

Remediation Roundtable

March 19, 2019





Remediation Roundtable Webcast

- Basic directions provided on listserv email
- Detailed directions on website
 - ▶ www.ct.gov/deep/remediationroundtable





Remediation Roundtable Agenda

- **Announcements**
- **Updates and Roundtable Tips**
- **Presentations**
 - NEW SEH Status Reporting Forms
 - General Permit for In-situ Aerobic Biodegradation
 - Rem in / Rem Out



Announcements – Web Updates

- ▶ SEH Map and SEH List
- ▶ DEEP website portal migration
DEEP.remediationroundtable@ct.gov



Announcements

- ▶ EPOC RSR Course April 4, 2019
- ▶ Carl Gruszczak = new Remediation ITRC contact
- ▶ New Commissioner Katie Dykes



Announcements – WQS Public Comments

- ▶ Soliciting Public Comments on the Water Quality Standards until April 5, 2019, as a precursor to updating the WQS
- ▶ Comments to be sent to: DEEP.WQS@ct.gov
- ▶ More information available at: www.ct.gov/deep/wqsc

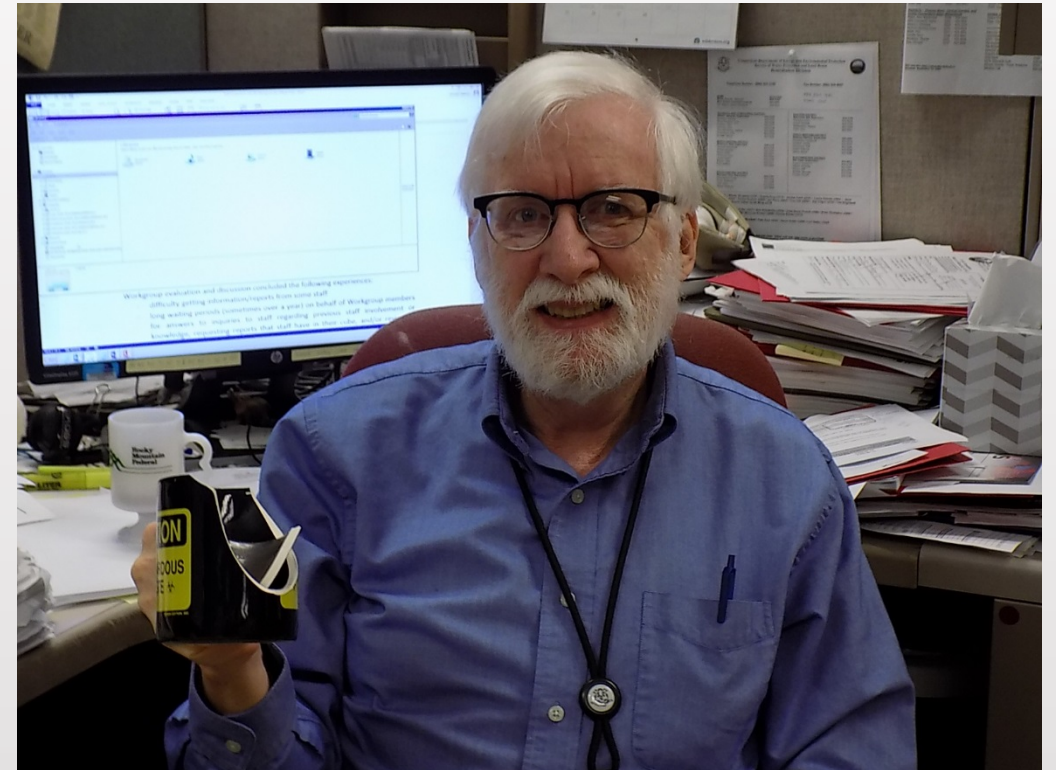


Announcements – Remediation Staff

➔ Ray Frigon
New Remediation
Division Assistant Director



➔ Ken Feathers
Retiring this spring





Questions or Comments?

Please Speak into Microphone
and State Your Name

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Update Wave 2

Remediation Standard Regulations

Betsey Wingfield
Bureau Chief

Bureau of Water Protection and Land Reuse



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Remediation Roundtable Tips



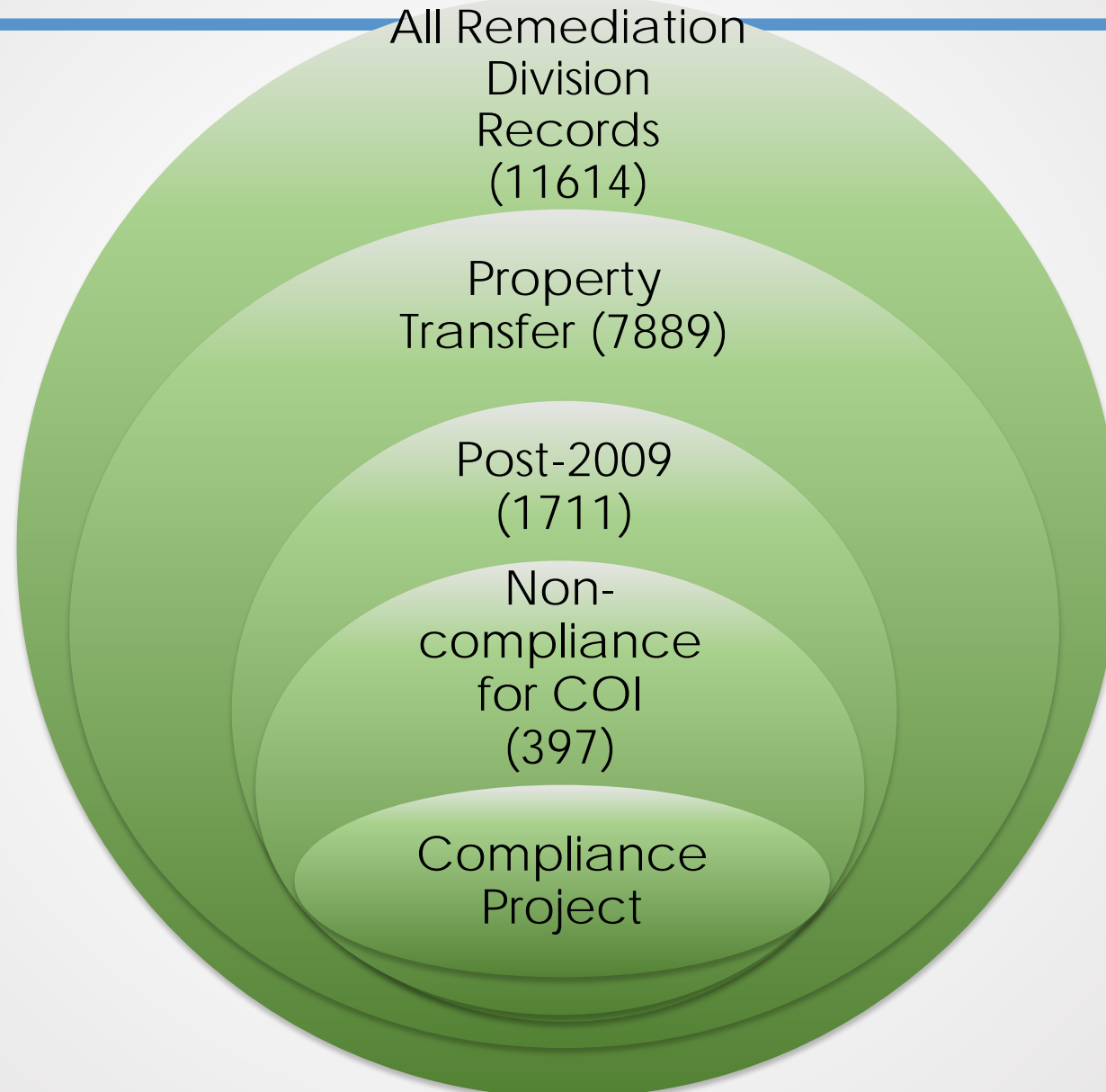


Tip #24. Transfer Act Compliance Initiative

Statutory Requirements

- ▶ 2 years post acknowledgement date – Completion of Investigation (COI) due
 - ▶ Using prescribed form for sites filing after 7/1/2007
- ▶ 3 years post acknowledgement date – Remedial Action Plan (RAP) due
 - ▶ Using prescribed form for sites filing after 7/1/2007
- ▶ 8 years post acknowledgement date – Verification due
 - ▶ For sites filing after 10/1/2009

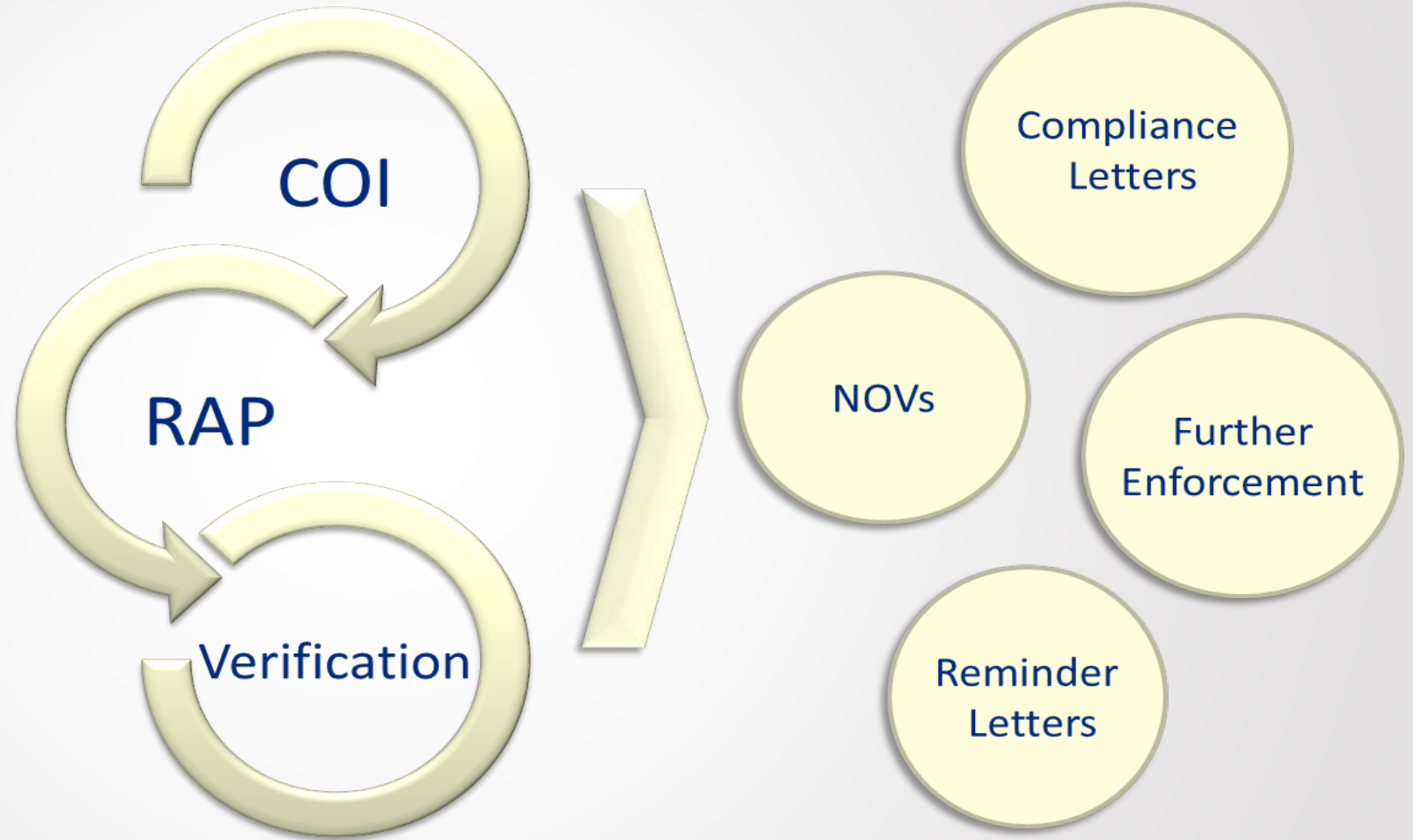
Tip #24. Transfer Act Compliance Initiative: Metrics





Tip #24. Transfer Act Compliance Initiative

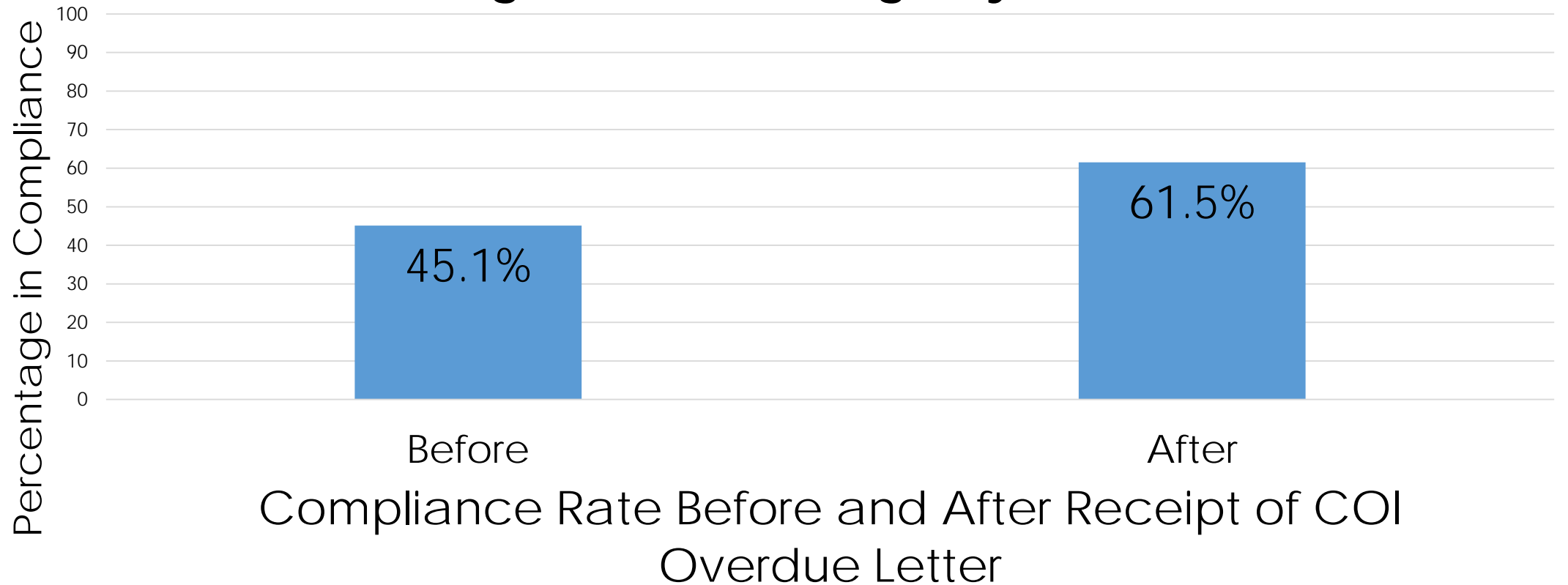
As milestones for each site become due, compliance status is reviewed.



Tip #24. Transfer Act Compliance Initiative: Success



Compliance Rates for Post October 1, 2009 Property Transfer Program Form III filings 2-year Milestone





Tip #24. Transfer Act Compliance Initiative

- ▶ Remediation Division is tracking Property Transfer Form III filings, particularly focusing on sites acknowledged after October 1, 2009
- ▶ Taking steps to remind certifying parties of their statutory requirements
- ▶ Encouraging compliance to eliminate the need for formal enforcement – starting with friendly reminder letters
- ▶ Will engage in more formal enforcement for noncompliant sites



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Tip #25. Environmental Land Use Restriction Data



A large table of environmental land use restriction data, containing numerous rows of alphanumeric codes and numerical values, likely representing property identifiers and associated restriction details.

Tip #25. Environmental Land Use Restriction Data



Data wants your data!



Tip #25. Environmental Land Use Restriction Data

- ▶ Data is a good start – representative data of current conditions is the best start
- ▶ One key component of screening for completeness is inclusion of data that supports your rationale for each restriction requested
 - ▶ **Not supplying supporting data will result in an automatic Notice of Administrative Deficiency (NOAD)**
- ▶ Entire Phase II/III data sets from investigation through remediation through confirmation sampling is too much
- ▶ Do not include data for sampling points that no longer exist

CRITICAL DATA



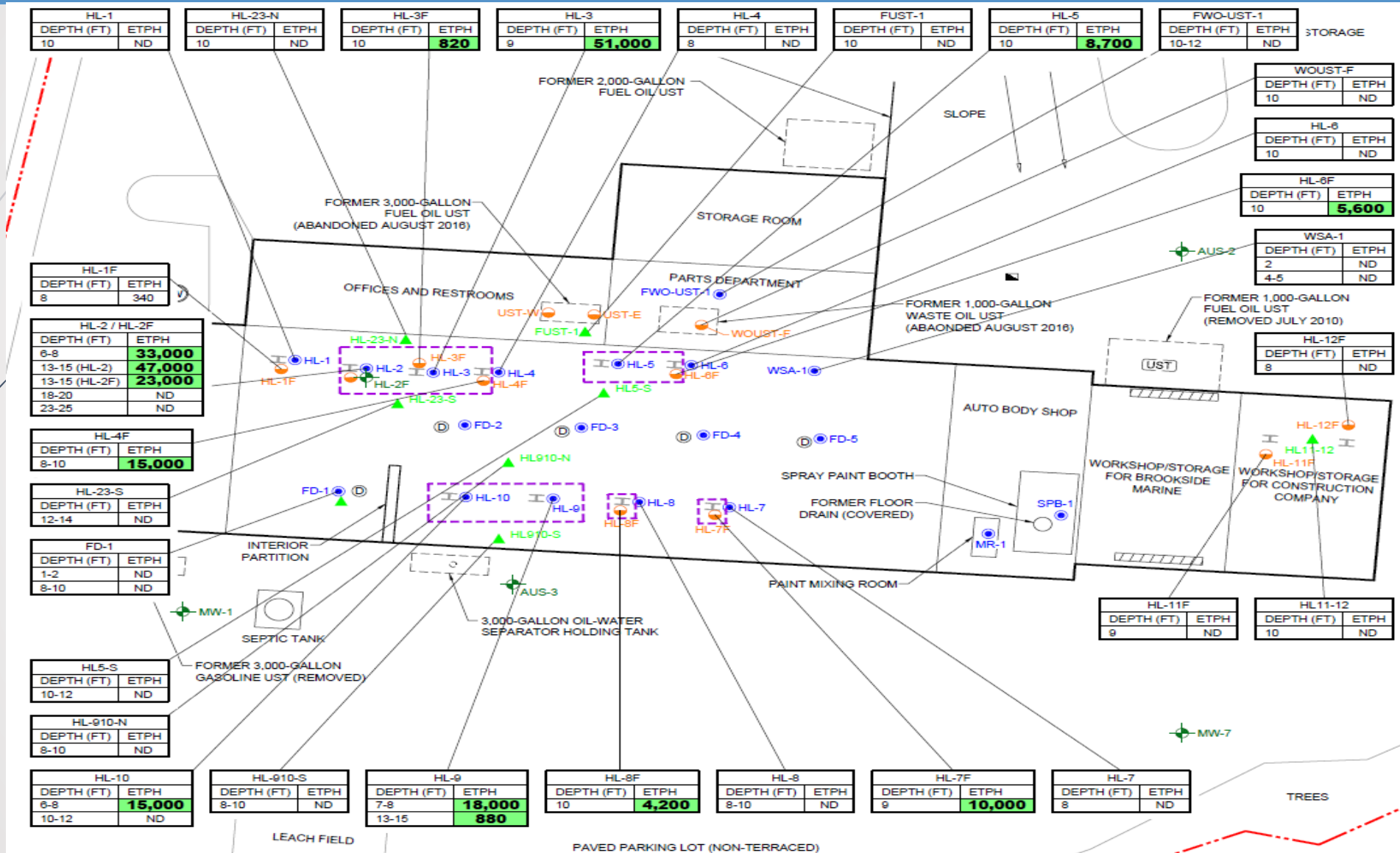


Tip #25. Environmental Land Use Restriction Data

- ▶ Data is a good start – representative data of current conditions is the best start
 - ▶ Summary data tables
 - ▶ Corresponding sampling location map
 - ▶ Matching monitoring well/soil boring names to the sampling location map
 - ▶ Subject Areas for each restriction should be overlaid on the sampling map
- ▶ Indicate and explain LEP-implementing options, variances, exemptions, exceptions
 - ▶ Include approvals or forms associated with such items!

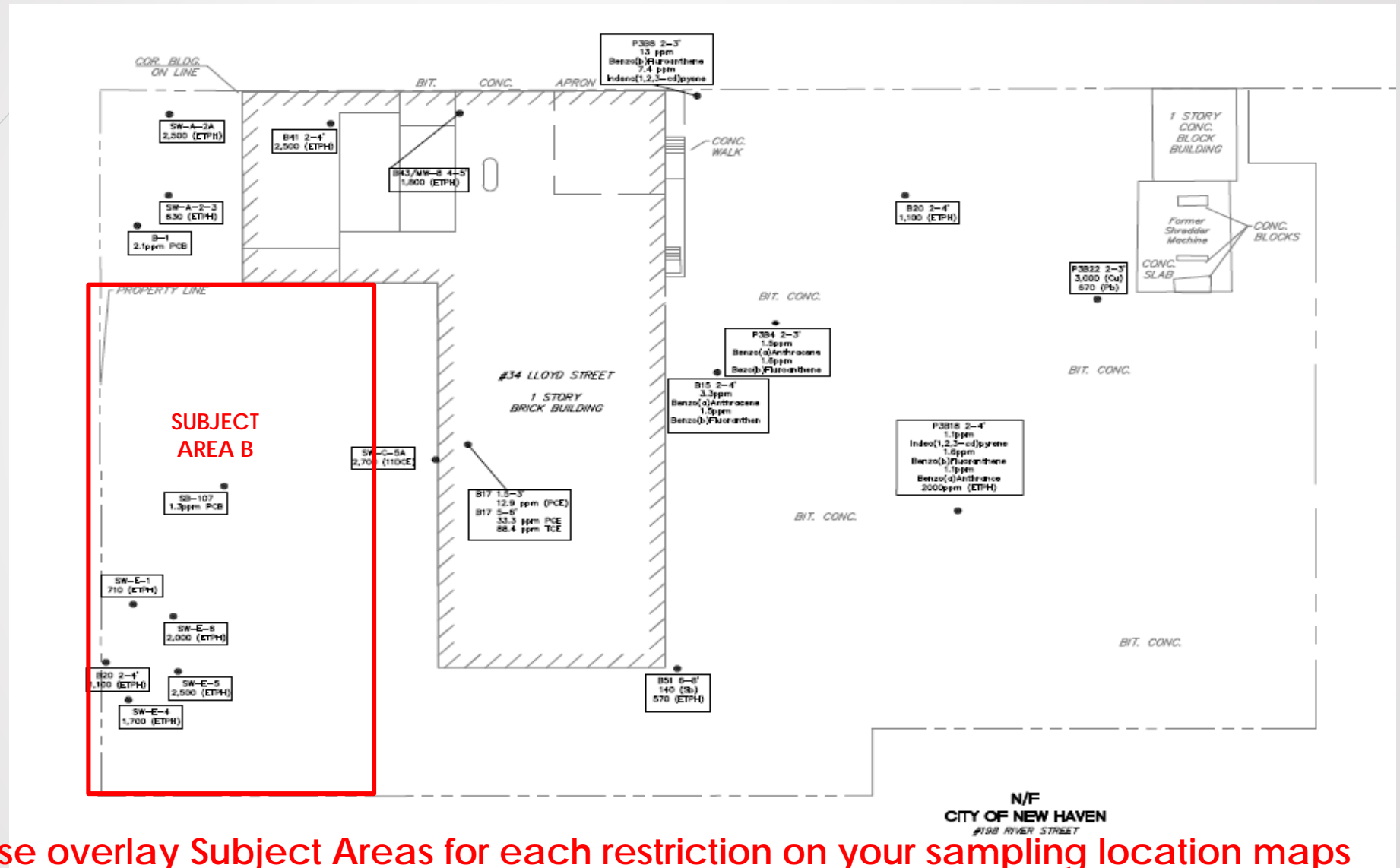


Tip #25. Environmental Land Use Restriction Data





Tip #25. Environmental Land Use Restriction Data



***Please overlay Subject Areas for each restriction on your sampling location maps**



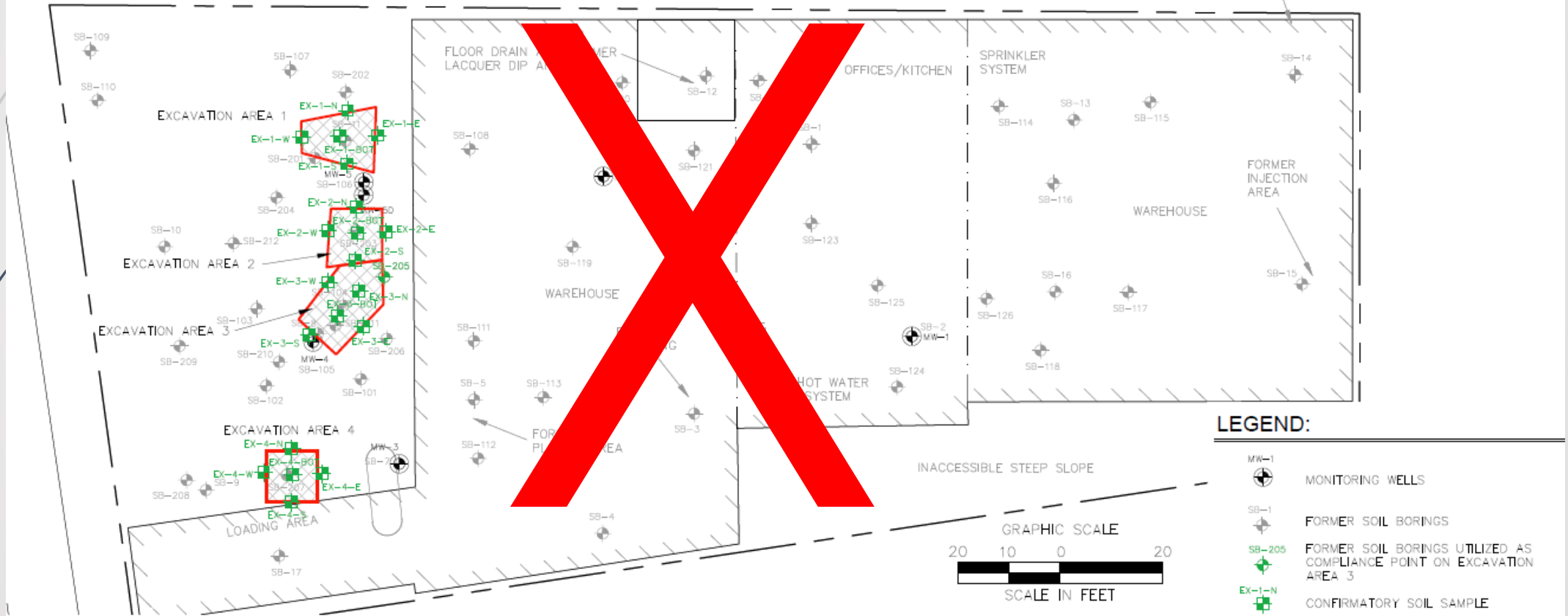
Tip #25. Environmental Land Use Restriction Data

EXCAVATION AREAS



EXCAVATION AREAS DUG TO DEPTH BETWEEN 4'-5' BGS ON JUNE 29, 2017 AND JULY 20, 2017

RIVER STREET



***Sampling locations and data for points that no longer exist should not be included**



Tip #25. Environmental Land Use Restriction Data


Exhibit B. Decision Document
*Exposure of Inaccessible Soil Restriction Form **
Supplemental Information


If alternative language is proposed, complete the following:
Explain why alternative language is needed:

The proposed alternative language is:

If pertinent to the Application, enter additional information below (optional):

- ✓ Insert electronic copies of tables and figures below.
- ✓ If applicable, insert electronic copy of EPA's approval of the PCBs Notification pursuant to 40 CFR Part 761.61 below.
- ✓ Insert electronic copies of extra Forms as needed (found on the [Environmental Land Use Restrictions](#) webpage). These will be included in the final ELUR package.

 [Application Contents](#)

 [Return to Exhibit B. Decision Document Restriction Form\(s\)](#)

List LEP-implementing measures:
i.e. variances, exemptions,
exceptions, such as:

- Additional or Alternative Polluting Substances (APS)
- 95% Upper Confidence Level
- TSCA regulated PCB approvals



Questions or Comments?

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Tip #26. Sampling Rationale: Documentation

- Follow-up on a previous tip about Sampling Rationale (Tip #20 – June 19, 2018)
- Now that you have your sampling rationale (location & depth) developed based on release fate & transport, it needs to be communicated in the Verification Report
- Issue seems to be separating from the familiarity with the site

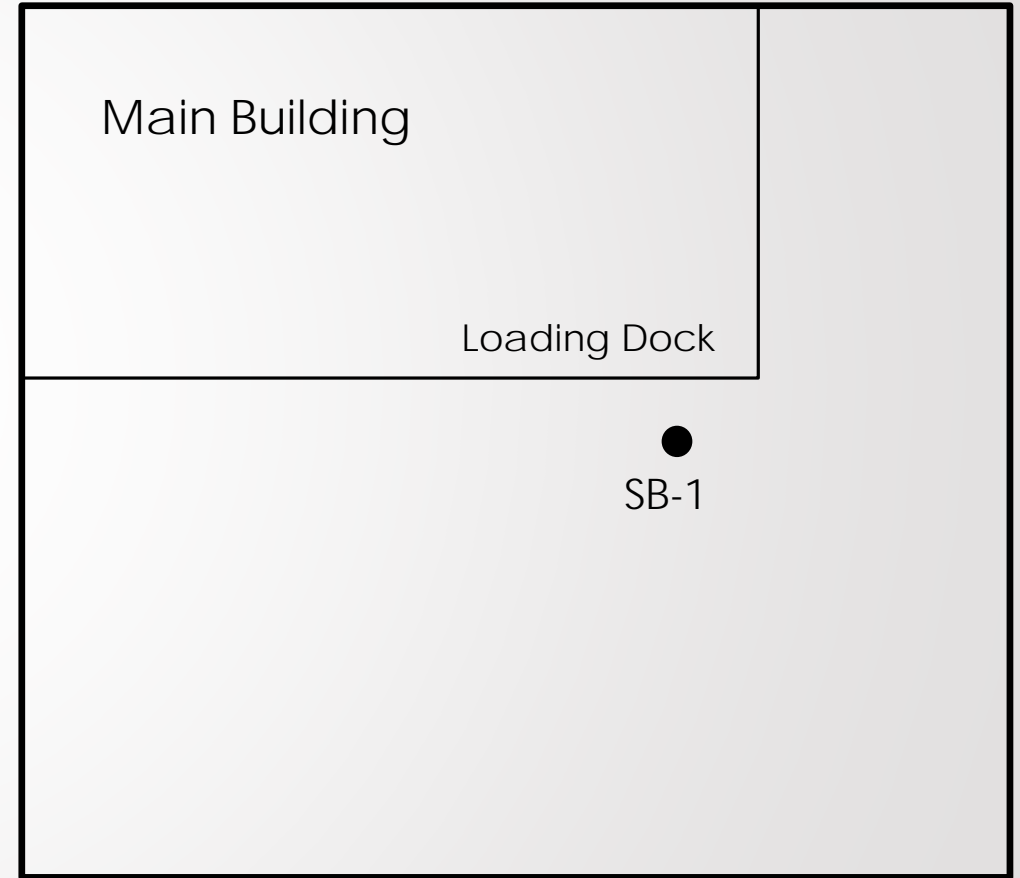


Tip #26. Sampling Rationale: Documentation



Location most likely to be contaminated based on Sampling Rationale

?



Sparse Site Plan

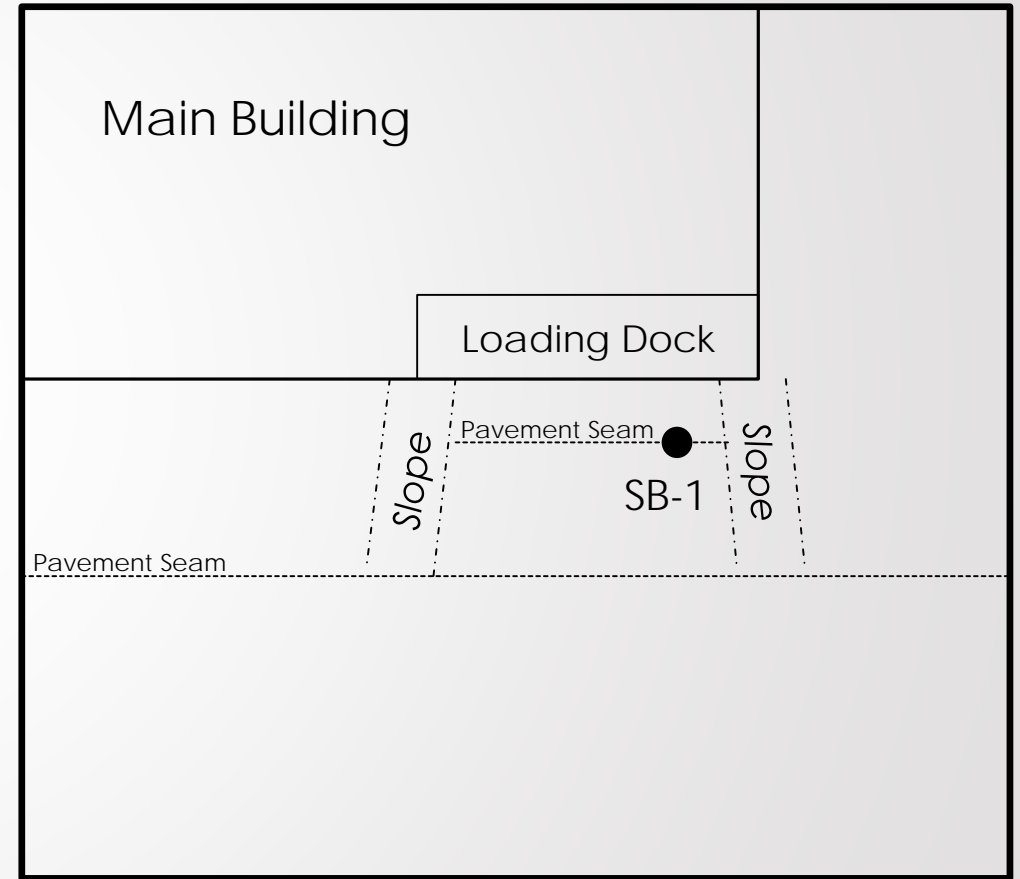


Tip #26. Sampling Rationale: Documentation



Location most likely to be contaminated based on Sampling Rationale

⇒



More Detailed Site Plan



Tip #26. Sampling Rationale: Documentation

- Need to make sure that the explanation of the sampling rationale is understandable to someone who is not familiar with the site:
 - State the obvious
 - Don't make any assumptions
 - If need be, repeat info from previous reports
- This is important to not only aid in DEEP review, but also helps the understanding of anyone who is reviewing the site file in the future



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Significant Environmental Hazards

Follow up Reporting

Camille Fontanella
SEH Program Coordinator
Remediation Division



SEH Follow up Reporting

- ▶ Refresher on Statutorily Required Initial Response Actions for Soil, Drinking Water, and Groundwater Hazards
- ▶ Types of Correspondence You May Expect from DEEP
- ▶ Continued Reporting on Mitigated (Controlled) Hazards – **NEW Status Update Forms**



Statutorily Required Initial Response Actions

- ▶ Soil Hazard Condition CGS §22a-6u(d):
 - ▶ Direct Exposure Short-term risk
 - ▶ Reportable for top two feet of soil
- ▶ Drinking Water Hazard Conditions CGS §22a-6u(b) and (c)
 - ▶ Short-term risk of ingesting polluted groundwater
 - ▶ Reportable for substances **above or below** groundwater protection criteria or **NAPL** or **if detected at all and is a result of a release** but has no GWPC
- ▶ Groundwater Hazard Condition CGS §22a-6u(g)
 - ▶ Short-term risk of ingesting polluted groundwater
 - ▶ Reportable if drinking water wells within 500 feet downgradient or within 200 feet in any direction of plume above GWPC

Statutorily Required Initial Response for Soil Hazards

	Industrial/ Commercial	Ind/Comm but Residential use is within 300 feet	Residential
Triggers: Metals and PCBs	30 x IDEC *15x RDEC non- restricted access definition PCBs	15 x IDEC OR 30 x IDEC if paved/fenced	15 x RDEC
Triggers: Organics	30 x IDEC	30 x IDEC	15 x RDEC
Notify	90 days of discovery		
Initial Actions by day 90	<ul style="list-style-type: none"> • Notify • Determine extent • Prevent Exposure • Report with Recommendations (include annual report) 		
Exceptions	<ul style="list-style-type: none"> • Hazard abated prior to 90 days by: removal, inaccessible per RSRs, remediated to RSRs • TPH and specified organics 		
	---	<30XI/C DEC and already has well-maintained pavement/fencing	Site in LHD lead paint abatement program



Statutorily Required Initial Response Actions:

Surface Soils – Technical Guidance

- ▶ Ind/Comm within 300 ft of Residential **use** is measured from area exceeding hazard to residential parcel boundary
- ▶ Characterization of extent evaluates laterally and vertically to 2 feet bgs
 - ❖ May affect distance to Residential Use and therefore threshold values for metals/PCBs
- ▶ PCBs 40 CFR 761.123 definition of *non-restricted access*
 - ❖ May affect use of RDEC or IDEC, 1ppm x 15

**Statutorily
Required
Initial
Responses
for Drinking
Water and
Ground-
water
Hazards**

	Supply Well (b)	Supply Well (c)	Monitoring Well (g)
Trigger	> GWPC or NAPL	<GWPC OR any detection	> GWPC 500 ft to DG well 200 ft any direction
Notify	1 day verbal and 7 day written	30 day	30 day
Actions by day 30	<ul style="list-style-type: none"> Well Survey 500 feet radius Test abutters 	<ul style="list-style-type: none"> Retest Well If > GWPC, more actions 	<ul style="list-style-type: none"> Well Survey 500 feet radius Test abutters
Report	30 day report with recommended actions	With notification at 30 days with recommended actions	



Statutorily Required Initial Response Actions:

Drinking Water and Groundwater – Technical Guidance

- ▶ Required a butter testing
 - ❖ Where DWW within 500 feet of polluted well
 - ❖ Includes parcels separated only by roads
- ▶ Primary responsibility to notify is placed by statute on the owner of site that is source of pollution
 - ❖ If >GWPC in supply well and source cannot be determined, notification must be submitted by TEP Client, even if not owner of source



Statutorily Required Initial Response Actions:

Drinking Water and Groundwater – Technical Guidance

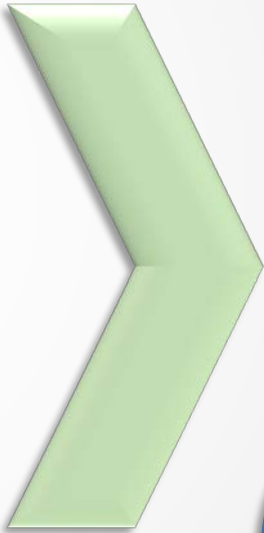
- ▶ Well survey required even where water service and in GB areas
- ▶ What is downgradient?
 - ❖ Without GW flow direction, cannot know downgradient
 - ❖ Without 3-D hydrogeologic study of bedrock, all directions could potentially be downgradient
 - ❖ Recommend notification within 500 ft if inhabitable structures present, unless receptor survey has already determined no supply wells

[Water Supply Well Receptor Guidance Document](#)



DEEP Response to SEHs

As milestones for each site become due, compliance status is reviewed.





NEW SEH Status Reporting Forms

- Risk reduction is only effective if maintained and monitored
 - [SEH Status Update Form: Soil](#)
 - [SEH Status Update Form: Drinking Water and Groundwater](#)
- Forms are designed to:
 - Give predictability for timing and info requested
 - Make reporting easier
 - No written report is required until request for Certification of hazard abatement or change in plan



SEH Reporting – Soil Hazard Conditions

➤ Purpose:

- Standardized reporting at a set frequency of continued actions to break exposure pathway
- Inspection and maintenance of control measures limiting direct exposure (e.g., fencing, signage, pavement)

➤ Soil Report Elements:

- What is the hazard and how is it mitigated?
 - Inspection checklist, photo documentation
- Is there an issue with mitigation measures that needs to be fixed?
- **ONLY 4 PAGES!!!**



SEH Reporting – Soil Hazard Conditions

- ▶ Predictability:

- ▶ **All SEH Annual Soil Status Reports** will be due **June 1** of each year

- ▶ You may need to inspect more frequently, depending on your site conditions

- ▶ **Supplemental Reporting:** If there is a problem with mitigation measures in the meantime, use the same form to **report fixes within 30 days**
Please do not wait until June 1



SEH Reporting – DW and GW Hazard Conditions

➤ Purpose:

- Standardized report frequency and content
- Operation, maintenance, and monitoring of control measures breaking exposure pathway (e.g., GAC filters)

➤ DW/GW Report Elements:

- What is the hazard, who is affected, and how is it mitigated and monitored?
 - Attach map and tables for DW/GW data
 - Report testing of additional supply wells, installation of treatment systems, on-going monitoring of drinking water and monitoring wells
- Request modification of approved monitoring plan



SEH Reporting – DW and GW Hazard Conditions

- ▶ Predictability:
 - ▶ All DW/GW reports will be due on a regular reporting frequency according to DEEP-approved plan at the time of Acknowledgement:
 - ▶ Quarterly: **February 1, May 1, August 1, November 1** of each year
 - ▶ Semi-annual: **May 1 and November 1** of each year
 - ▶ Annual: **May 1** of each year
- ▶ **ONLY 4 PAGES!!!**



SEH Online Resources

www.ct.gov/deep/remediation/SEH

- ▶ [CGS Section 22a-6u](#)
- ▶ [FAQs About SEHs](#)
- ▶ [Fact Sheet on Reporting SEHs](#)
- ▶ SEH Threshold Tables
 - ▶ [Reference Table A](#): Volatile Organic Substances
 - ▶ [Reference Table B](#): Semi-volatile Organic Substances
 - ▶ [Reference Table C](#): Inorganic Substances
- ▶ [SEH Quick Summary Table](#)
- ▶ [SEH Guidance and Instructions](#)
- ▶ [List of SEHs Reported to DEEP](#)
- ▶ Interactive [Map of SEHs](#)



Future SEH Status Reporting Forms

- ▶ Volatilization and Surface water



Questions or Comments?

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and State Your Name

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General Permit for In Situ Aerobic Biodegradation

Kenneth Feathers
Supervising Sanitary Engineer
Remediation Division



Permit Expiration

- ▶ Current General Permit expires August 26, 2019
- ▶ Notice of Tentative Decision to Renew
 - ▶ without Modification (except update to DEEP)
 - ▶ Published February 27, 2019- [Notice](#)
 - ▶ Public comment period ends March 27, 2019
 - ▶ This renewal will ensure continuous coverage



Long Range Plan

- ▶ CT General Statutes 22a-6aa provisions apply
 - ▶ Existing permit extended one year to August 26, 2020
 - ▶ Prior to date, a Final Decision on renewal must be made or permit expires
- ▶ However, in the next year DEEP will propose modifications to update this General Permit
 - ▶ Modifications being developed on a timeline to be issued prior to August 26, 2020.
- ▶ The proposed modifications will be separately public noticed this fall; seeking informal input



Future Permit

- ▶ Scope of modifications being considered:
 - ▶ Simplify fees
 - ▶ Incorporate provisions to ensure protection of public water supplies
 - ▶ Expand use of certificate of coverage
 - ▶ after screening level review - quicker
 - ▶ based on LEP/PE professional certification
 - ▶ Increase register-only opportunities
 - ▶ Most open-grave applications
 - ▶ Considering small injection jobs as well



Future Permit cont.

- ▶ Additional revisions under consideration
 - ▶ Monitoring requirements
 - ▶ Reporting requirements
 - ▶ Permit-prescribed initial response actions
 - ▶ Increase flexibility for response to problems
- ▶ DEEP seeks input before finalizing our draft



Permit Monitoring

- ▶ Multiple data objectives
 - ▶ Document compliance with permit
 - ▶ Identify discharge effects beyond permitted Zone of Influence in timely manner
 - ▶ Ensure environmental receptors are protected
 - ▶ Identify issues with reactions/risk within ZOI
 - ▶ Monitor success of remediation
- ▶ Multiple monitoring locations
 - ▶ Outside and inside ZOI
 - ▶ Receptors: wells and pathways



Monitoring Questions

- ▶ Goal: balance meeting monitoring objectives with a cost-effective monitoring program
 - ▶ What is an appropriate frequency/duration?
 - ▶ Use intermediate screening samples?
 - ▶ What is a sufficient parameter suite?
 - ▶ Use field parameters only as a screening approach?
 - ▶ Can screening samples be differently acquired?
 - ▶ Grab sample no purge?
 - ▶ How can we provide for monitoring flexibility?
 - ▶ location/parameters/timing vs specific data objective



Response Actions

- ▶ Permit requirements drive Response Actions
 - ▶ Overly sensitive trigger criteria in permit?
 - ▶ Poorly located downgradient wells used, (within injection composite zone of influence)
 - ▶ Some true permit violations may be of little impact when further evaluated
- ▶ Seek balance: protection vs. implementability
 - ▶ Reduce DEEP staff involvement/delay in response



Response Questions

- ▶ Goal: balance response requirements between adequate protection and practicality
 - ▶ What changes can be made to reduce false positive permit violation triggers?
 - ▶ What would an event- driven progressive evaluation of apparent violations look like?
 - ▶ Triggers for expanded testing (location and parameters)
 - ▶ Triggers for active intervention
 - ▶ How can we ensure timely intervention for major issues posing real risk?



Reporting

- ▶ Current reporting requirements are complex
 - ▶ Many interim reports waived for most sites
 - ▶ Very varied reporting formats in use
- ▶ Reporting Objective: document what was done
 - ▶ End of active phase
 - ▶ Monitoring (also response action)
 - ▶ Project recap when done
- ▶ Goal: balance documentation with report preparation burden and file volume



Request for Input

- ▶ We will prepare a proposed modification to the permit this spring/summer
- ▶ Public notice expected in the fall
- ▶ Send suggestions by May 1, 2019

To: Kenneth.Feathers@ct.gov

and

Anthony.Gyasi@ct.gov



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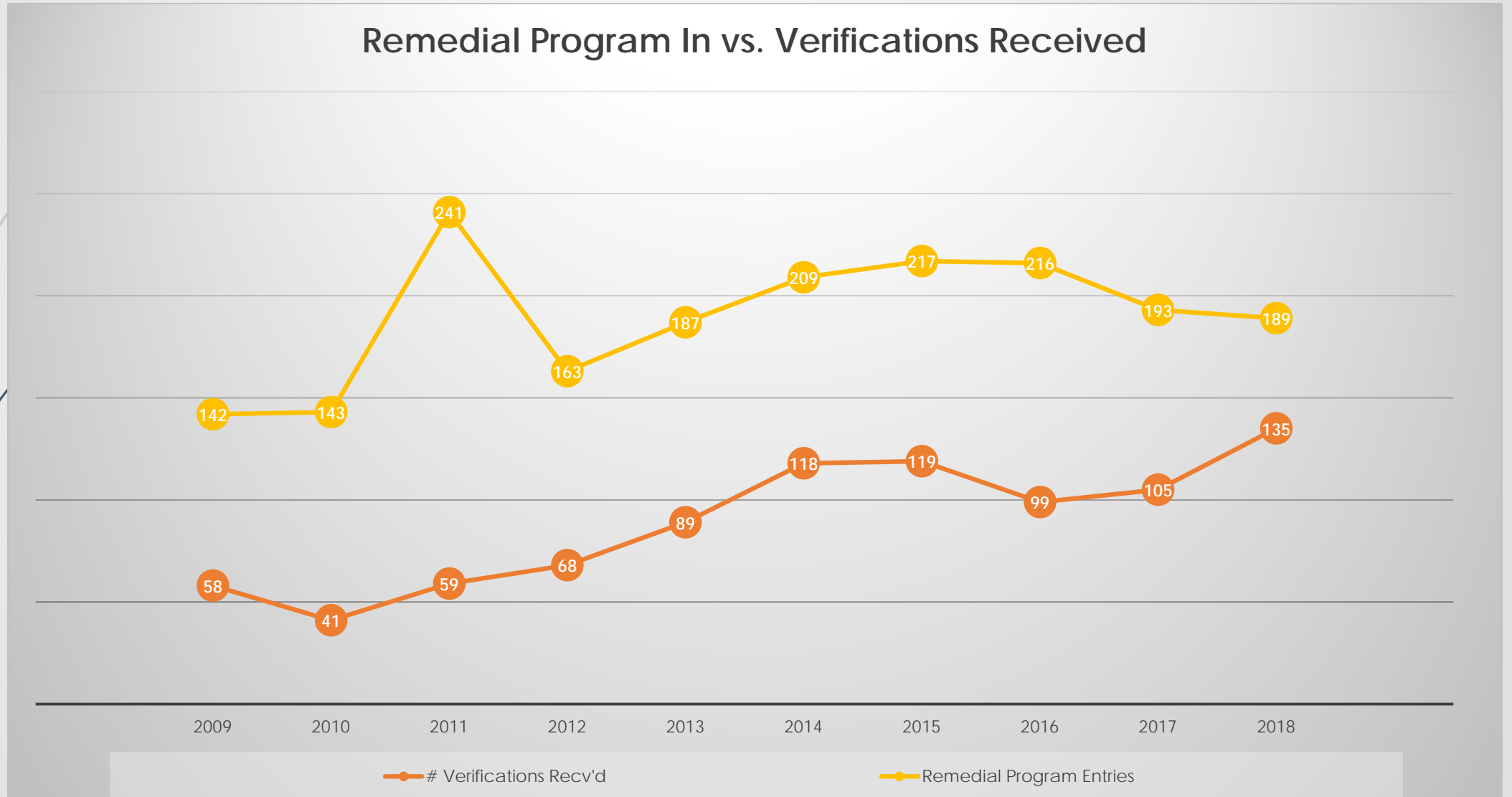
REM In – REM Out

Ramifications of Verifications

Jan Czeczotka
Director
Remediation Division

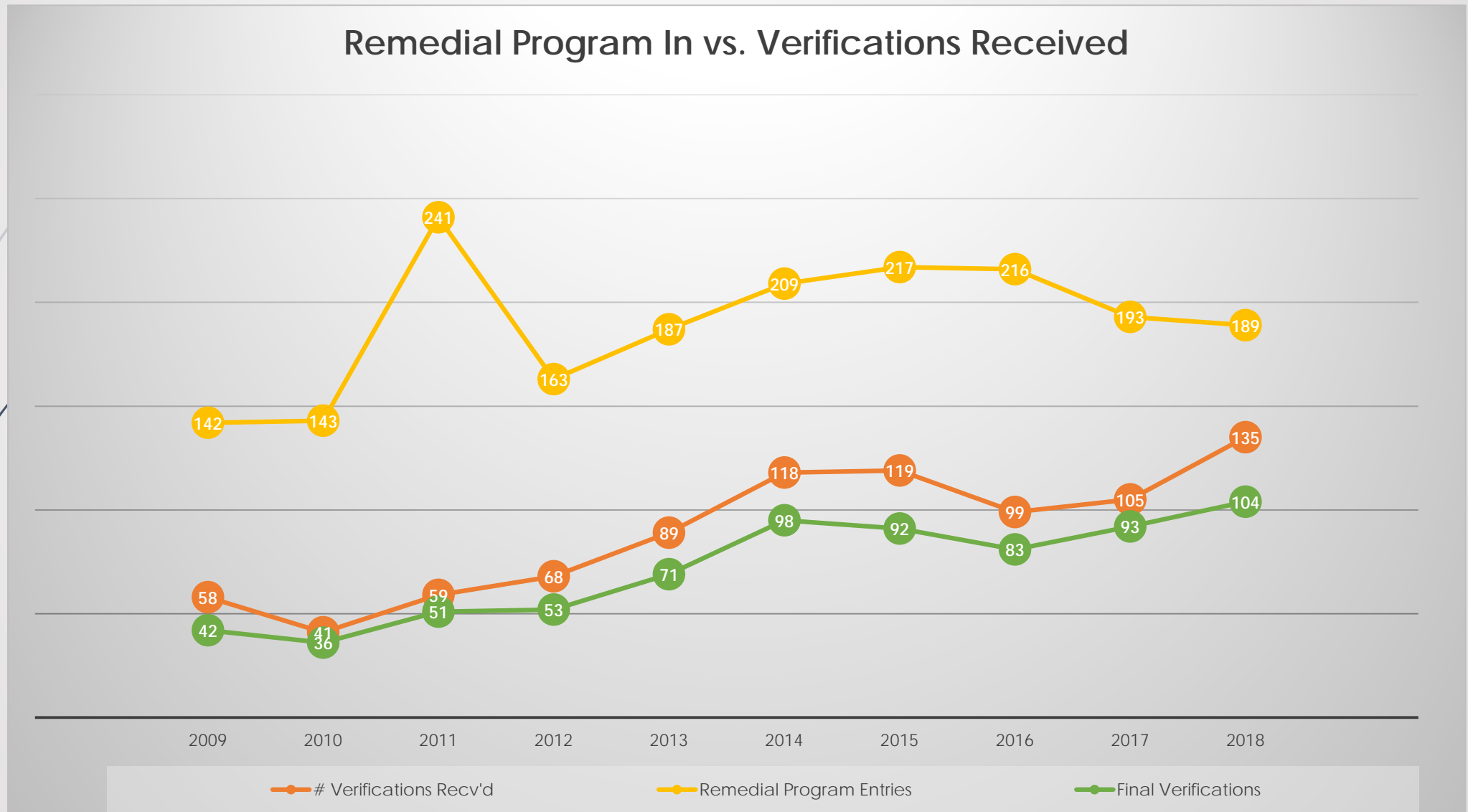


REM In – Verifications In





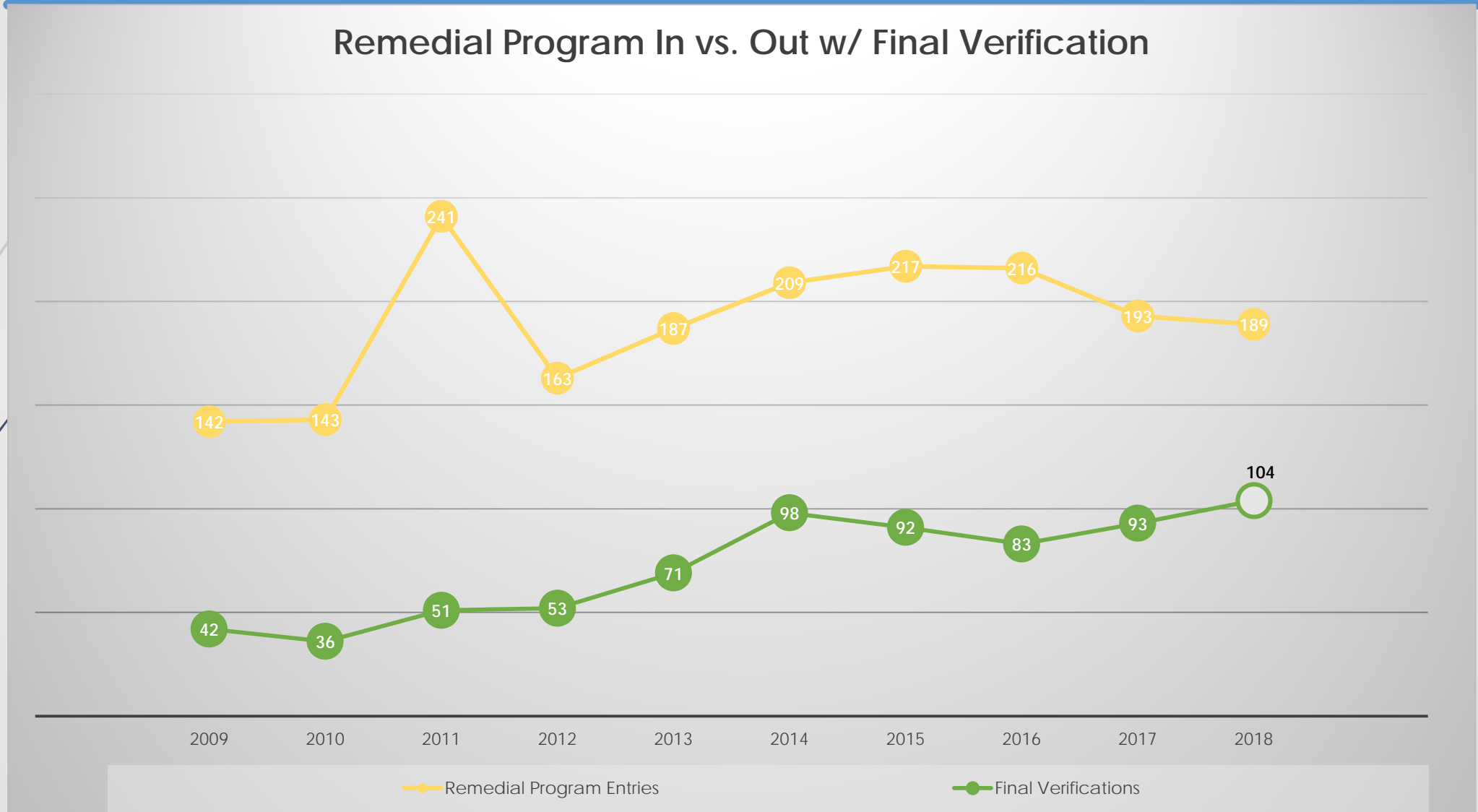
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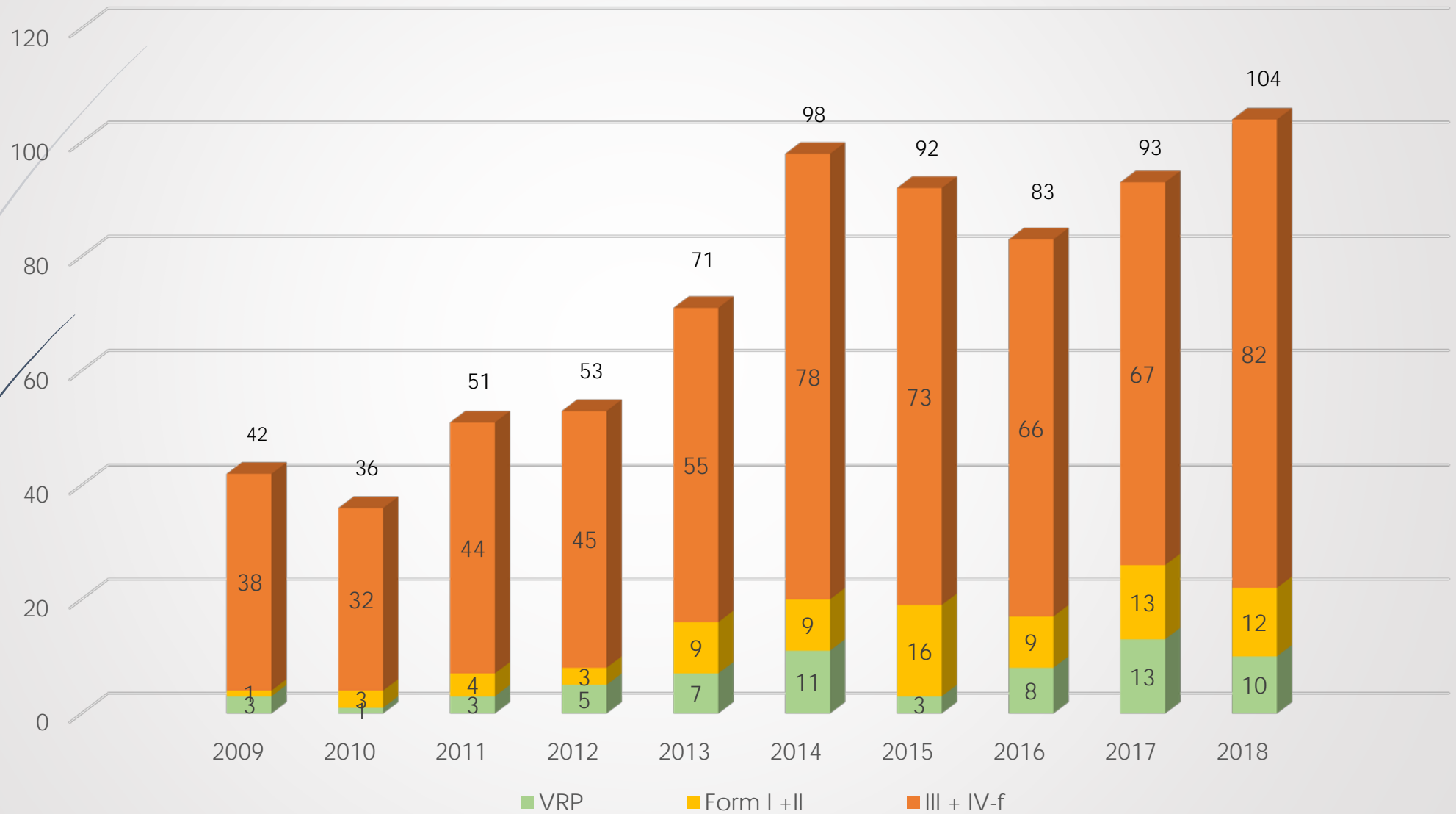
REM In – REM Out

Remedial Program In vs. Out w/ Final Verification





REM Out: Final Verifications





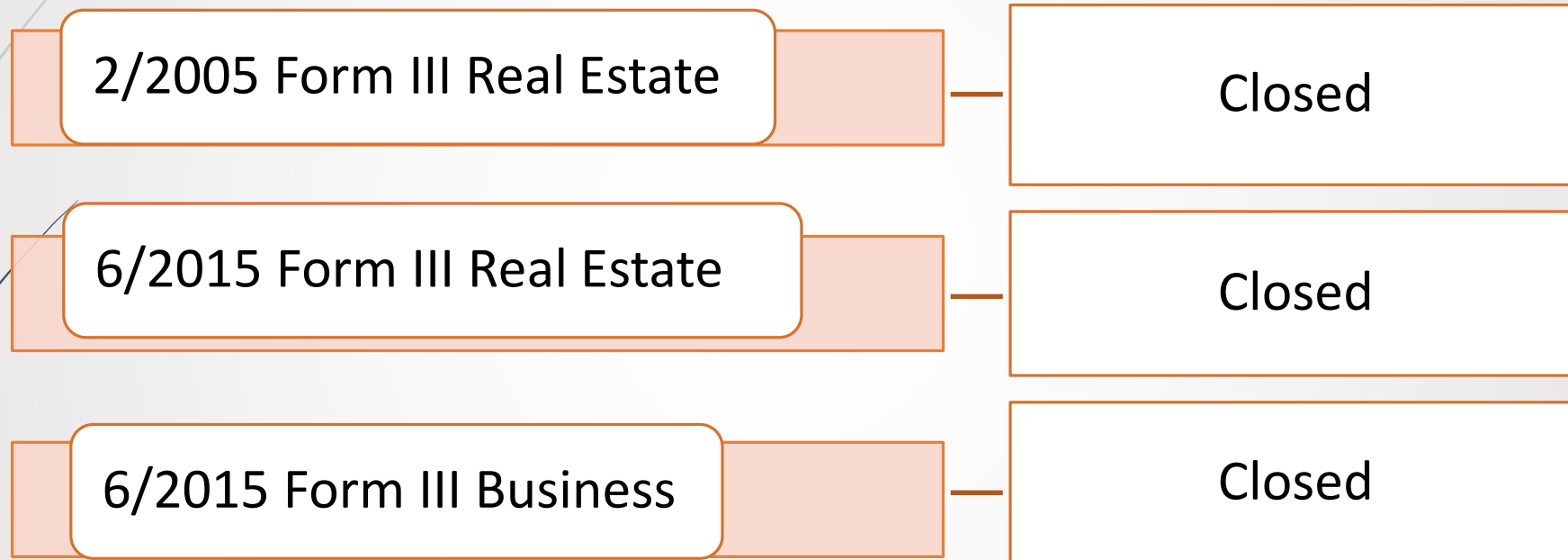
Ramifications of Final Verifications Property Transfer Filing

- ▶ Multiple filings for 1 Establishment
 Ie: Multiple Rem#'s for one GIS#

Final Verification submitted for a specific Filing
(Specific Rem#)



Ramifications of Final Verifications Property Transfer Filing



➔ Final Verification submitted for 6/2015 Real Estate Form III



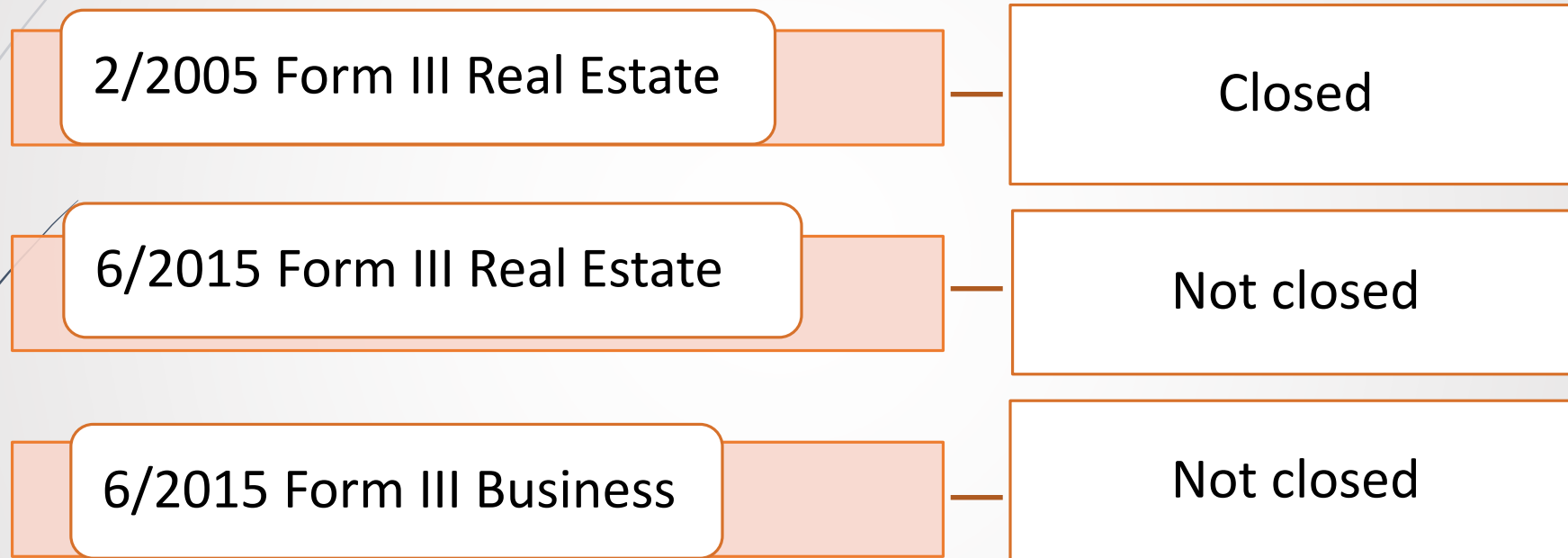
Ramifications of Final Verifications Property Transfer Filing

2/2005 Form III Real Estate	Not closed
6/2015 Form III Real Estate	Not closed
6/2015 Form III Business	Closed

➔ Final Verification submitted for 6/2015 Business Form III



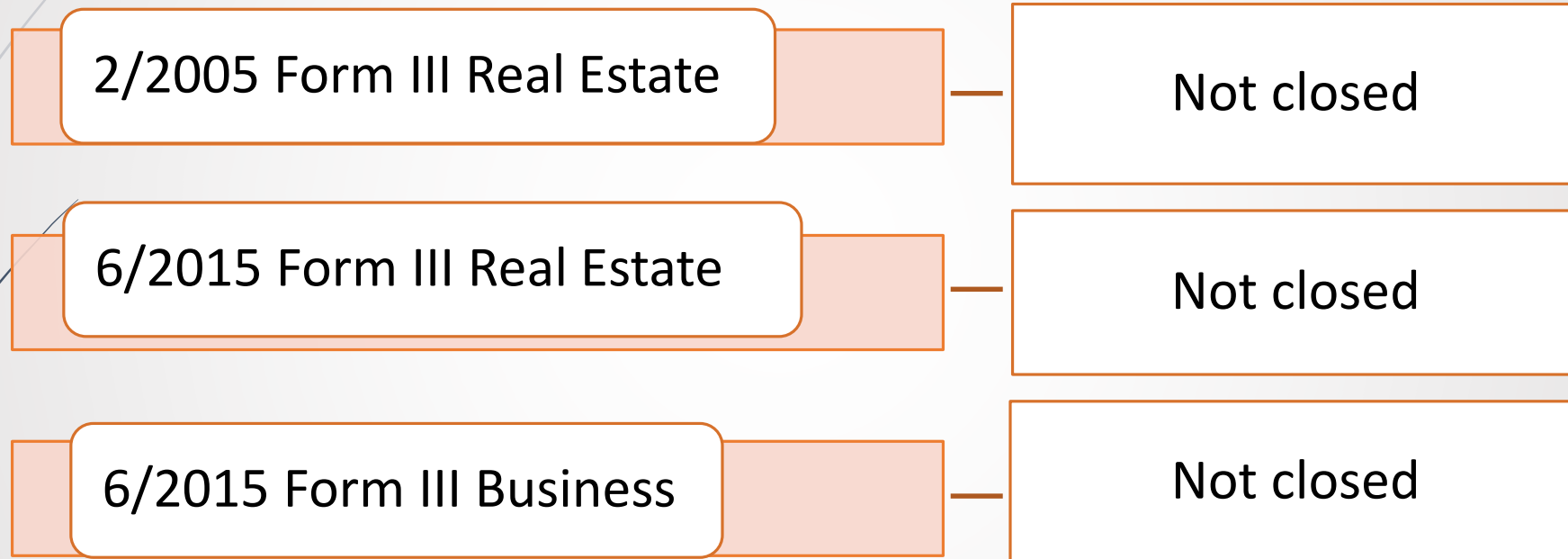
Ramifications of Final Verifications Property Transfer Filing



- ➔ Final Verification submitted for 2/2005 Real Estate Form III:
Date of filing III designated as applicable date for Verification



Ramifications of Final Verifications Property Transfer Filing



➔ Portion Verification submitted for 6/2015 Real Estate Form III



Ramifications of Final Verifications Property Transfer Filing

- ▶ The use of a previously submitted verification to support a particular filing is OK, but supporting information is required.

- ▶ **Information such as:**

Documentation on the Assessment of Environmental Conditions of the establishment between the date the previous Verification was designated to apply and the Transfer



← Time Interval →



← 10 Days to submit →

Property
Transfer
Filing Form



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Web: www.ct.gov/deep/remediationroundtable



Remediation Roundtable

Next meeting: June 18, 2019