



Department of Energy  
Consolidated Audit Programs Update  
Spring 2022 EFCOG Safety Working Group  
QA/ISM Team Subgroup Operational Meeting (Virtual)  
April 26, 2022

Steve Clark  
Analytical Services Program  
Manager  
April 26, 2022





# Agenda

- Introduction
- Analytical Services Program (ASP)
  - DOE Consolidated Audit Program-Accreditation Program
  - Commercial Treatment, Storage, Disposal Facilities Program Audit Program
- How to Use DOE Consolidated Audit Program Reports
- TSDF Audits - New Approach
- ASP Training Workshop



# Introductions



*Steve Clark  
Program Manager  
Analytical Services Program Manager*



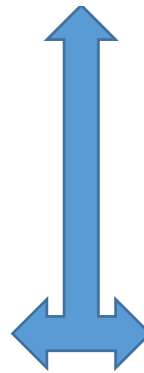


DEPARTMENT OF ENERGY  
CONSOLIDATED AUDIT PROGRAM - TSDF AUDIT PROGRAM

**DOECAP** 

**Commercial Waste Treatment,  
Storage, and Disposal Facilities  
(TSDFs):**

**Audits conducted by federal and  
contractor volunteers from  
throughout DOE Complex**



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CONSOLIDATED AUDIT PROGRAM-ACCREDITATION PROGRAM

**DOECAP-AP** 

**Commercially-Operated Analytical  
Environmental Laboratories  
(DOECAP-AP):**

**Assessments conducted by 3rd-party  
accrediting bodies, supported by DOE  
complex-wide federal and contractor  
staff**



# ASP History

1995

Office of the Inspector General (OIG)  
Report

- Redundant quality assurance evaluations
- No consistency, communication, or cooperation between DOE sites/contractors

1996

Environmental Management  
Consolidated Audit Program  
(EMCAP)

- Established multi-site working group
- Oak Ridge Operations Office

1999

DOE Order 435.1 Issued

- Requires Field Element Managers (FEMs) to approve use of commercial TSDFs based on annual review

2002

Assistant Secretary for Environmental  
Management (ASEM) Letter

- Expecting EM programs to actively participate and support program



# ASP History (con't)

2003  
ASEM letter

- Requires EMCAP to be the sole provider of audits of analytical laboratories and commercial radioactive TSDFs
- Standardize contract terms and conditions to allow EMCAP audit results
- ASP transferred from DOE's Office of Environment Management (EM) to the Office of Environment, Safety and Health (EH)

2016  
OIG Report

- DOECAP consolidates redundant audits and saves money

2017  
EHSS (formerly AU) Letter

- Memorandum identifying the change to 3rd party accreditation for commercial analytical laboratories

2020  
Remote Audits

- Memorandum establishing remote audits in response to COVID-19 travel restrictions. Onsite audits/assessments restarted in January 2022



## ASP Support to the Department/Facility Usage Query - FY2021



**350** contracts throughout  
the DOE Complex:  
(**157** Lab/**193** TSDF)



**\$67.5M** in contracts  
**\$31.4M** - Laboratory  
**\$36.1M** - TSDF



**33** DOE sites supported  
**31** DOE Contractors



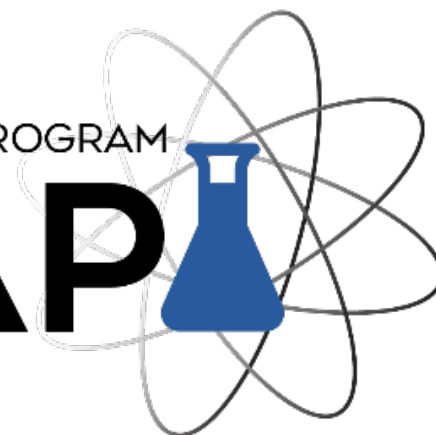
**7** Program Offices  
Supported: SC, EERE, EM,  
NA, FE, LM, NE





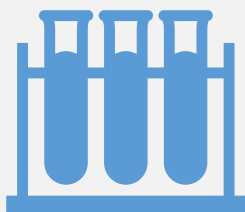
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**DOECAP-AP**





# DOECAP-AP Assessments



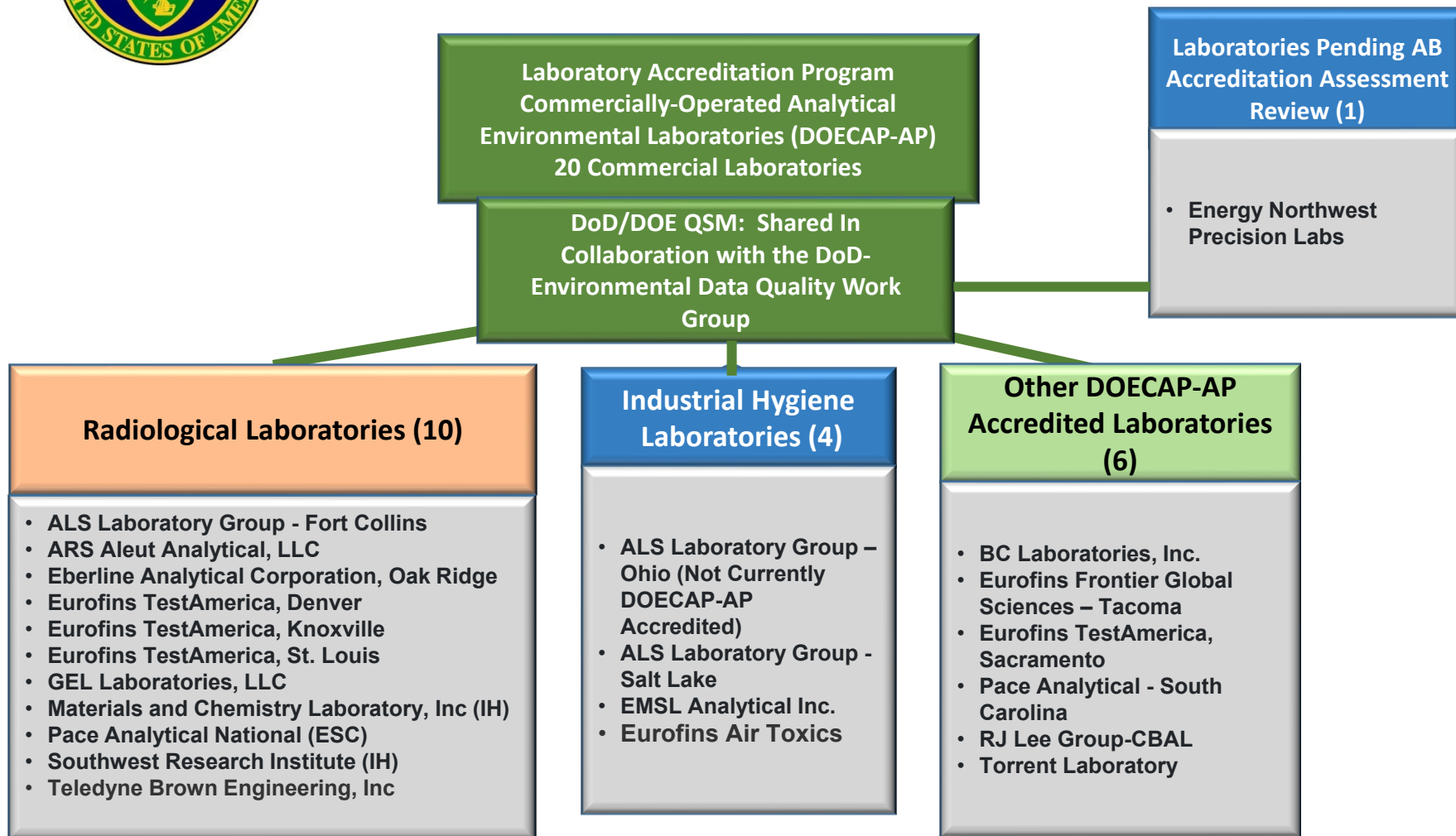
20 ACCREDITED LABORATORIES  
PERFORMED BY APPROVED 3<sup>RD</sup>-PARTY  
ACCREDITING BODIES



1 DOECAP AUDITED LABORATORY - ALS  
OHIO



# DOECAP-AP





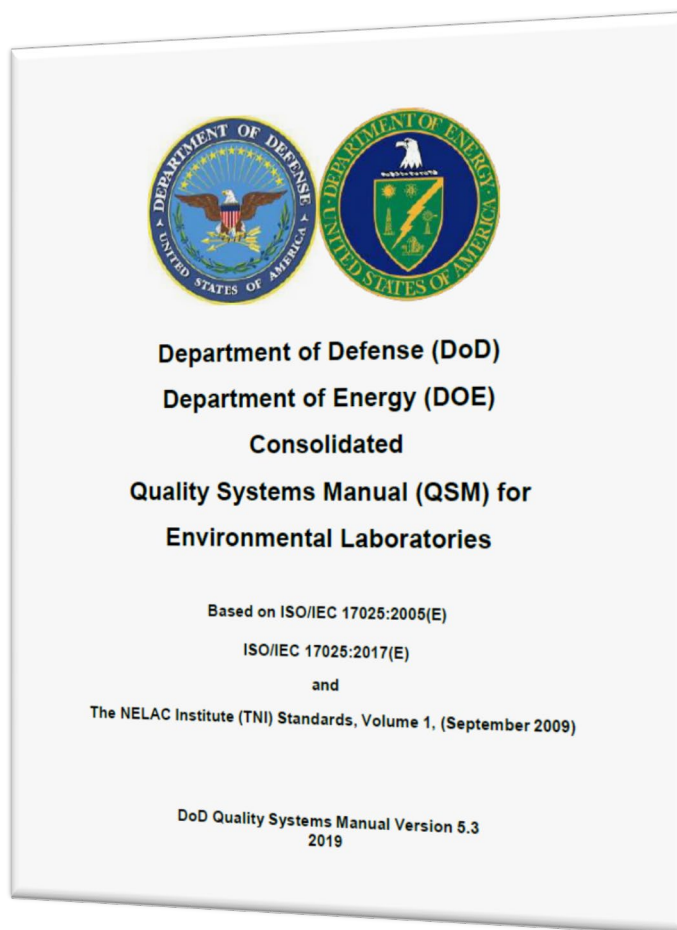
# DOECAP-AP Laboratory Assessment Report Uses by Program Office

Reports Used to Support:	Lab Contracts (157)	DOE Program Offices						
		EERE (4)	EM (90)	FE (4)	LM (4)	NA (24)	NE (2)	SC (29)
DOE Order 435.1	6	0	0	0	0	0	0	6
NEPA Decisions and Review	0	0	0	0	0	0	0	0
DOE Order 414.1D	109	0	70	0	4	16	2	17
Qualified Supplier Lists	84	0	58	0	0	4	2	20
Quality Assurance Reviews	89	4	45	0	4	20	0	16
Basic Order of Agreement	50	0	36	0	0	4	0	10



# DoD/DOE Quality Systems Manual (QSM) for Environmental Laboratories

- Provides baseline requirements for establishing and managing quality systems for laboratories performing analytical testing for DoD and DOE.
- Only approved Accrediting Bodies assess and accredit laboratories to the most recent version of the QSM.
- EHSS-21 works in conjunction with DoD to advance the interests of the Department in supporting the continued development and implementation of the QSM.
- The QSM supports DOE analytical needs with emerging contaminants, such as per- and polyfluoroalkyl substances (PFAS).





# 7 Lab Audit Concentrations + 2 Additional Standards

**QUALITY ASSURANCE  
MANAGEMENT SYSTEMS  
AND GENERAL  
LABORATORY PRACTICES**

**HAZARDOUS &  
RADIOACTIVE MATERIAL  
MANAGEMENT**

**INORGANIC AND WET  
CHEMISTRY**

**ORGANIC ANALYSIS**

**RADIOCHEMISTRY  
ANALYSIS**

**LABORATORY  
INFORMATION  
MANAGEMENT  
SYSTEMS/ELECTRONIC  
DATA MANAGEMENT  
(LIMS)**

**TNI 2016**

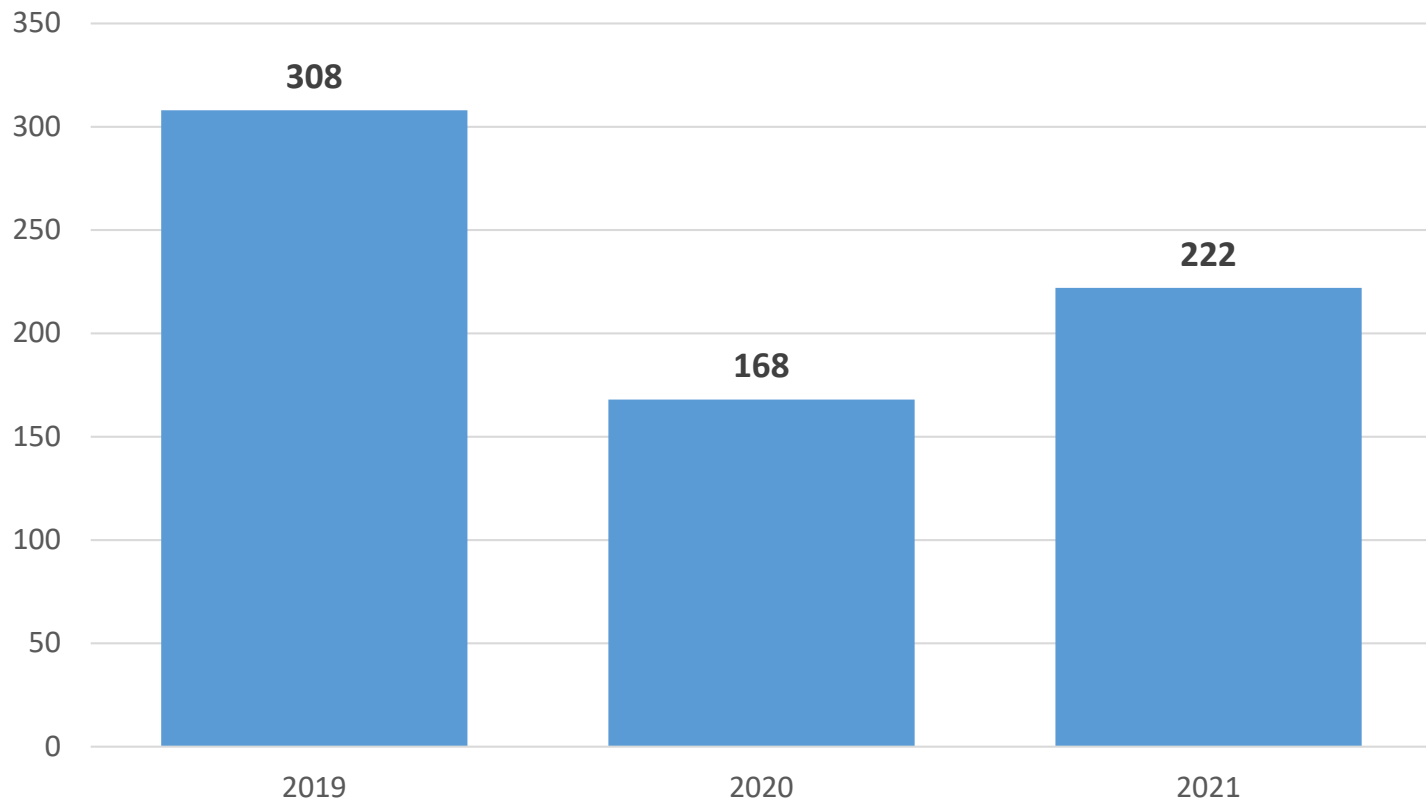
**AQUATIC TOXICITY**

**ISO 17025:2017**



# Findings by Year

Number of Laboratory Findings per Year





# How to Use the Laboratory Assessment Reports



Any actions taken or requests for further information are at the discretion of the contract holders using the services provided by the facility.



Corrective actions are evaluated for adequacy and effectiveness by the 3<sup>rd</sup> party AB. If the laboratory cannot correct the finding, then the accreditation can be suspended until it is satisfactorily addressed.



It is ultimately the responsibility of each DOE site to determine the adequacy of the facility to meet their contractual needs.



Laboratory assessment findings are provided to the DOE Complex under DOECAP memorandum.



Site Prime contractors use reports to satisfy their QA oversight and/or Quality Assurance Plan requirements.



Reviewed to identify laboratory's ability to produce defensible data for site specific decisions.





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CONSOLIDATED AUDIT PROGRAM - TSDF AUDIT PROGRAM

**DOECAP** 



## Why Audit TSDFs?

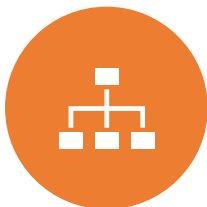
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CONSOLIDATED AUDIT PROGRAM - TSDF AUDIT PROGRAM

**DOECAP** 

- **Reduce Risk and Liability to the Department by:**
  - **Providing Waste Stream Management Oversight at Commercial Facilities**
    - *Mixed Low Level Radioactive and Hazardous Waste Facilities*
    - *Hazardous Waste Only*
    - *Radiological Waste Only (Low-Level)*
  - **Provides a reliable annual review which supports the FEMs justification for shipping waste off-site to commercial facilities for final disposition.**
  - **Support Various Quality Assurance Needs**
    - *Quality Supplier Lists*
    - *Approved Vendor Lists*
    - *Quality Assurance Plans*
    - *NEPA Reviews*



# 7 TSDF Audit Concentrations



**QUALITY ASSURANCE  
MANAGEMENT  
SYSTEMS-**



**SAMPLING AND  
ANALYTICAL DATA  
QUALITY**



**WASTE OPERATIONS**



**ENVIRONMENTAL  
COMPLIANCE AND  
PERMITTING**



**RADIOLOGICAL  
CONTROL**



**INDUSTRIAL AND  
CHEMICAL SAFETY**



**TRANSPORTATION  
MANAGEMENT**



## DOECAP Report Uses

**TSDF Audits Support 195 Prime and DOE Direct Contracts supporting 33 DOE Sites and 7 Program Offices throughout the DOE Complex**

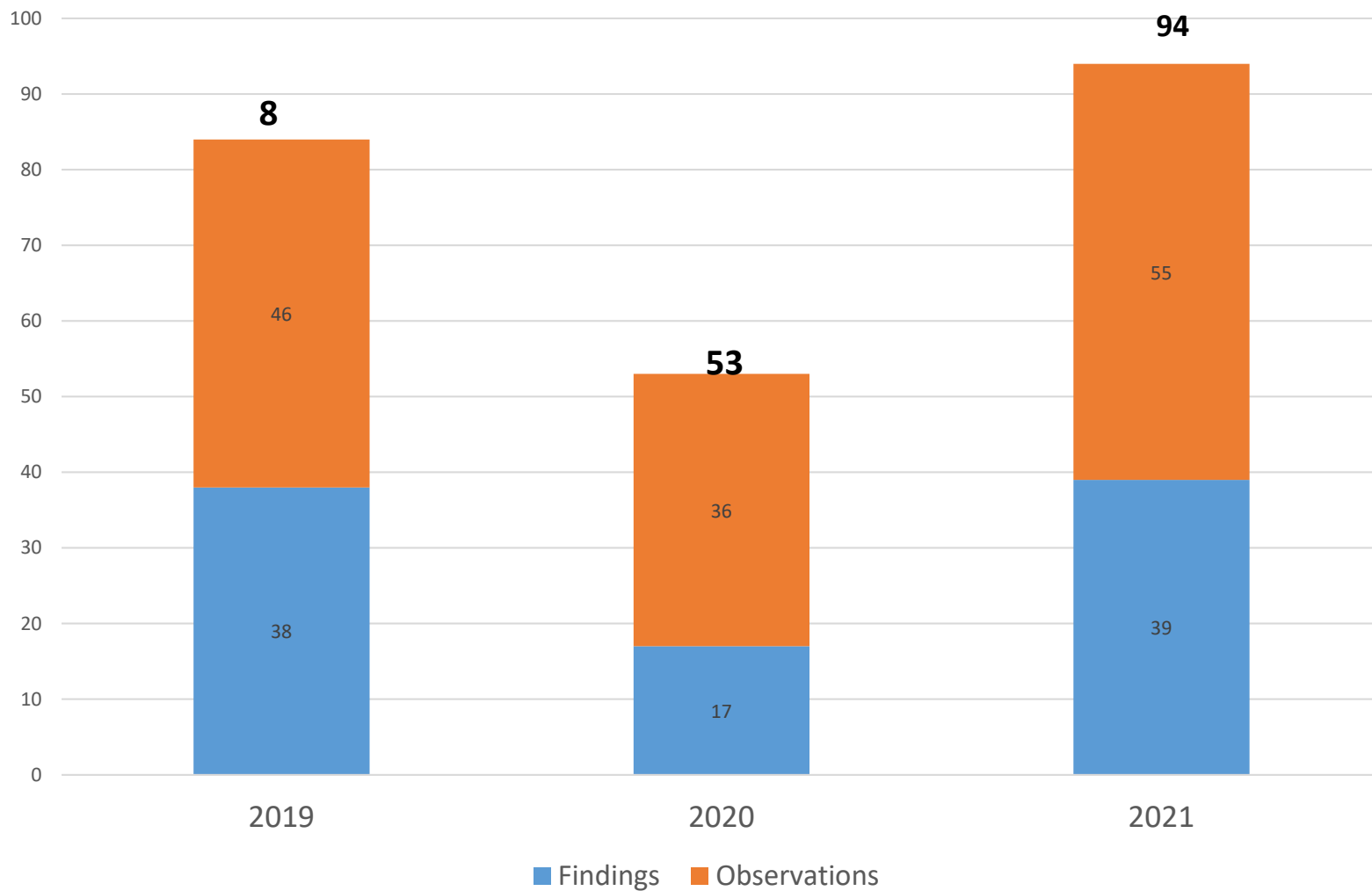
Reports Used to Support:	All TSDF and Laboratory Contracts	TSDF Contracts	Laboratory Contracts
DOE Order 435.1	<b>44</b>	<b>38</b>	<b>6</b>
NEPA Decisions and Review	<b>13</b>	<b>13</b>	<b>0</b>
DOE Order 414	<b>162</b>	<b>57</b>	<b>105</b>
Qualified Supplier Lists	<b>157</b>	<b>76</b>	<b>81</b>
Quality Assurance Reviews	<b>153</b>	<b>64</b>	<b>89</b>
Basic Order of Agreement	<b>82</b>	<b>33</b>	<b>49</b>

# Example of EM Site Contracts and Annually Audited TSDFs

EM Sites	Hanford Site	Office of River Protection	Idaho National Laboratory	Paducah	Oak Ridge Reservation	Savannah River Site	West Valley Demonstration Project	Portsmouth Site	Transuranic Waste Processing Center	WIPP	SPRU	Los Alamos National Laboratory
Diversified Scientific Services	X	X	X	X	X	X	X	X	X			
Perma-Fix of Florida, Inc				X	X	X	X	X				
EnergySolutions, LLC - TN (Bear Creek Processing Facility)				X	X			X	X	X		X
Waste Control Specialists			X	X	X	X	X	X			X	X
Veolia Nuclear Services (Recently Added to EMCBC BOA for Waste Management)												
Perma-Fix Northwest, Inc.	X	X	X	X	X					X		
Energy Solutions Utah			X	X	X	X	X	X			X	X



## Combined Totals of TSDF Findings and Observations by Year





## Additional Example Findings and Incidents

**72% of all findings since 2016 are related to failures in following procedures.**

**17% of findings are related to failures related to training.**

**Since 2017, nine (9) facility findings associated with incompatible chemicals being stored together (fire hazards, etc.)**



# Minimize Risk to the Department

The goal is to minimize the likelihood and consequences of human fallibility and/or technical and organizational system failures.

DOECAP, as a tool, is a cooperative effort across the DOE Complex to eliminate redundant audits and reduce the unnecessary expenditure of resources and funds.





## DOECAP Audit Process/Reports

- **DOECAP audit process:**
  - Supports the Department
  - Removes Redundancy and Saves Money - multiple audits at the same facility
- **DOECAP audit reports provide information on:**
  - Performance and Quality Assurance
  - Oversight of Efficient and Effective Operations
  - Consistency
  - Environmental Compliance
  - Safety



# New 2022 TSDF Audit Approach

## Two Part Audit Process:

Part 1 – Remote (2-day)

Part 2 – Onsite (2-day)

Part 1: The remote audit will follow the TSDF Remote Audit Procedure implemented during the COVID pandemic.

Part 2: Shortly after the remote audit, a small audit team will perform the onsite audit. This team will be site specific and include the Team Lead (from remote audit) and auditors for the Industrial and Chemical Safety and Waste Operations concentrations. This could change as site specific needs may dictate a different focus.



Department of Energy

## Analytical Services Program Annual Training Workshop

### Featured Topics:

- DOE Analytical Services Program Updates
- DoD/DOE Quality Systems Manual Updates
- COVID-19 Impacts & Lessons Learned
- Annual Site Environmental Reports
- PFAS Analysis - Updates & Trends
- DOECAP TSDF Audit Training
- Data Validation

The logo for the Analytical Services Program (ASP) Annual Training Workshop. It features the letters "ASAP" in a large, bold, blue font with a white outline. To the right of the "P" is a smaller box containing the text "ANNUAL TRAINING WORKSHOP".

ANNUAL  
TRAINING  
WORKSHOP

Save the Date:  
September 13-15, 2022

ANALYTICAL SERVICES PROGRAM

*Location: Las Vegas, Nevada*

Sign up to be notified when registration opens: [doecapasp.projectenhancement.com](https://doecapasp.projectenhancement.com)

Office of Environment, Health, Safety and Security



## Contact

For more information and a list of participating TSDFs and environmental laboratories:

<https://www.energy.gov/ehss/analytical-services-program>

*I never see what has been done; I only see what remains to be done.*

**-Marie Curie**

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