

National Performance Audit Program (NPAP)

Purpose- Plan for effective use of
375K QA initiative funds

Objectives

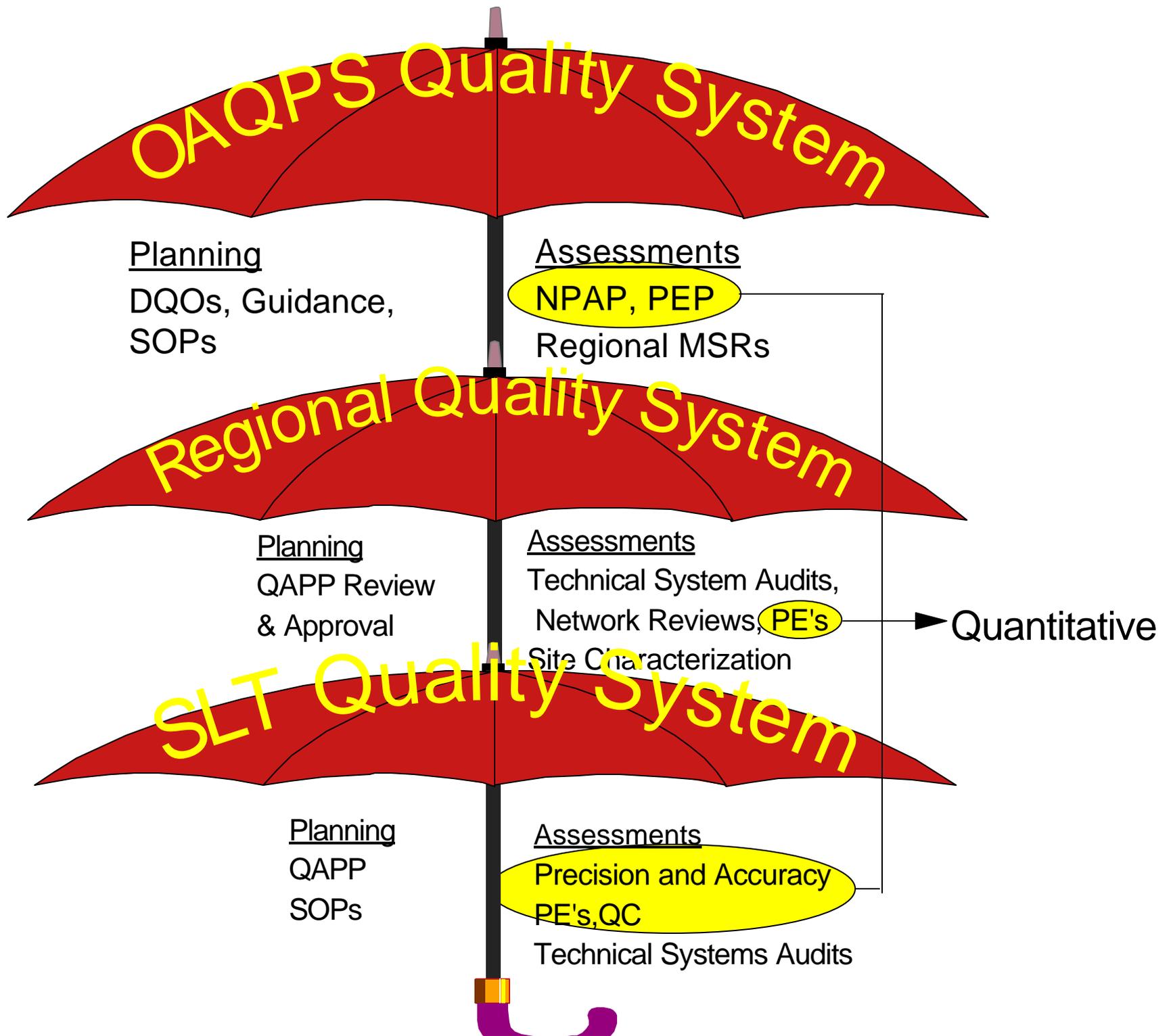
- Describe two options for the use of NPAP initiative funds
- Gain acceptance to pursue either approach

What is NPAP?

Performance Evaluation - A type of audit in which quantitative data generated in a measurement system are obtained independently and compared with routinely obtained data to evaluate the proficiency of an analyst or laboratory or measurement system

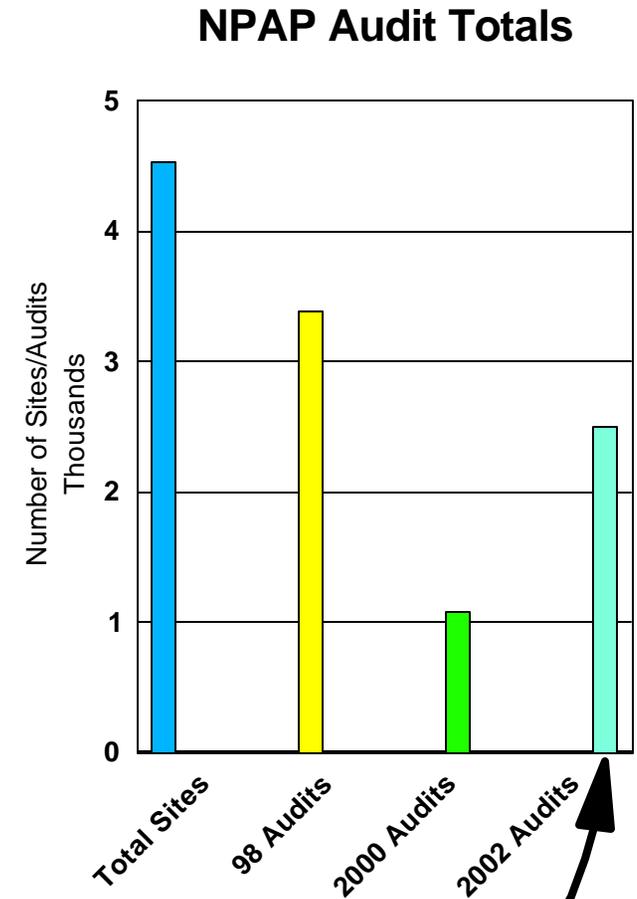
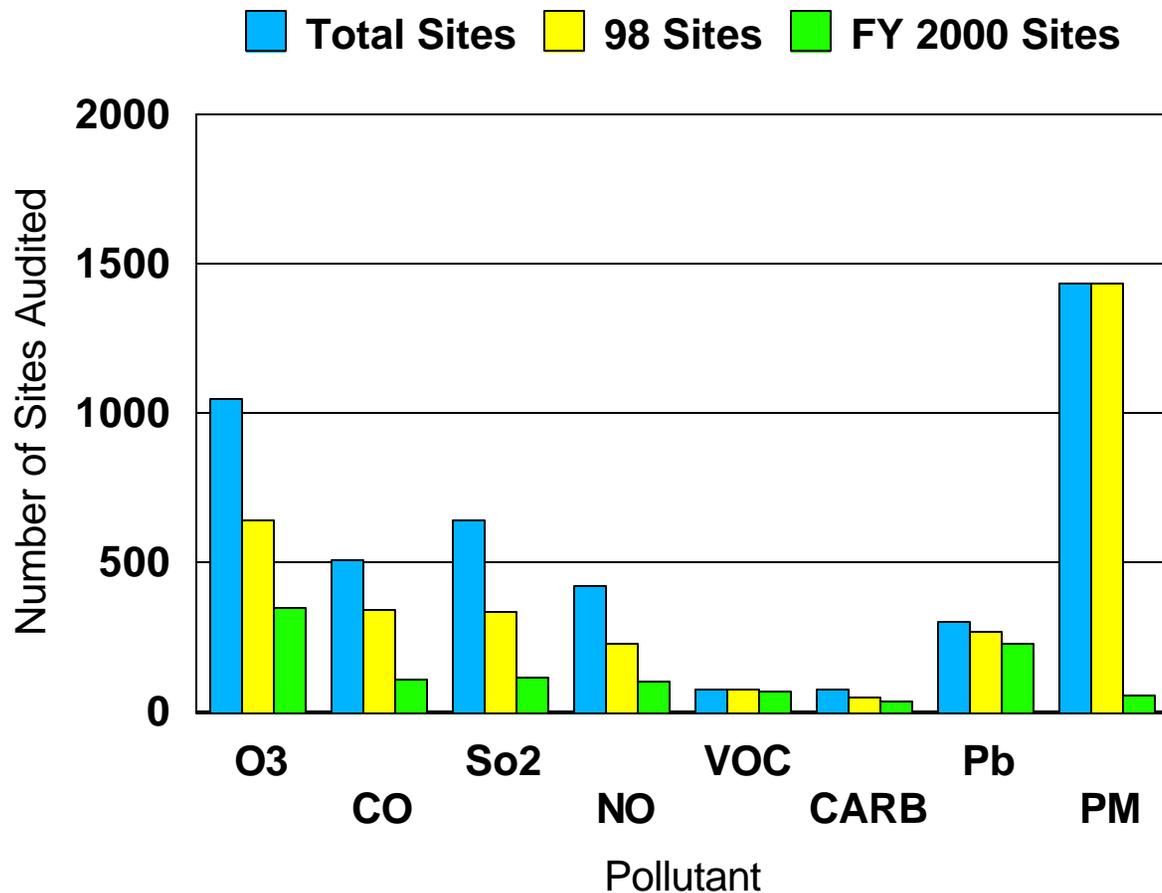
Both NPAP and the PM_{2.5} Performance Evaluation Program (PEP) are performance evaluation programs and provide for an assessment of data quality that's:

- ▶ Independent
- ▶ Objective
- ▶ Comparable nationally



NPAP 98/2000 Comparisons

98- ~ 1million, 2000- ~ 600K

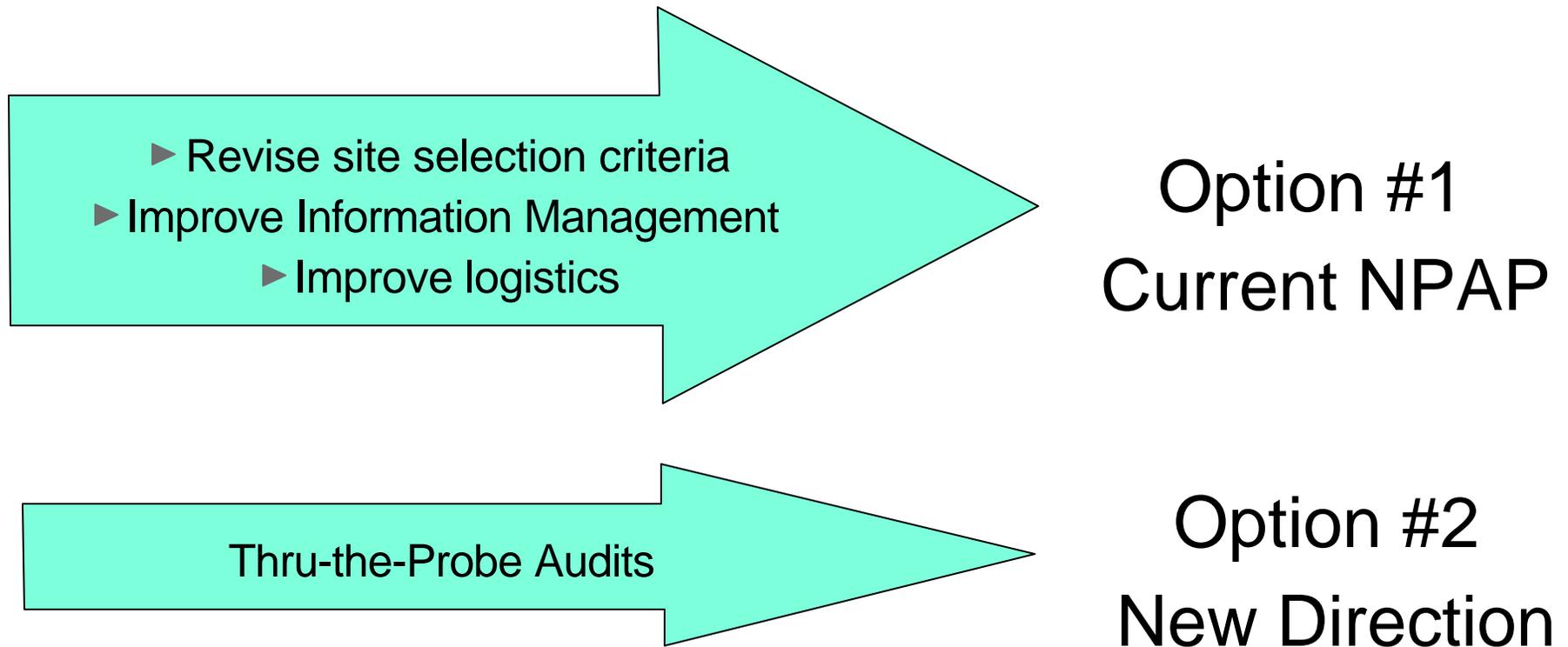


- ▶ 2000 focus was Ozone
- ▶ Goal - ~2500 audits by FY02

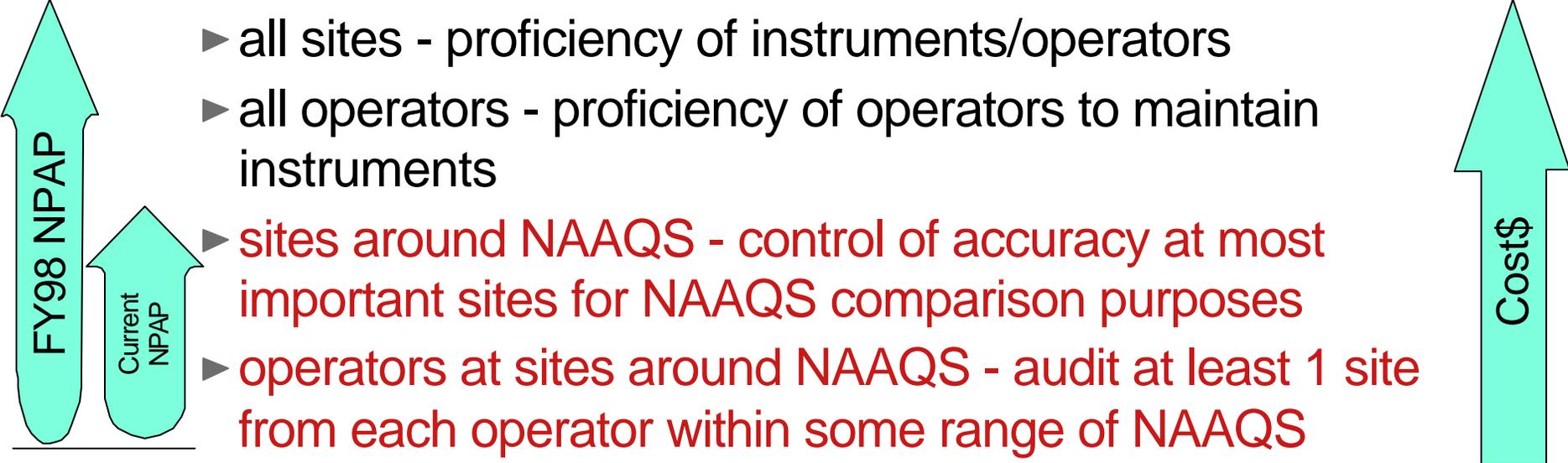
NPAP Improvements

- *Goal - Increase audits to acceptable level and create a more cost efficient program*

The Options



Revise site selection criteria

- 
- Different options - based on resources
 - ▶ all sites - proficiency of instruments/operators
 - ▶ all operators - proficiency of operators to maintain instruments
 - ▶ sites around NAAQS - control of accuracy at most important sites for NAAQS comparison purposes
 - ▶ operators at sites around NAAQS - audit at least 1 site from each operator within some range of NAAQS
 - eliminate redundancy -
 - ▶ use NPAP to "certify" State implemented audits
 - ▶ allows NPAP to focus on sites where State audits are not performed for an overall increase

Costs do not necessarily have to be greater but meeting the criteria would take longer

Improve Information Management

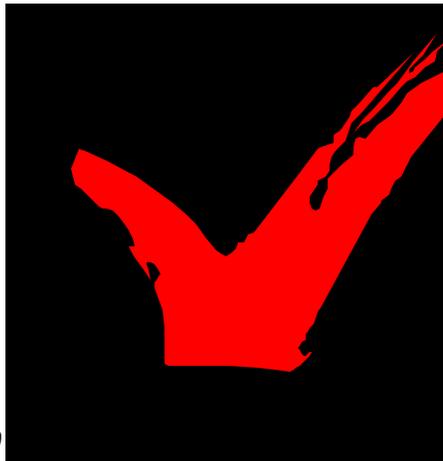
- Get rid of snail mail
 - ▶ Build an e-mail list of monitoring participants
- Complete thorough review of data base
 - ▶ Identify what is "really" needed
- Redevelop data base in a more user-friendly software system
- Get most of it on the web for real-time access by State/locals
- Do the entry work in-house

Improve Logistics

- Present- Equipment shipped to operator address-- audit(s) conducted --shipped back to contractor --verified/calibrated--readied for next shipment
- New - #1 Equipment given to PEP Field Scientists to transport to sites- reduces wear and tear and accomplishes more audits
- New - #2 Equipment shipped and left in the State for other monitoring organizations to use-- comes back when it appears (data evaluation) it's drifting
- Purchase additional audit equipment to increase number of audits

Option #1 -Current NPAP Summary

- Site selection-Eliminate redundancies and increase audits to an acceptable level
- Info Management -Create a new information management system
- Logistics - Eliminate shipping and purchase new instrumentation in increase audits



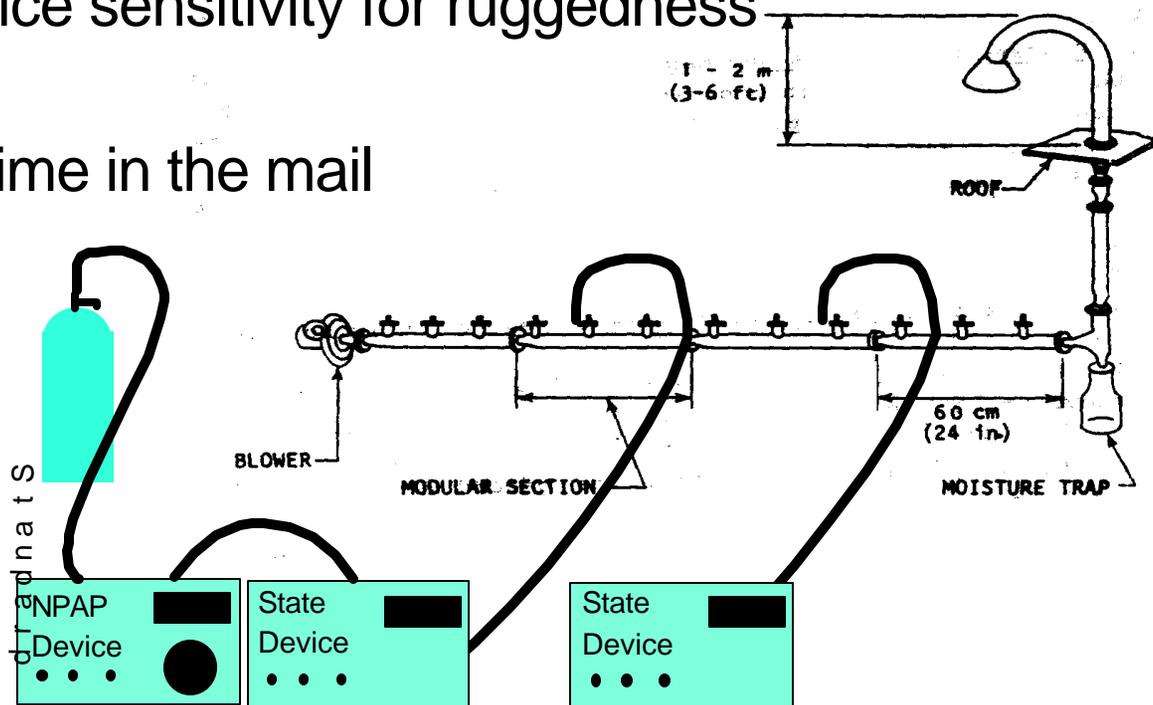
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Option #2 New Direction

Thru-the-Probe (TTP) Audits

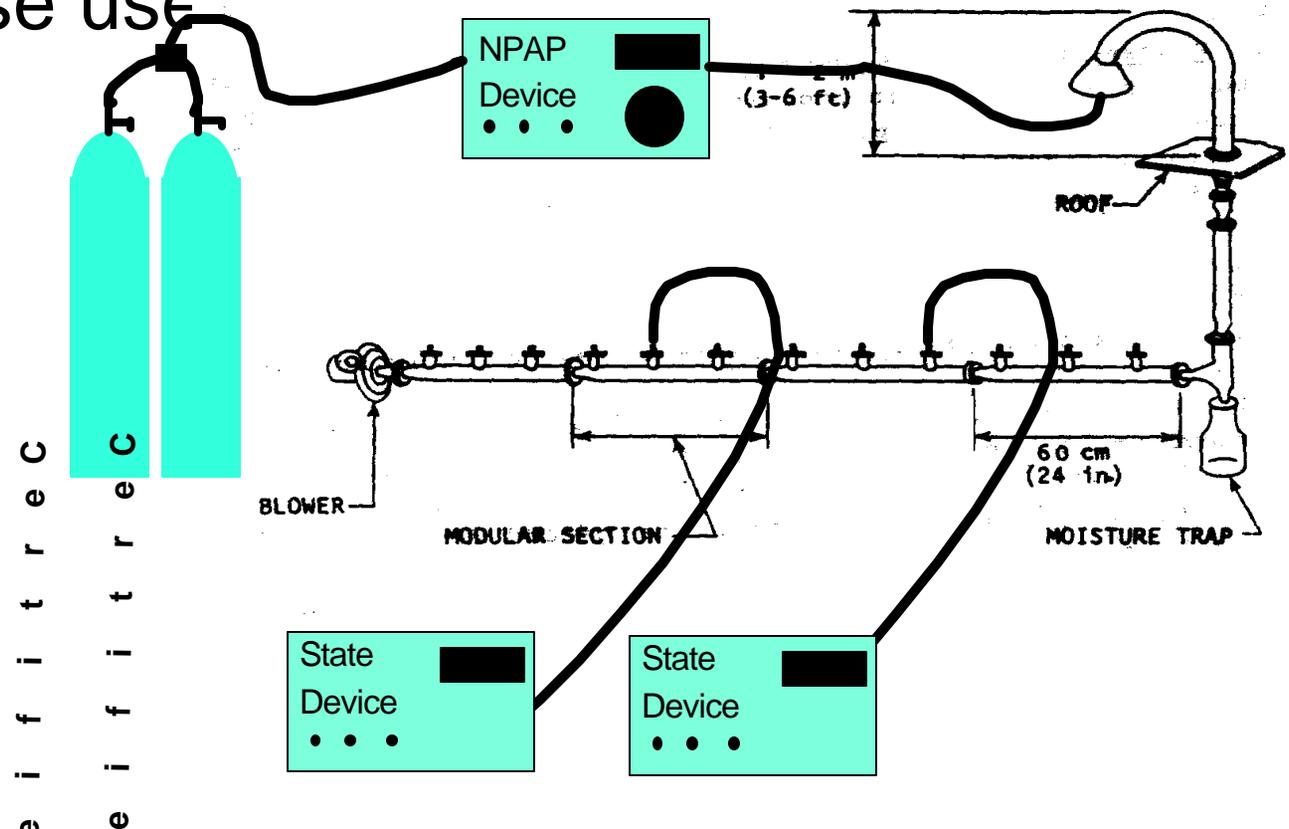
■ Current NPAP

- ▶ Standards enter the samplers through a port in the back of the instrument;
- ▶ disregards sample collection tubing where contamination or losses may occur.
- ▶ Standard devices sacrifice sensitivity for ruggedness but still need TLC.
- ▶ Devices spend a lot of time in the mail
- ▶ No real time feedback



Thru-the-Probe

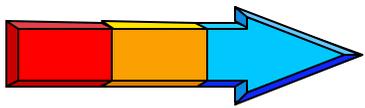
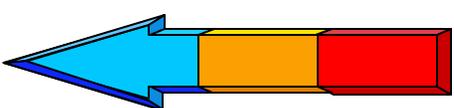
- Evaluates entire sampling stream
- Equipment can be state of the art
- Little potential for damage
- More audits less down time
- Multi-purpose use





TTP- The Plan-FY01

- Acquire mobile laboratories containing
 - ▶ State of the art samplers, devices and analyzers
 - ▶ Info management systems - immediate reporting of results
- Involve ORIA to the extent that they can contribute
- Work with CARB
 - ▶ Vehicle Specs
 - ▶ Intensive technician training
 - ▶ Use their documentation
 - ▶ Use their information management system
- Pilot the program in the East
 - ▶ Determine cost savings & implementation issues
 - ▶ Improve program and phase in additional vehicles

 **Key-- NPAP + PEP = NPEP** 

In order to make TTP work we need to take advantage of the PM2.5 Performance Evaluation Program (PEP) personnel currently in each Region. Need to combine PEP and NPAP dollars

TTP - Pros

- Efficiency -ESAT PEP program already in the field
 - They have extra time between PM2.5 audit so no substantial labor cost.
 - It works, CARB does it- we can use there expertise and information management systems
- More Audits
- Can implement better, more sensitive devices
- Don't need to ship audit devices- reduces damage
- Immediate data feed back to State/locals/Tribes
- May be available for use in rapid response data collection situations (e.g., WTI, agriculture/forestry burns?)
- ORIA/Regions will provide technical expertise and cooperate on implementation

TTP- Cons

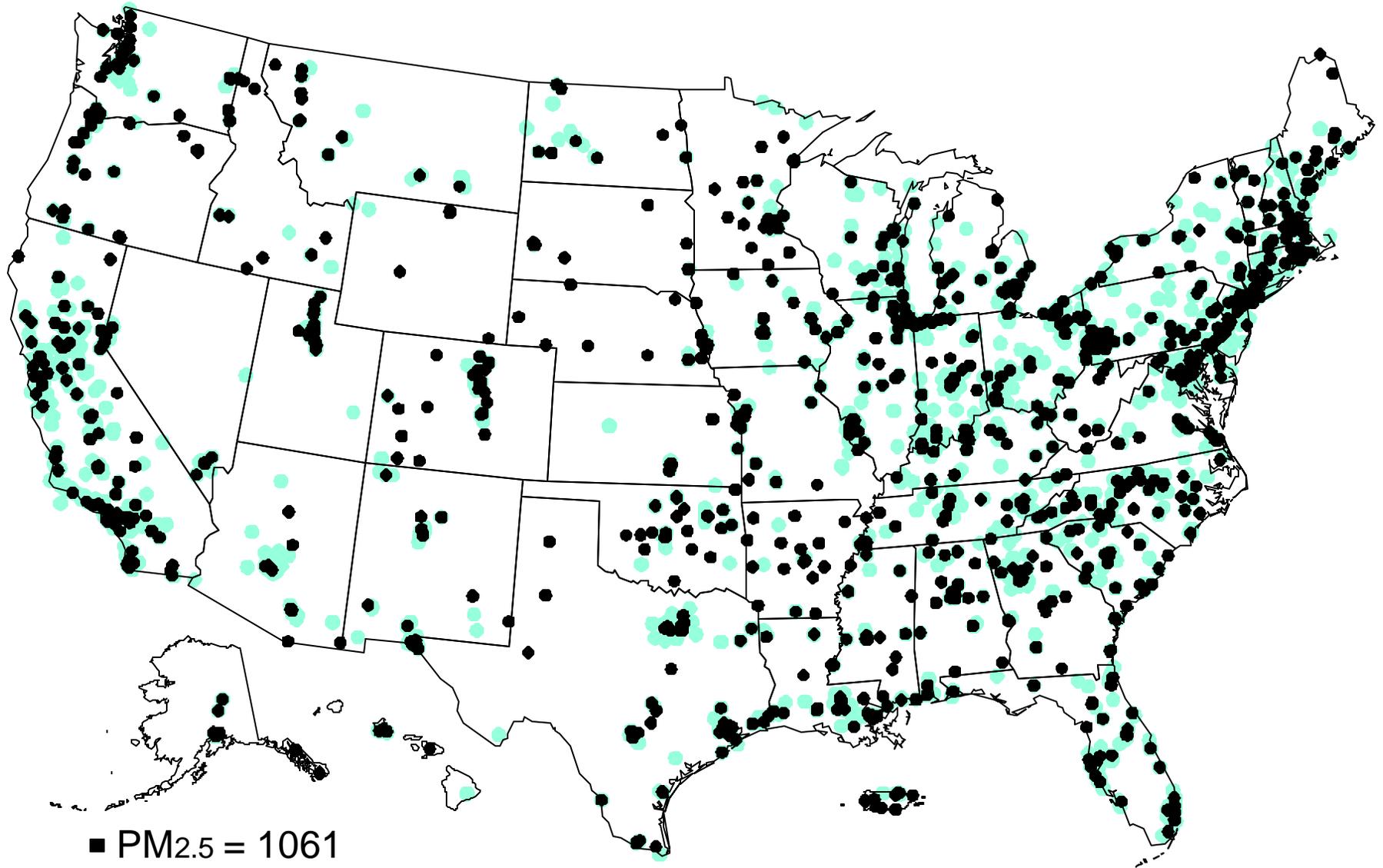
- Decentralized data base- more coordination needed
- Additional training required
- Need to phase program into existence
- Need additional personnel trained for back-up and rotation
- Still need a small mailable audit program (AK, HI, VI, PR)
- Requires lead time for purchasing, testing, and implementation
- It's an investment and requires a commitment to QA

TTP Phase In

- FY01 -
 - ▶ Acquire mobile labs with FY01 initiative funds
 - ▶ Use remaining funds to make some improvements to current system
 - ▶ Use base funds (540K) to implement current NPAP
- FY02-
 - ▶ Acquire additional mobile labs with NPAP base (540K) and any initiative money
 - ▶ Use remaining portion of base funds to implement current NPAP
- FY03
 - ▶ Purchase remaining labs with NPAP Base funding (540K)
 - ▶ Keep needed portion for NPAP to perform necessary mail outs

NOTE - Probably do not need 10 labs. Monitoring Strategy and State PE programs may move TTP to a "regionally based" program utilizing fewer vehicles.

PM_{2.5} (black) & Other Criteria sans PM₁₀ and Pb (cyan) Monitoring Sites



- PM_{2.5} = 1061
- Other Criteria = 1656
- Collocated = 426

8 labs X 45 weeks x 2 sites/week = 720 Sites
NPAP audits completed in ~ 3 years (with 8 labs)

TTP Program Costs

(8 laboratory Scenario)

Weekly Breakdown

Cost Break Down	Day 1	Day 2	Day 3	Day 4	Day 5	Total Cost
Fuel (5 mi/gal and 1.50 /gal)	105	30	30	30	105	300
Labor (45/hr)	360	360	360	360	360	1800
Perdiem (\$130/day)	130	130	130	130	50	570
Vehicle Repair (ave)	70	70	70	70	70	350
Vehicle replacement	67	67	67	67	67	335
Equipment Replacement	50	50	50	50	50	250
Instrument Certification	25	25	25	25	25	125
Miscellaneous	20	20	20	20	20	100
Costs	827	752	752	752	747	3830

Summary Costs						
Category	Costs	Comments				
1) Total * 45 weeks	172350					
2) Cost for 8 Regions	1378800	1 van per region for 45 weeks/year				
3) Labor 7weeks * 8 FTE	100800	Additional labor costs during 7 weeks van not running				
4) PEP Labor Costs	735200	Additional PEP costs for 5 field personnel and two lab personnel + Admin. (80K)				
5) PEP Costs	175600	Shipping Costs, vehicle leases, repairs, & Info Mgt. & Miscellaneous				
6) Mailable NPAP	100000	Additional costs to run mailable NPAP				
7) Information Mgt.	8000					
8) Training	10000					
Total NPAP + PEP	2508400	Total estimated costs of program				
Present NPAP + FY02 PEP	2542545					

See Time Line

Some Reminders

- NPAP as we know it does not end
 - ▶ Need it for sites outside continental US
 - ▶ Continue with PAMS as is
- Need stable level of funding
 - ▶ PEP dollars must remain available
 - ▶ Won't work without ESAT or similar contract
 - ▶ Need NPAP base of 500-600 K (currently 540K for FY01)
 - ▶ Through Monitoring Strategy discussions, need to move PE programs into a "cost of monitoring"
- Anticipating help from the Regions
 - ▶ Some Regions may want to implement audit with EPA personnel

Summary

NPAP Goal - Increase audits to acceptable level and create more cost efficient program

- We can improve current NPAP
 - ▶ Network reductions (Monitoring Strategy) may help
 - ▶ Probably need ~750K to be adequate
- TTP - Meets the goal
 - ▶ Technically it's a better approach
 - ▶ Real time feedback
 - ▶ Anticipate doing it with 500-600K of NPAP funds and current PEP funding (1.7 million)