV		



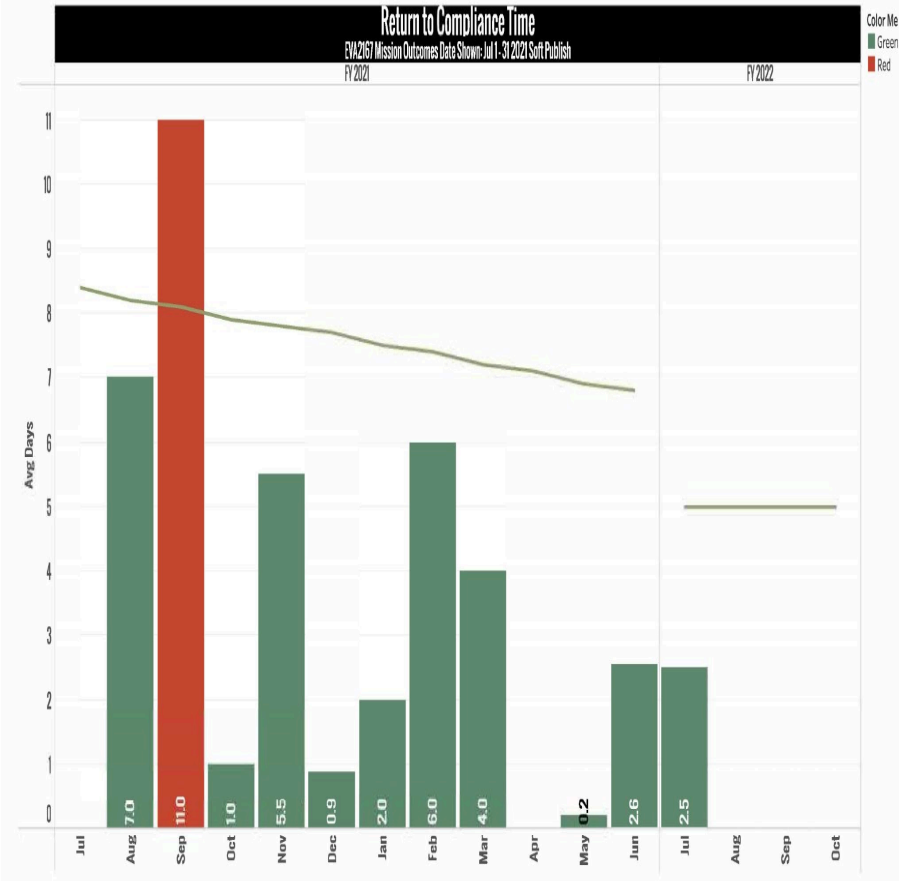
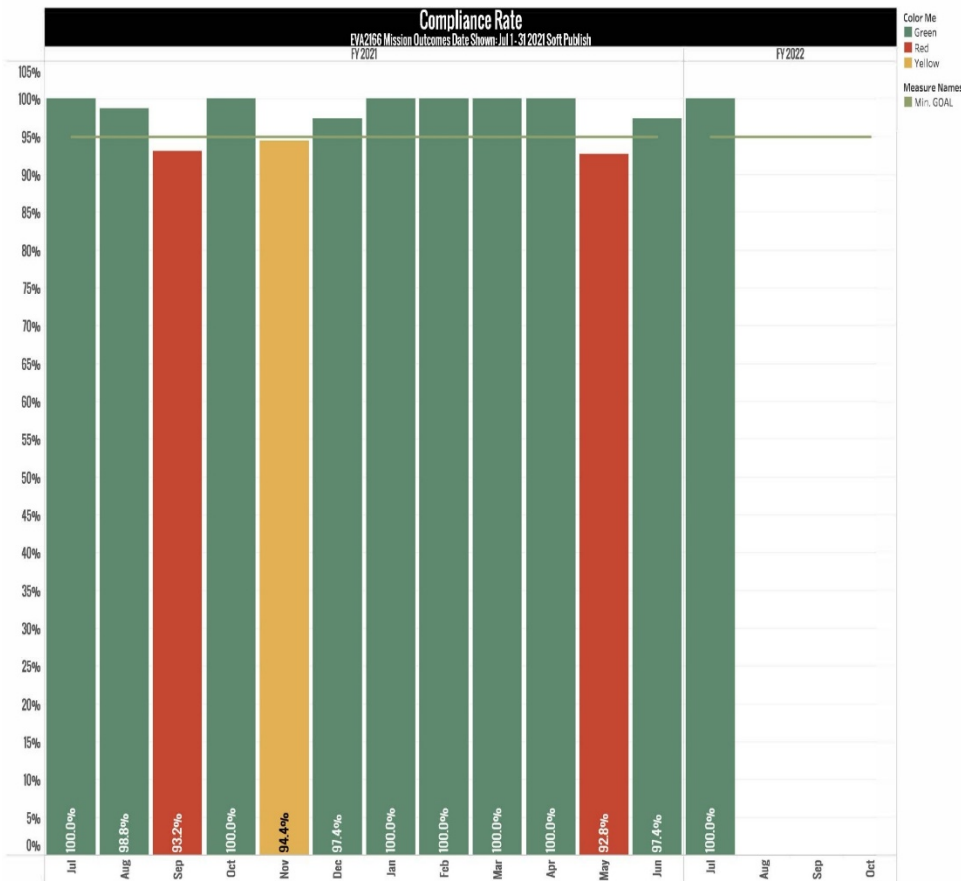
Form Number					Page of				
Continued on VEO Form Number									
Observation Date 8/5/2021			Time Zone MST		Start Time 01:27:11		End Time 01:34:01		
							Comments		
1	30	10	10	20					
2	40	5	15	10					
3	15	10	5	5			Avg Opacity = 16.46		
4	40	10	40	10					
5	10	5	20	15					
6	10	10	10	40					
7									
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Observers Name (Print) Casey Bryan									
Observers Signature Casey Bryan							Date 8/5/2021		
Organization AZDEQ									
Certified By AZDEQ Quality							Date 8/9/2021		

- File Review Plus
 - Inspect Facility maintained emission reporting document(s)
 - View documents virtually prior to scheduled virtual compliance inspection
 - Reduced time onsite and allowed for efficient virtual inspections



Vehicle Emission Control (VEC)

- Virtual inspections 240 Fleet customers
- Virtual Process for inspector/equipment audits (gas analyzer & opacity meter)



VEC Virtual Equipment Audit Forms/Photos

Virtual Inspection Audits

Gas audit questions

- Did the vehicle pass the inspection?

Gas

- What are the pass/fail emission standards?

CO-1.206 220ppm 1980 & Newer

- Do you know where to find the standards?

Appendix AZ Non-diesel standards

- What if there is no federal emissions label?

Refer to mitchell / All data / prodemand

- If the vehicle has dual exhaust what do you do?

Test Both ex. Pipes take Average of both test

- If the vehicle is bi-fuel, how do you test it?

Vehicle must pass using Both types of fuel, Cannot fail either test, using compressed natural gas / liquid must use a correction of 0.61 to calculate the true HC number result.

Picture of the hose inserted	Picture of Emissions Label
Picture of both Vin's (Door and Dash)	Picture of passing gas cap
Picture of the analyzer readings during Idle	Picture of the analyzer readings at 2500 rpm
Picture of Instrument Cluster during Idle	Picture of Instrument Cluster at 2500 rpm

Equipment Calibration pictures

Picture of connection from analyzer to bottle	Picture of analyzer screen during audit
Picture of Gas Bottle	

Inspector Name: William Pratt Jr.

License Number: 100008D

Signature: William Pratt Jr.

Date Completed: 5/24/21



VEC Virtual Equipment Audit Forms/ Photos



Virtual Inspection Audits

Opacity audit questions

- Did the vehicle pass the inspection?
Yes.
- What are the opacity standards?
40.08
- How did you measure the stack?
Tape measure
- How many snaps are completed during an official emissions test?
3 wide open stacks throttle
- What stack do you test if there is multiple stacks
Test the dirtiest stack

Opacity Audit pictures

Picture of engine label	Picture of OC/CAT (if Equipped)
Picture of print out (Red Mountain only)	Picture of the weather station (Wager only)
Picture of VIN placard in cab	Picture of meter screen reading during test (final)
Picture of stack measurement	

Equipment Calibration pictures

Picture of meter screen during audit (final result)	Picture of Filter
Picture of connection from meter to head	

Inspector Name: William Fritz Jr. License Number: 100089D
Signature: William Fritz Jr. Date Completed: 5/24/21



VEC Virtual Equipment Audit Forms



ADEQ Vehicle Emissions Control Inspector Audit Report

Fleet Name: <i>Lifted Trucks</i>	Fleet #: <i>62928</i>	Fleet Agents Name & Phone #: <i>William Fritz 602-996-5626</i>	Date: <i>5-24-21</i>
Inspector Name: <i>Keith Torres</i>	CFD #: <i>12029</i>	Exp. Date: <i>4/26/2022</i>	License Displayed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OBD	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TRANS	CYL	ID	FUEL	2 ND FUEL	GAS CAP	DLC	KOEO	KOER	READY	EQUIPMENT #

GAS	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TRANS	CYL	ID	FUEL	2 ND FUEL	IDLE HC	IDLE CO	2500 HC	2500 CO	GAS CAP	EQUIPMENT #
AIR	CAT	PCV	EVAP	LL							

OPACITY	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TIME	TEMP	BARO	HUMIDITY	OPAC %	ENG YR	STACK	CIDL	CCV	CAT	EQUIPMENT #

Written Evaluation:

Inspector Signature: *[Signature]* Date: *5-24-21*

Compliance Officer: *[Signature]* OVERALL AUDIT RESULTS: **PASS** **FAIL**



ADEQ Vehicle Emissions Control Inspector Audit Report

Fleet Name: <i>Lifted Trucks</i>	Fleet #: <i>62928</i>	Fleet Agents Name & Phone #: <i>William Fritz 10310 602-996-5626</i>	Date: <i>5-24-21</i>
Inspector Name: <i>William Fritz Sr.</i>	CFD #: <i>10310</i>	Exp. Date: <i>9-2-21</i>	License Displayed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

OBD	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TRANS	CYL	ID	FUEL	2 ND FUEL	GAS CAP	DLC	KOEO	KOER	READY	EQUIPMENT #

GAS	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TRANS	CYL	ID	FUEL	2 ND FUEL	IDLE HC	IDLE CO	2500 HC	2500 CO	GAS CAP	EQUIPMENT #
AIR	CAT	PCV	EVAP	LL							

OPACITY	DATE	VIN	MAKE	MODEL	MODEL YR	ODOMETER					
GVRW	TIME	TEMP	BARO	HUMIDITY	OPAC %	ENG YR	STACK	CIDL	CCV	CAT	EQUIPMENT #

Written Evaluation:

Inspector Signature: *[Signature]* Date: *5-24-21*

Compliance Officer: *[Signature]* OVERALL AUDIT RESULTS: **PASS** **FAIL**

VEC Virtual Fleet Inspector Audit Forms/Photos



Virtual Inspection Audit Form

Date: 5-26-21	Fleet LTF # 62928	Fleet Name: Lifted Trucks
Agent Name: William Fritz		Co-Agent Name:
Inspector Name: Keith Torres		Inspector Name:
Inspector Name: William Fritz Jr.		Inspector Name:
Inspector Name:		Inspector Name:

Inspector / Equipment Performance Audit Evaluation

Gas Audit Questions		Yes	No	N/A
1	Did the vehicle pass the inspection	x		
2	Did the inspector know what are the pass/fail emission standards	x		
3	Did the inspector know where to find the standards	x		
4	Did the inspector know what to do if there is no federal emissions label	x		
5	Did the inspector know what to do if the vehicle has dual exhaust what do you do	x		
6	Did the inspector know what to do if the vehicle is bi-fuel, how do you test it	x		
7	Were all required pictures taken	x		

OBD II Audit Questions		Yes	No	N/A
1	Was the vehicle ready to test			
2	Was the MIL commanded on/off			
3	Was the DLC tampered			
4	Did the vehicle pass the inspection			
5	Did the inspector know how many unready monitors are allowed for this year of vehicle			
6	Were all required pictures taken			

Opacity Audit Questions		Yes	No	N/A
1	Did the vehicle pass the inspection	x		
2	Did the inspector know what are the pass/fail emission standards	x		
3	Did the inspector know how many snaps are completed during an official emissions test	x		
4	Did the inspector know which stack do you test if there are multiple stacks	x		
5	Did the inspector know how did you measure the stack	x		
6	Were all required pictures taken	x		

Equipment Calibrations Gas/Opacity		Yes	No	N/A
1	Picture of Bottle/Filter Taken	x		
2	Picture of Connection Taken	x		
3	Picture of Analyzer/Meter screen taken during calibration	x		

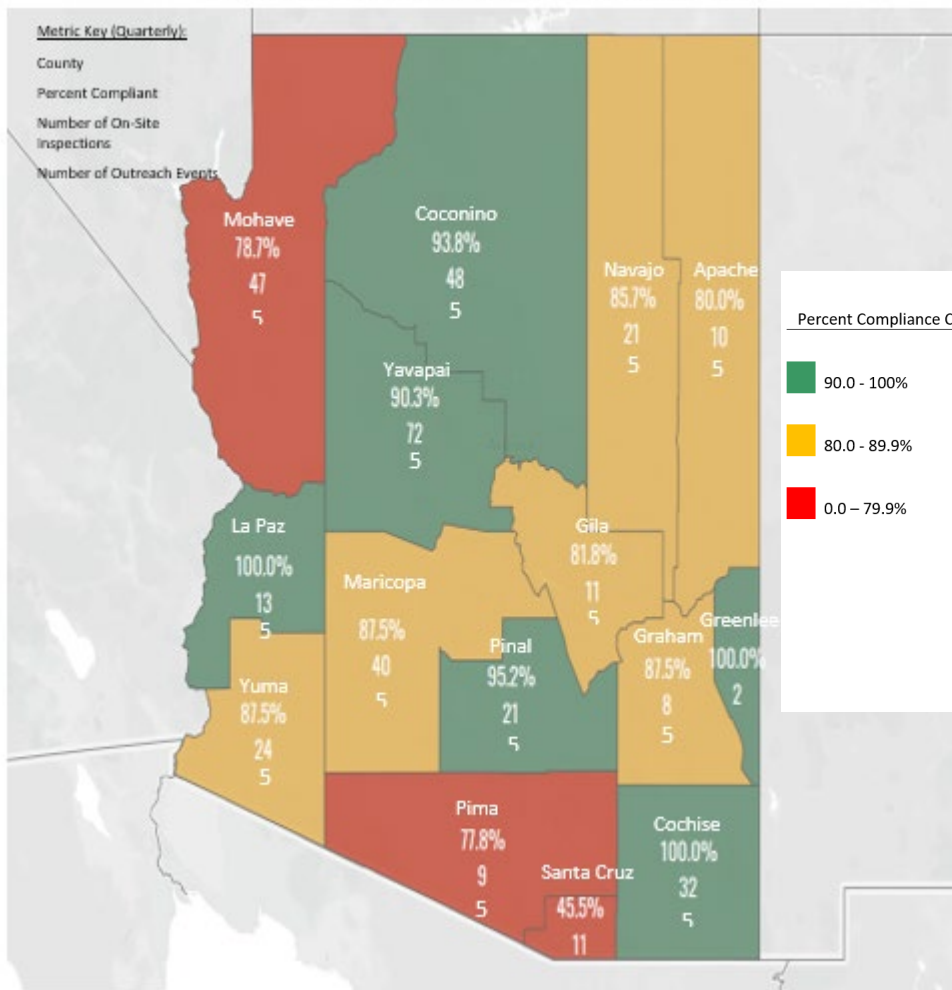
Comments:

Inspectors did 2 inspections Gas/Opacity



■ Virtual Compliance Assistance Outreach

Effect of Outreach to Compliance Rates



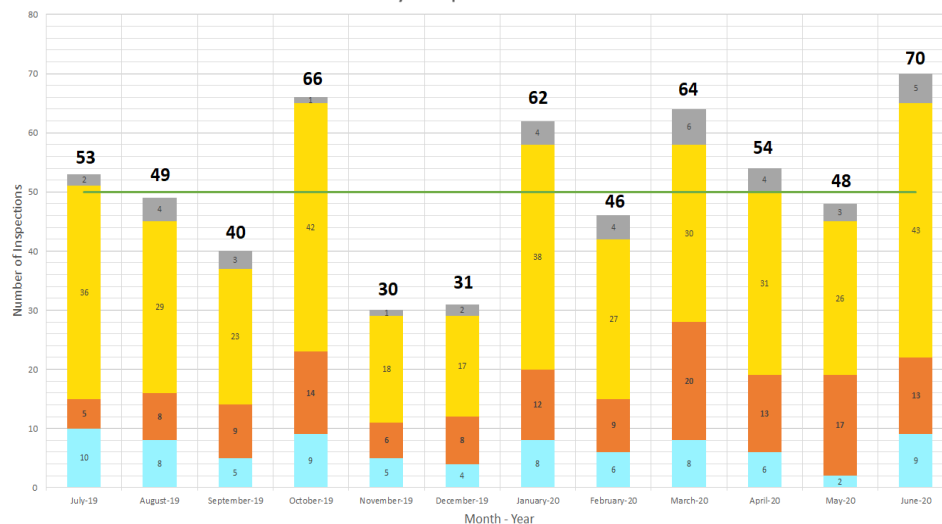
County	Percentage of Facilities in Compliance	Number of On-site Inspections	Number of Outreach Events	Number of Attendees
Maricopa	87.50%	40	7	520
Yavapai	90.30%	72	5	400
Yuma	87.50%	24	7	440
Gila	81.80%	11	5	400
Pinal	95.20%	21	5	400
Coconino	93.80%	48	5	400
Mohave	78.70%	47	5	400
Navajo	85.70%	21	5	400
Apache	80.00%	10	5	400
La Paz	100.00%	13	5	400
Graham	87.50%	8	5	400
Greenlee	100.00%	2	5	400
Pima	77.80%	9	5	400
Cochise	100.00%	32	5	400
Santa Cruz	45.50%	11	5	400

Facilities Emissions Control Section

■ Evaluation

- Average number of facilities found to be compliant from March 2020 to December 2020: 92.61%
- Number of virtual inspections from March 2020 to March 2021: 46
- Number of virtual file reviews from March 2020 to March 2021: 20

Monthly Inspections Conducted FY2020 Goal

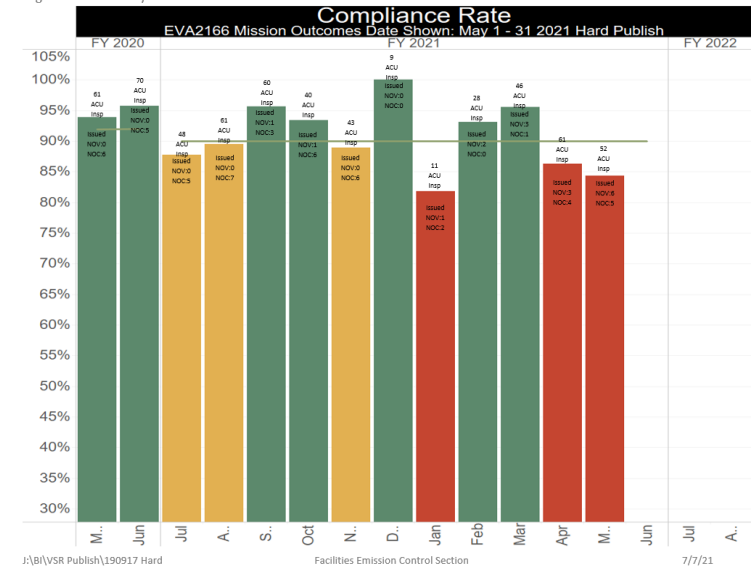


FY20
Inspection Goal
600

Inspection Totals
FY20 613 Week 52
FY19 308

■ Inspections
Stack Test
■ Inspections
Source
■ Inspections
Agriculture
■ Inspections
Asbestos
— Target

Lag Metric – Monthly



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Facilities Emission Control Section

7/7/21

- Evaluation- Lessons Learned
- Virtual Inspections reduced driving time for our inspectors
- Increased work capacity of our inspectors
- Standardized our Standard of Work (SOW) process for in-person and virtual inspections.
- Incorporated photos for both our in-person and virtual inspections in order to create more transparency. Previously photos were not part of the in-person inspection.

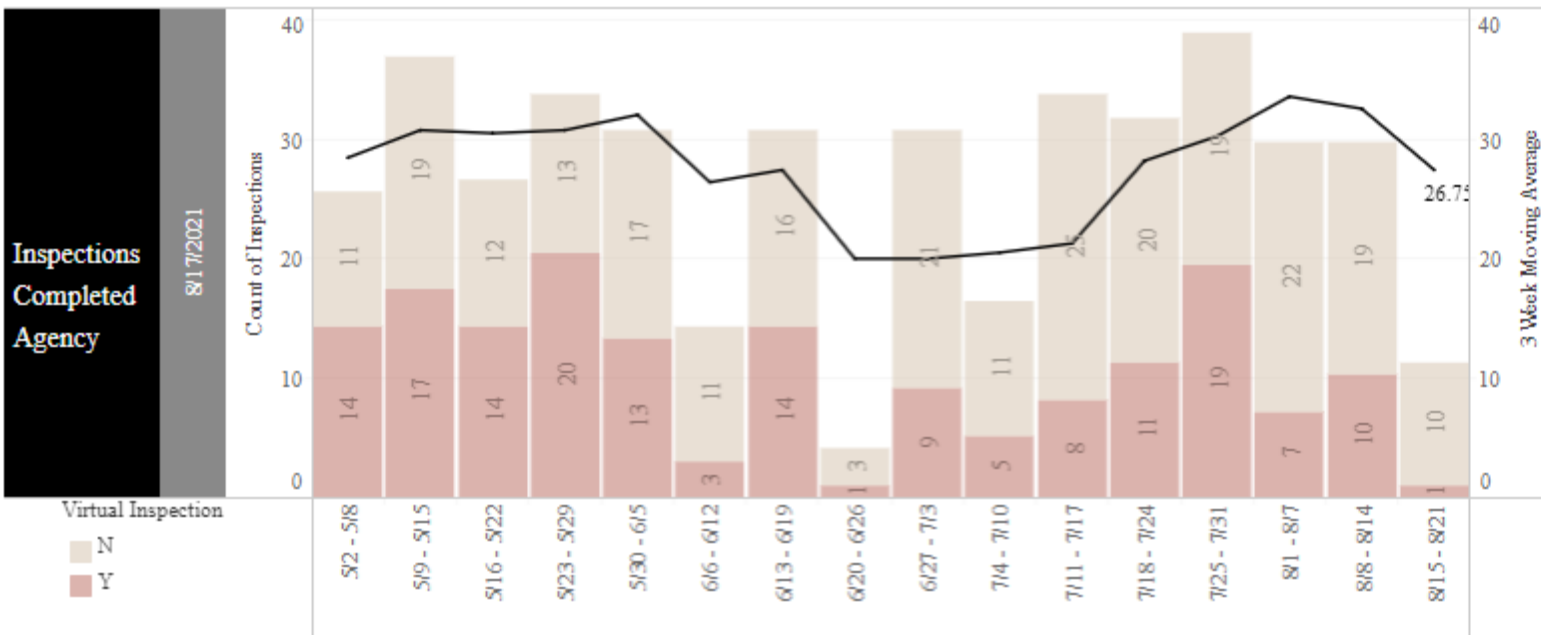
Sustainability



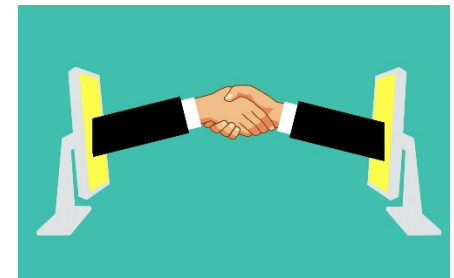
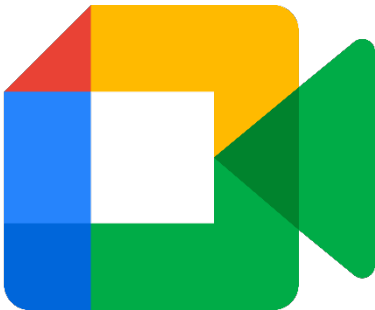
Action (Subprg Id,Subprogram Wp...)

- ☐ (All)
- ☒ 2S02, Facility Emissions Control
- ☐ 2S04, Oil & Gas
- ☒ 2S05, Vehicle Emissions Control
- ☐ 3S01, Solid Waste
- ☐ 3S02, Hazardous Waste
- ☐ 3S04, UST and Leaking UST
- ☐ 4S01, Groundwater Protection
- ☐ 4S02, Surface Water Protection
- ☐ 4S04, Safe Drinking Water
- ☐ 4S05, Water Re-Use

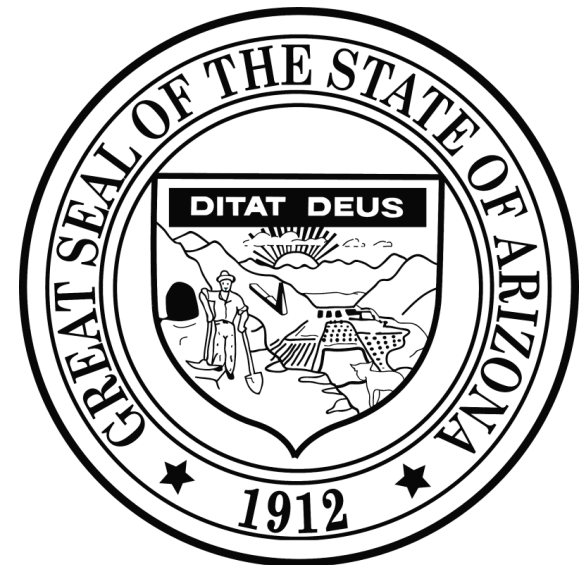
Inspections



- The technology used in virtual inspections is available to many agencies through cell phones with photograph / video capabilities and computer based reporting systems.



- ADEQ is the only air quality regulatory agency in the State of Arizona to implement virtual inspections and virtual file reviews as the primary method of operation during the COVID-19 restrictions.



Contact Information

Visit our website at: <https://azdeq.gov/>

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