

Interstate Technology & Regulatory Council



Is a Sample a Site?

Making Sense of Sites:
Risk Assessment as a Decision-Making
Tool in Site Cleanup

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Baltimore, MD

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NJ Department of Environmental Protection





Is a Sample a Site?

Abstract:

- 1) To examine the the practice of assessing risk from a site based on a single, namely the highest sample result.
- 2) And if not the highest measurement, then over what area or volume should soil samples be averaged to allow for an unbiased & realistic assessment of risk?



Is a Sample a Site?

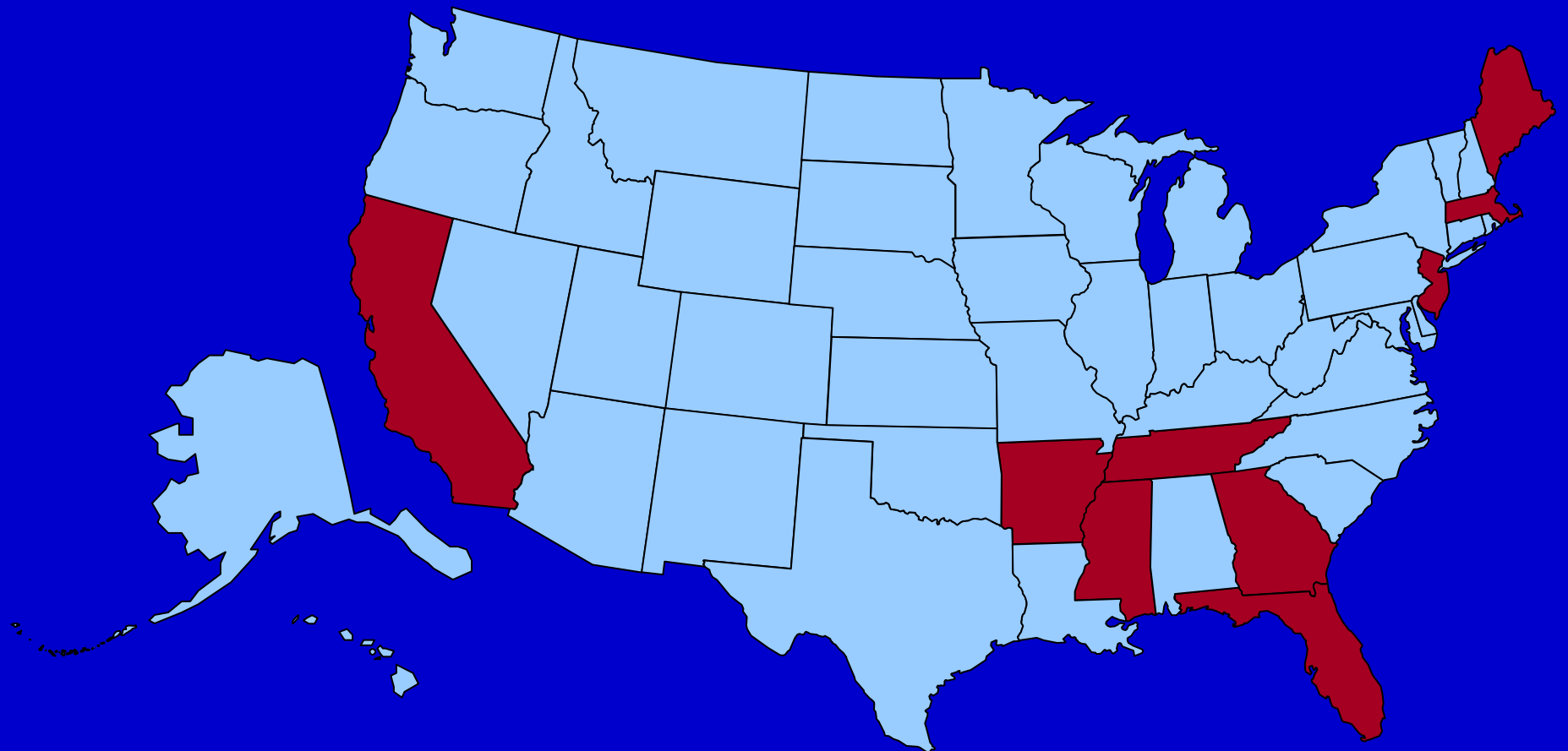
Overview:

- State Survey Participants
- State Survey Results
- A closer look at NJ's approach



Is a Sample a Site?

State Survey Participants: A total of nine including AL, AR, CA, FL, GA, ME, MA, NJ & TN.



Is a Sample a Site?

State Survey Results Summary:

- Early: 100% yes
- RI: 33%
- Risk: 33%
- FS: 33%
- Remedy/Monitoring: 44%
- Confirmation/Remedy: 44%

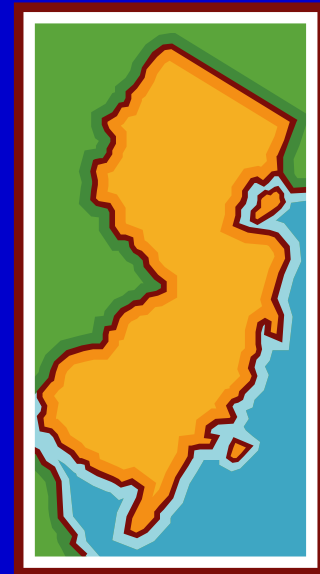




Is a Sample a Site?

NJ Summary:

- Early: yes
- RI: no - compliance averaging (c/a) ok
- Risk: no - c/a ok
- FS: no - c/a ok
- Remedy/Monitoring: yes
- Confirmation/Remedy: yes





Is a Sample a Site?

Possible Reasons:

- Regulations (bound by)
- Prescriptive regs; on an AOC-by-AOC basis
- Professional Judgement/Past Experience
- Lack of Risk Assessment Training
- Liability
- etc.



Is a Sample a Site?

Compliance Averaging (pursuant to N.J.A.C 7:26E-4.8(c)3i) for individual AOCs:

- 1) All contaminant concentrations exceeding the applicable remediation standard shall be identified; and
- 2) Samples with MDLs exceeding the applicable remediation standard shall be identified; and
- 3) For purposes of calculating the average, one half the reported MDL shall be substituted for all contaminants reported as ND, and “estimated values” shall be included “as is.”



Is a Sample a Site?

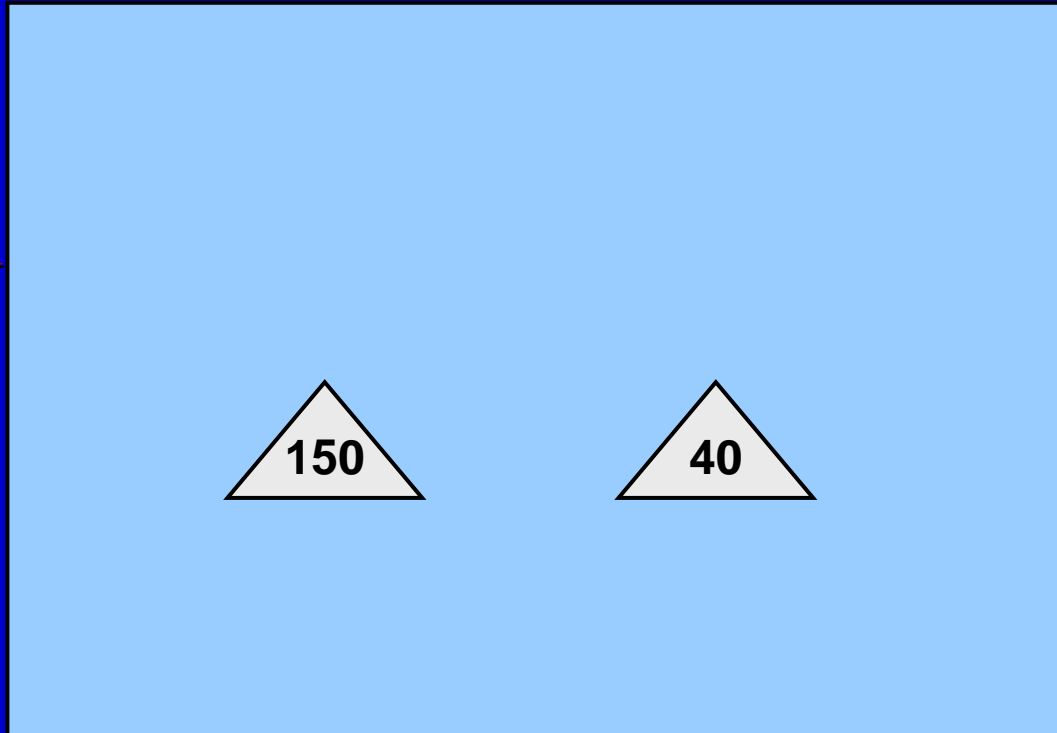
Compliance Averaging in NJ – continued...


- 4) For diluted samples, ND values shall NOT be included in the AOC average whereas “detectable” values shall be included.
- 5) The average shall be calculated from the contaminated area only and shall NOT include “clean zone” data. Samples from different depth intervals shall NOT be averaged together.
- 6) Post-ex sample data shall NOT be averaged for compliance with applicable remediation standards.

Is a Sample a Site?

Soil Criteria = 100 ppm

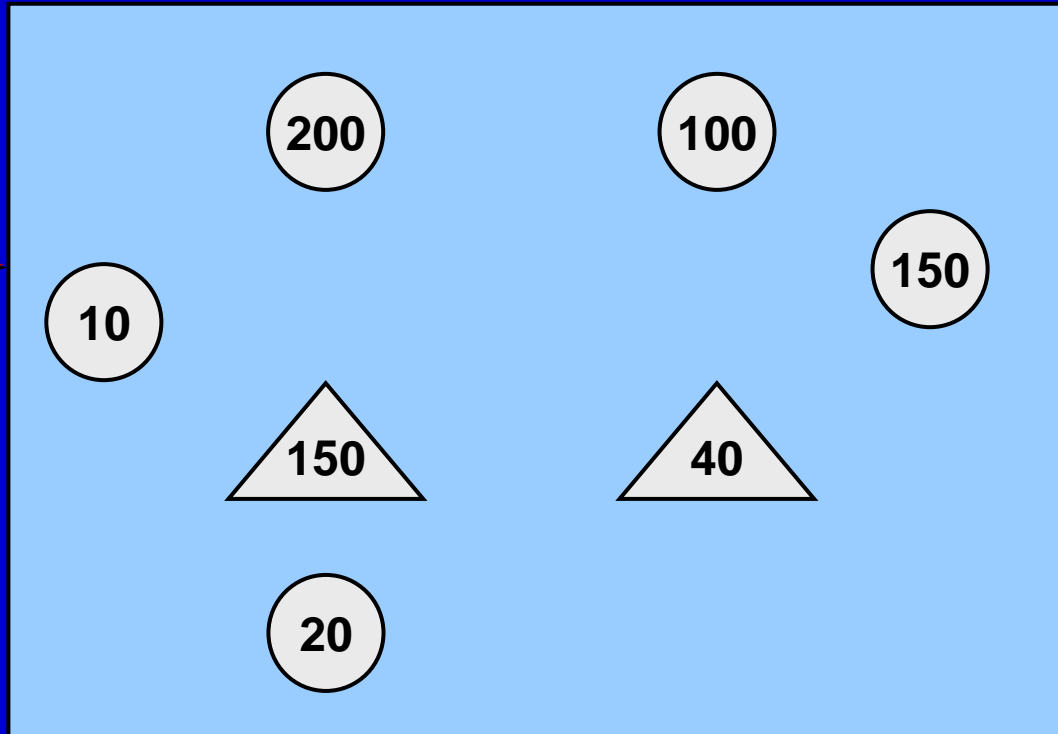
Suspected
Area of
Concern




 = Initial
Sample

Is a Sample a Site?

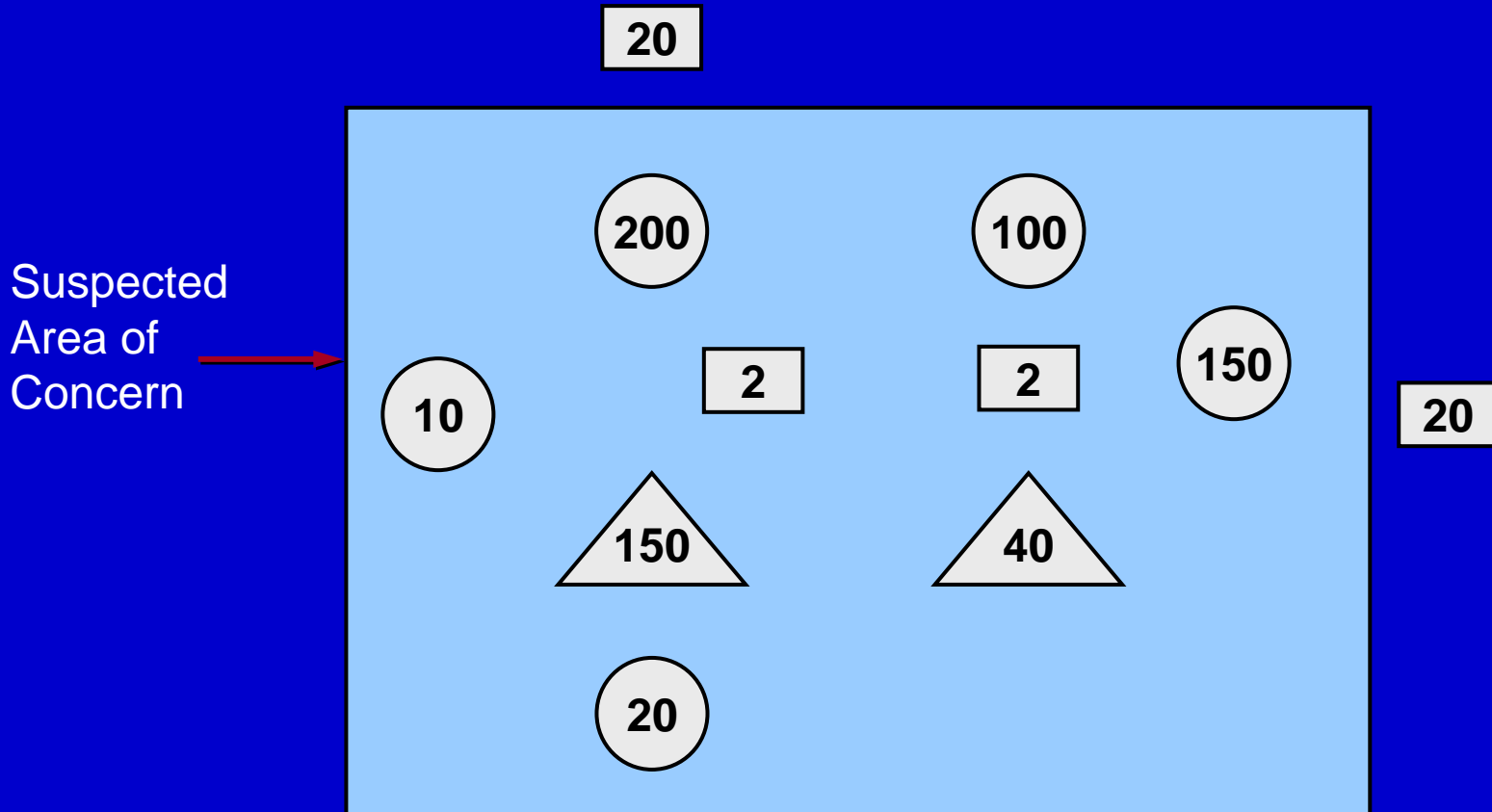
Suspected
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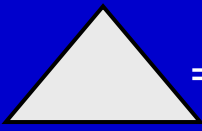


 = Initial
Sample

 = Round 1
Delineation
Sample

Is a Sample a Site?

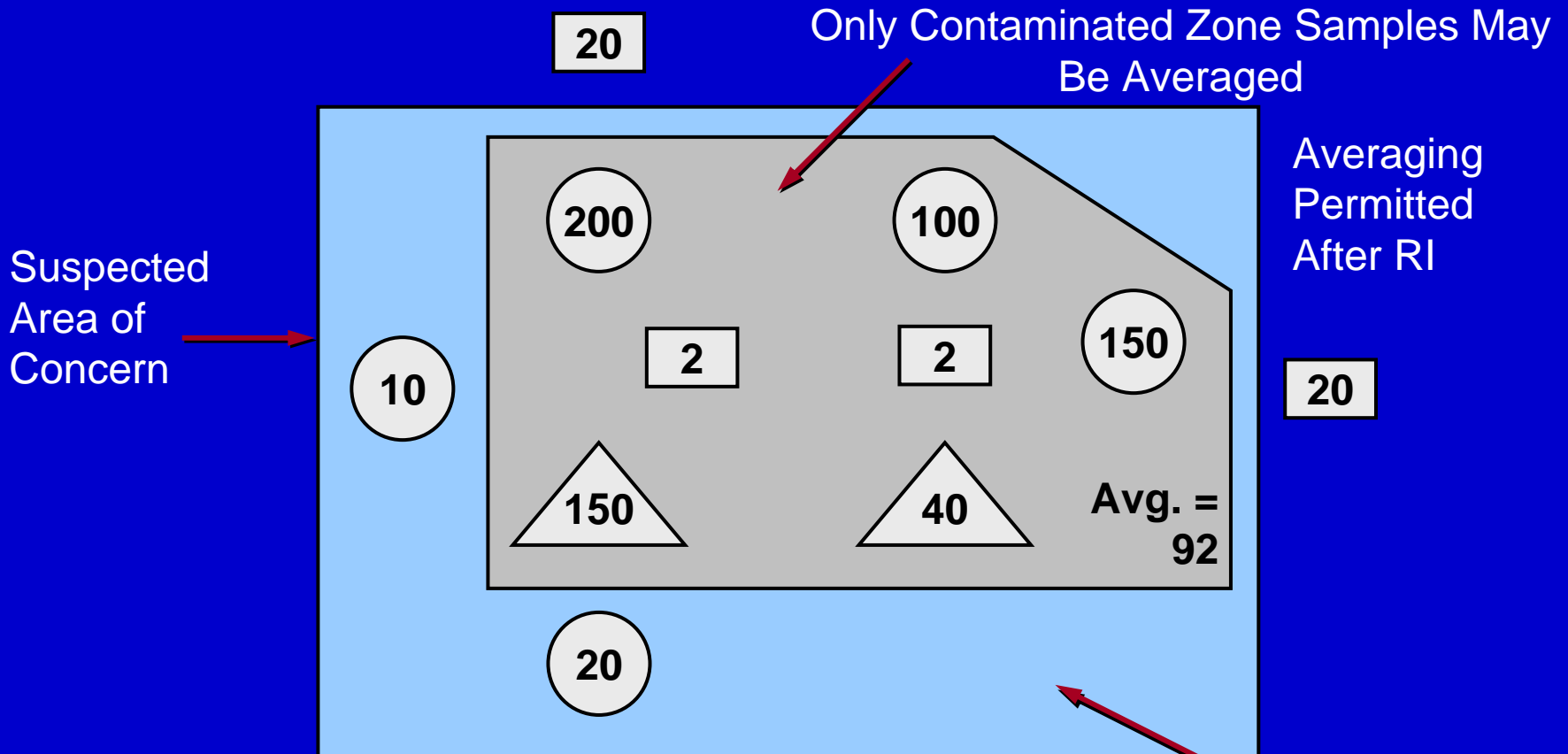



 = Initial Sample

 = Round 1 Delineation Sample

 = Round 2 Delineation Sample

Is a Sample a Site?



 = Initial Sample

 = Round 1 Delineation Sample

 = Round 2 Delineation Sample



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Q & A/ Discussion