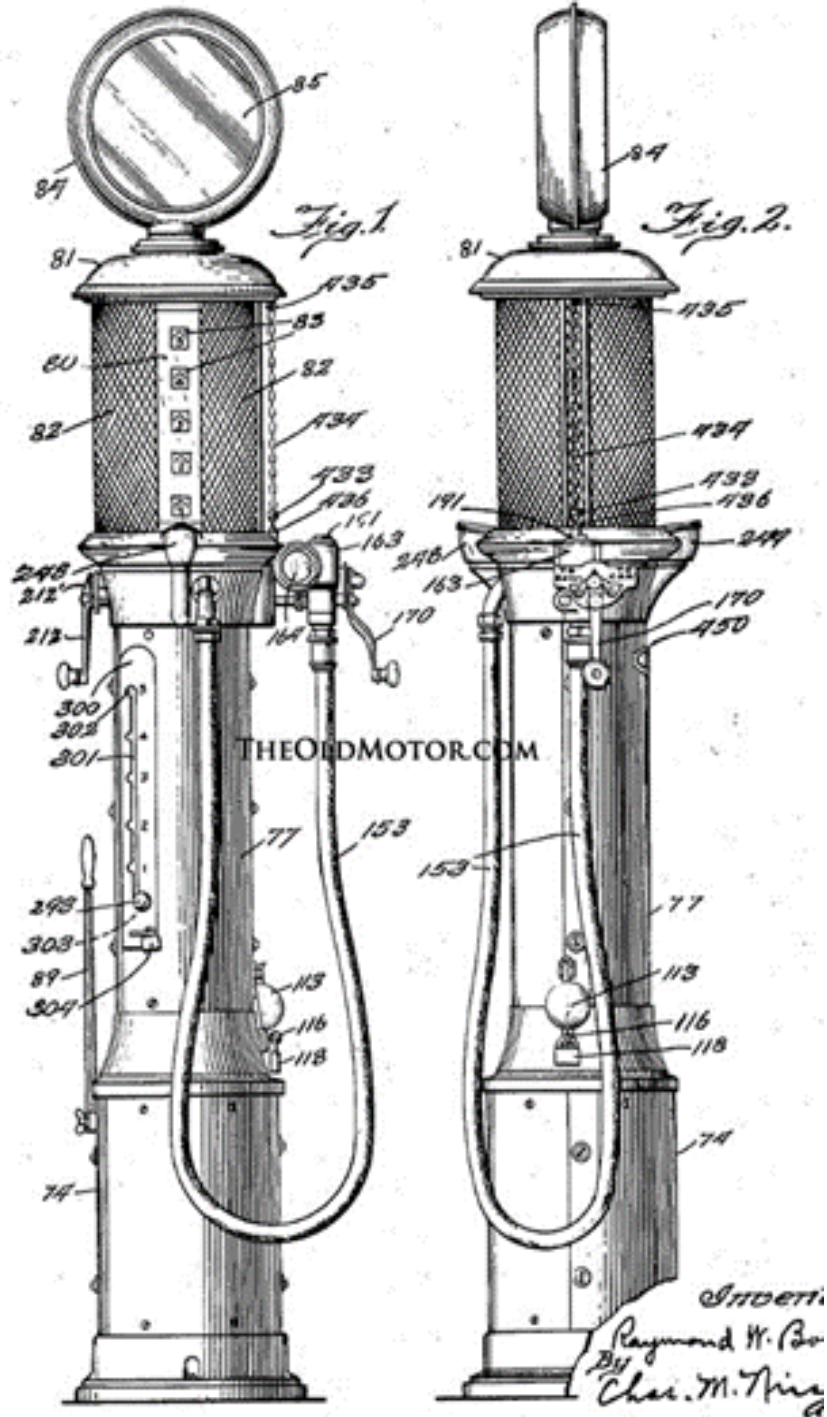


Inspection and Enforcement of Single-Walled USTs

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CUPA Conference 2024



Topics

- Why This and Why Now?
- Current Single Walled Data
- Current Considerations and Overall Tomfoolery
- Inspection Requirements for Single-Walled USTs
- Enforcement
- The Role of the State Water Resources Control Board
- CUPA Evaluations



Why Care About Single-Walled Tanks?

- Aren't these supposed to be closed soon?



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- Aren't these supposed to be closed soon?
- But we hardly have any in our jurisdiction.
- But I heard the Waterboard was going to extend....
- But it doesn't make sense to make repairs before the deadline.
- Why not do this with double-walled USTs?



The Issues



Time

1 year, 10 months, 3 days until the deadline
UPA closure and install permit processing
RUST Fund Processing limitations

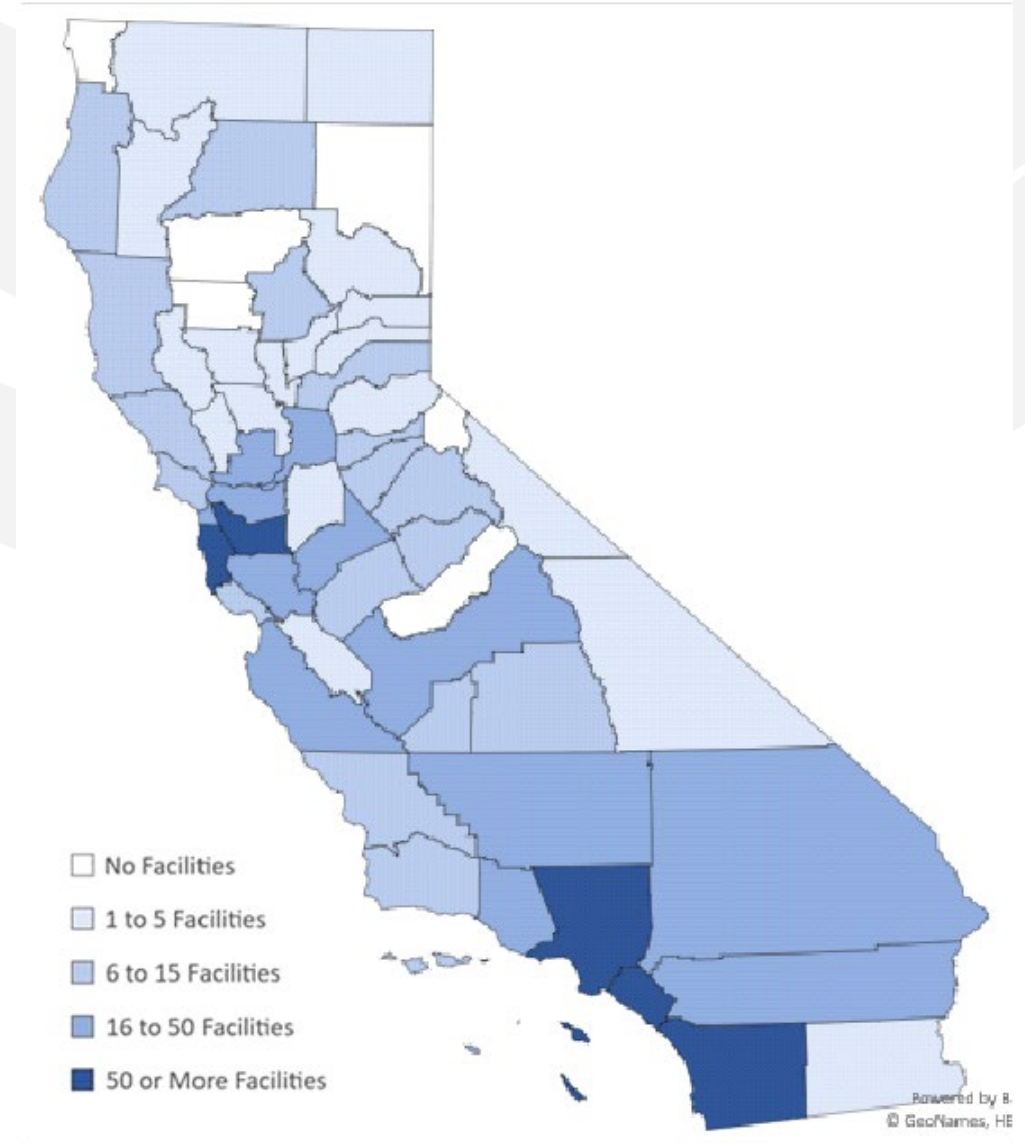


Supply and Demand

Limited contractors
Limited materials
\$\$\$\$

Single-walled USTs

- 640 facilities with single-walled USTs
- 1,754 single-walled USTs
- 333 double-walled UST with single-walled piping
- ~6% of California UST Inventory (still)



Considerations and Tomfoolery

Permit to Operate Muscle



Five-year permit end date should be modified now to December 31, 2025.



All other permits should be modified by January 2025.



Send permits with a UST closure permit request form.

Specific Reuse of Single-Walled USTs

- Not an alternative to permanent closure
- UPAs should confirm the system will be used as proposed
 - Example: Fire Suppression
 - Provide a workplan demonstrating how this system would assist the local fire department, approval from the local fire department or district, and identify how water stored in the tank will be pumped out and usable in a fire situation.



The Temporary Closure Shenanigans

The path to abandoned tanks is paved with temporary closures.

Temporary closure only available for systems that will return to operation

Single-walled UST will not be returned to operation

Red Tag is the new Temporary Closure

Empty tank is the next best thing as out of the ground (Careful with this)

Compatibility

- How many SW E85 USTs out there?
- E 15?
- B20?



Single-Walled UST Inspection Requirements

Tank Monitoring

- Automatic tank gauge (ATG)
- Continuous in-tank leak detection (CITLD)
- Statistical inventory reconciliation (SIR) & tank integrity testing
- Continuous vadose zone monitoring*
- Groundwater monitoring*

California Code of Regulations title 23 (23 CCR),
div. 3, ch. 16, section 2643(b) & 2644



ATG

23 CCR §2643(b)(1):

- Tested once every 30 days after product delivery OR when tank is filled to within 10% highest operating level
- Detect a 0.2 gph release
- Generate hard copy of all data AND calculated leak rate and threshold



CITLD

23 CCR §2643(b)(3):

- Detect a 0.2 gph release
- Operate on uninterrupted basis OR within a process that allows system to gather incremental measurements once every 30 days



During your inspection...

- ✓ Review hard copies of ATG and CITLD results
 - ✓ Perform valid 0.2 gph leak test
 - ✓ One leak test every 30 days= 12 copies since last inspection
- Monitoring System Certification
 - ✓ ATG visually inspected and level reading accuracy verified
 - ✓ Documented on the Monitoring System Certification form

T 1:DYED DIESEL
 PROBE SERIAL NUM 452342
 0.2 GAL/HR TEST
 PER: APR 23, 2022 FAIL

T 2:KEROSENE
 PROBE SERIAL NUM 543371
 0.2 GAL/HR TEST
 PER: APR 23, 2022 PASS

T 3:CLEAR DIESEL
 PROBE SERIAL NUM 366853
 0.2 GAL/HR TEST
 PER: APR 23, 2022 PASS

* * * * * END * * * * *

APR 23, 2023 11:50 AM
 LEAK TEST REPORT
 T 1:DYED DIESEL
 PROBE SERIAL NUM 452342
 TEST STARTING TIME:
 APR 3, 2023 12:00 AM
 TEST LENGTH = 2.0 HRS
 STRT VOLUME = 3967.4 GAL
 LEAK TEST RESULTS
 0.20 GAL/HR TEST INVL
 0.20 GAL/HR FLAGS:
 LOW LEVEL TEST ERROR
 PERCENT VOLUME TOO LOW
 * * * * * END * * * * *

T 2:87
 PROBE SERIAL NUM 374449
 TEST STARTING TIME:
 JUN 5, 2018 9:00 AM
 TEST LENGTH = 2.0 HRS
 STRT VOLUME = 4963.6 GAL
 START TEMP = 74.0 F
 END TEMP = 74.0 F
 TEST PERIODS 2-4
 -0.10 -0.16 -0.26
 LEAK TEST RESULTS
 RATE = -0.17 GAL/HR
 0.20 GAL/HR TEST FAIL
 * * * * * END * * * * *

SIR

23 CCR §2643(b)(2), §2643.1, & §2646.1:

- Conducted every 30 days
- Detect 0.2 gph release
- 0.1 gph tank integrity test
 - Once every 24 months
 - Within 15 days of two inconclusive reports
- Report quantitative leak rate every 30 days

During your inspection...

- ✓ Review hard copy of SIR results
 - ✓ Detect 0.2 gph release
 - ✓ Results include test every 30 days = 12 test results since last inspection
 - ✓ 0.1 gph tank test every 24 months
 - ✓ §2646.1- within 15 days of two inconclusive reports
- Monitoring System Certification
 - ✓ ATG visually inspected and level reading accuracy verified
 - ✓ Documented on the Monitoring System Certification form



PHYSICAL INVENTORY RECONCILIATION (S.I.R.) --
Report for 2020

TANK MANAGEMENT SERVICES

YEAR 2020

244/ 244

Customer : ----
Location : ----
Address : ----
Phone : ----
Tank : -----



1 JET A

	Leak Threshold	Minimum Detectable Leak Rate	Estimated Leak Rate	Result
January	.100	.000	.000	Pass
February	.100	.004	.000	Pass
March	.100	.000	.000	Pass
April	.100	.000	.000	Pass
May	.100	.004	.000	Pass
June	.100	.006	.000	Pass
July	.100	.006	.000	Pass
August	.100	.000	.000	Pass
September	.100	.000	.000	Pass
October	.100	.016	.000	Pass
November	.100	.000	.000	Pass
December	.100	.006	.000	Pass



Pipe Monitoring

- Pressurized piping
- Suction piping
 - Conventional
 - Safe suction
- Gravity piping

23 CCR §2643(c),(d),&(e), §2666(b)(2),
§2636(a)(3) & §2641(b)



Piping (Pressurized)

23 CCR §2643(c):

- Monitoring conducted hourly- 3.0 gph at 10psi
- Restrict or shut off flow of product **OR** trigger a visual audible alarm

AND EITHER

1. Pass a 0.2 gph line test at least every 30 days
2. Pass a 0.1 gph line tightness test at least once every 12 months



Line Leak Detectors (LLDs)

§2666(c):

- December 22, 1998-
All LLDs for underground single-walled pressurized pipe required to shut down pump
- Emergency tanks systems can use AV alarm

Electronic LLDs are only option for single-walled pressurized piping

Piping (Conventional Suction)

23 CCR §2643(d):

- 0.1 gph line tightness test every 36 months
- Daily visual monitoring every 30 days
 - Logs maintained for 36 months



Piping (Safe Suction)

....Yes, it's exempt. So why mention it?

23 CCR §2636(a)(3):

- A. Below-grade piping operates at less than atmospheric pressure
- B. Below-grade piping is sloped back into the storage tank
- C. No valves or pumps are installed below grade in the suction line. Only one check valve is located directly below and as close as practical to the suction pump
- D. Inspection method that demonstrates compliance with the requirements above

Piping (Gravity)

§2643(e):

- 0.1 gph line tightness test every 24 months
- Excludes vertical drops

During your inspection...

- Pressurized
 - ✓ PLLDs
 - ✓ Monitoring System Certification Form
 - ✓ 0.1 gph every 12 months or
 - ✓ 0.2 gph line test every 30 days
- Safe suction
 - ✓ Verify meets §2636(a)(3) requirements
- Conventional suction
 - ✓ 0.1 gph line tightness test every 36 months
 - ✓ Daily visual logs conducted once every 30 days
- Gravity
 - ✓ 0.1 gph line tightness test conducted every 24 months

Single-Walled Piping Repairs

23 CCR, §2666(b)(2):

Single-walled buried product piping cannot be repaired

- Must meet Article 3 requirements when repaired or replaced
- Excludes vent, vapor, riser, safe suction (2636(a)(3)) piping

Enhanced Leak Detection (ELD)

- Located within 1000 feet of a public drinking water well
- ELD reviewed and approved by UPA within six months following notification by the board.
- ELD implemented within 18 months of receipt of notification from the board
- Repeated every 36 months thereafter

Health and Safety Code (H&SC), Ch. 6.7 section 25292.4(a)

23 CCR §2644.1

ELD

§ 2644.1(a):

- ELD test method:
 - Third party certified
 - 0.005 gph leak rate
 - Once every 36 months
- ELD test report submitted to the State Water Board and UPA within 60 days of test completion



During your inspection...

- ✓ ELD implemented
 - GeoTracker, State Water Board
- ✓ ELD test conducted every 36 months
- ✓ Test results submitted within 60 days

Remember §2666(b)(2)...

Single-walled buried product piping must meet Article 3 requirements when repaired or replaced

Repairs to buried product piping **≠** a passing ELD result.

Log of Repaired Leaks

Reference #	Date	Time	Status	System	Component	Manufacture
17	4/8/22	10:30	Leak Final	TK-3 Dyed DSL	Fill bucket Fill Bucket Swivel	OPW
21	4/8/22	11:10	Leak Final	TK-1 DSL	Fill bucket Fill Bucket Swivel	OPW
23	4/8/22	11:12	Leak Final	TK-1 DSL	ATG Conduit/P ATG Riser Top	Unknown
26	4/8/22	11:15	Leak Final	TK-2 KERO	Fill bucket Fill Bucket Swivel	OPW
30	4/8/22	11:19	Leak Final	TK-2 KERO	VR bucket Vapor Cap	OPW
31	4/8/22	11:20	Leak Final	TK-3 Dyed DSL	Fill bucket Fill Bucket Swivel	OPW
71	6/21/22	12:56	Leak Final	TK-1 DSL	ATG Conduit/Pull Box ATG Cap	Morrison

Log of Unrepaired Leaks

Reference #	Date	Time	Status	System	Component	Manufacture
None						
None						

Interior Tank Lining

- §2662(c)-
 - Steel motor vehicle fuel USTs upgraded by Dec 22, 1998
- 120/60- month lining inspection
- Completed by coatings expert or special inspector
- Submitted to UPA within 30 days

§2661, §2662, §2663, §2712(b)(6)

Interior Tank Lining

23 CCR §2663(h)(8):

- (8) Certification from the special inspector or coatings expert that:
 - (A) The tank is suitable for continued use for a minimum of 60 months.
 - (B) The tank is suitable for continued use for a minimum of 60 months only if it is relined or other improvements are made; or
 - (C) No longer suitable for continued use and shall be closed in accordance with Article 7.

During your inspection...

- ✓ Lining inspection completed every 60 months
- ✓ Tank is suitable for continued use for a min of 60 months
- ✓ Results submitted to UPA within 30 days
- ✓ Lining records maintained for life of UST

Cathodic Protection

- Sacrificial Anodes
- Impressed current

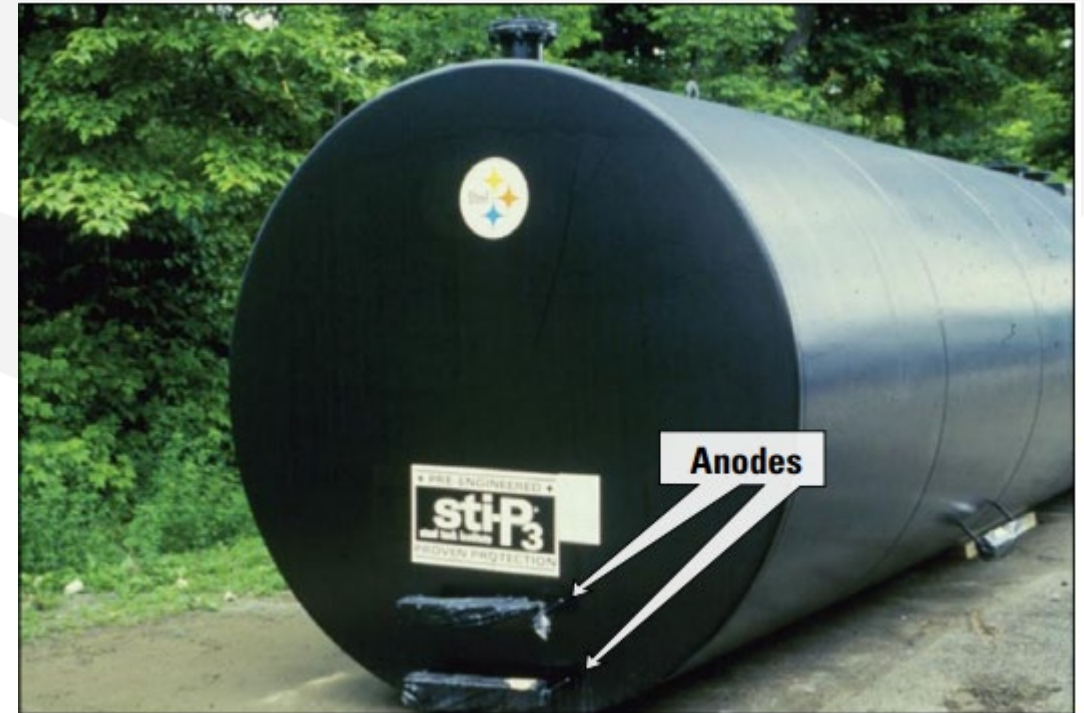
23 CCR 2635(a)(2), 2712(b)(3)



Sacrificial Anodes

23 CCR §2635(a)(2), §2712(b)(3):

- Certified by Cathodic Protection Tester
- Tested:
 - 6 months of install
 - Once every 36 months
 - 6 months of repair
- Records maintained 78 months



https://www.maine.gov/dep/waste/tanksmart/documents/TankSmart_Mod.2_1_CathProt.pdf

Impressed Current

23 CCR 2635(a)(2), 2712(b)(3):

- Inspected every 60 days
- Tested within 6 months of repair
- Records maintained 78 months



During your inspection...

- ✓ Test conducted every 36 months
- ✓ Records maintained for 78 months
- ✓ Tested within 6 months of repair

Impressed current system-

- ✓ Verify rectifier is turned on. Is it working?
- ✓ Inspection conducted every 60 days

Enforcement

Progressive Enforcement

Informal

- Citing violations
- NOV/NTC/FTC
- Re-inspection

Formal

- Administrative Enforcement Order (AEO)
- Red tag, 7-Day Notice
- Permit revocation
- Referral to AG/DA

2025



January 1, 2026



- New Chapter 16
- SWUSTs are prohibited
- Enforcement
 - Red tags
 - Civil penalties

Abandoned Tanks



Prevention



State Water Board assistance



Removal of Improperly Abandoned Tanks (RAT)

State Water Board Roles

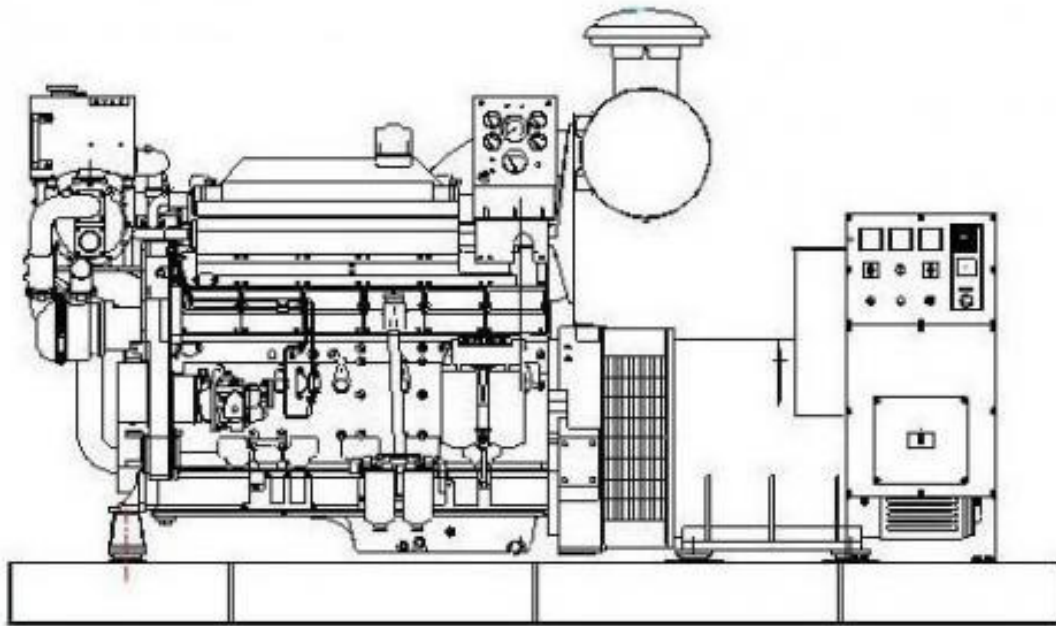


Provide Red Tags

Call about concerned facilities

- Potential abandoned or recalcitrant
- Outside of local agency current abilities

Emergency Tank Systems



- State Water Board may assist
- Red tag doesn't stop their usage
- Recommend maximum penalties

CUPA Evaluations

We currently review a disproportional number of SWUST

- This will continue through 2026, maybe 2027

If you have SWUSTs, expect several to all files selected

If you have oodles o' SWUSTs, selected by RNG

When we review files, we look at all of the discussed here today

Any patterns may be Deficiencies

Any select instances may be Incidental Findings.

Questions?

UST Leak Prevention

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