

Response Action Outcome Guidance Training

November 23, 2021

Alissa Ambacher, Co-Moderator
Training Committee, Ass't. Chair

Gillian Schwert, Co-Moderator
Training Committee



Continuing Education Credits (CECs)

SRP Licensing Board **has not yet approved**

3.0 Regulatory CECs

for this Training Class

Attendance Requirements:

- **Webinar participants:** must be logged-in for the entire session and answer 3 out of 4 poll questions (randomly inserted in the presentation)



CECs: What's the Process?

Since the SRPL Board **HAS NOT** approved CECs for the course:

- DEP compiles a list of “webinar” participants eligible for CECs and provides the list to the LSRPA
- LSRPA will email eligible participants a “Link” to an LSRPA webpage with certificate access instructions
- Certificates are issued by the LSRPA after paying a *\$25 processing fee*



CECs: What's the Process?

**Since the SRPL Board Has NOT approved CECs
for the course...**

The certificate process will occur **AFTER** the course has
been approved by the SRPL Board



Test Your Knowledge

The acronym RAO stands for:

- A. Really Awesome Owls
- B. Rank and Awful Offal
- C. Response Action Outcome



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Question and Answer Segments

- Questions will be read aloud by the moderator as time permits
- Any questions are not addressed during the presentation, will be answered via email



Chat Function

- Please use the chat to advise the Department of technical issues with the presentation
- Please do not use the chat function to comment on presentations or to answer other attendee's questions



Remember!

Please fill out the Course Evaluation here:

<https://www.surveymonkey.com/r/FVPL2SW>





Site Remediation and Waste Management Program Response Action Outcome Guidance Training

November 23, 2021

Upcoming LSRPA Courses, Events & Initiatives

➤ **December 14, 2021 – Member Regulatory Roundtable (1.5 Regulatory CECs)**

Vapor Intrusion: New Construction Design for NJ and National Standards

Gunnar Barr, Obar Systems, Inc.

Dan Nuzzetti, Obar Systems, Inc.

Michael Poland, PE, LSRP, Poland Environmental (Moderator)



Upcoming LSRPA Event



NEW JERSEY SITE REMEDIATION CONFERENCE
FEBRUARY 15 - 16, 2022



NJ Licensed Site Remediation Professionals Association

Thank You to Our Partners

—◆◆◆— Diamond Partners —◆◆◆—



—◆◆◆— Platinum Partners —◆◆◆—



—◆◆◆— Academic Institution Partner —◆◆◆—



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Stay connected through lsrpa.org and these social media platforms.





Thank You!

RAO Guidance: Background and Introduction

Gerald M. Hahn, Supervisor

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Committee Members

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Today's Presentation

- Presentation and overview of the Response Action Outcome (RAO) Guidance, Version 3.1
- Review and clarification of key sections:
 - Reference “Re” Section
 - To Whom and When to issue an RAO
 - “Scope of Remediation” options
 - RAOs and Permits
 - Overview of Notices
 - Common Administrative Issues (Prevention and Fixes)



What's New?

- Additional clarification and examples throughout the document
- New Notices
 - Transfer of Monitoring Well Use (Redesignated use)
 - Sediment Contamination from an Off-Site Source Not Remediated – General
 - Two VI notices
 - **Indeterminate Vapor Intrusion (VI) Pathway Not Yet Evaluated**
 - **Long-Term Vapor Intrusion Monitoring**



What's New (cont'd)

- Commingled Plume notices (one associated with an off-site release and two associated with a 2nd on-site release)
- RAO Withdrawal Shell
- FAQs – RAO Shell Scenarios
- Response Action Outcome Type Decision Matrix
- RAO E-portal Service



Thank You!



Issuing Response Action Outcomes

Michael A. Justiniano, Section Chief

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To Whom an RAO is Issued

- Person Responsible for Conducting the Remediation (PRCR)
 - See definitions – ARRCS – N.J.A.C.7:26C-1.3 – the definition includes, “Any other person who is remediating a site”
 - See obligations – ARRCS – N.J.A.C.7:26C-2
- PRCRs who do not Own the Property
 - Prospective buyer, tenant, discharger
 - If the RAO is being issued to a party other than the property owner, ensure to copy the property owner



When to Issue an RAO

Contamination has been Remediated

- The completion of any phase of remediation that demonstrates that there is no discharge or that the site or AOC has been remediated
- All applicable permits were obtained
- All monitoring wells installed as part of the remediation have been properly decommissioned
- All annual remediation fees and outstanding Department oversight costs owed have been paid



When to Issue an RAO (cont'd)

Contamination Remains On-Site

- Contamination has migrated onto the site and an appropriate background investigation has been conducted – Brandi Gray
- The contamination was naturally occurring and there were no discharges of the same contaminants related to site operations - Ben Alter
- The Department has issued a remedial action permit that includes institutional and/or engineering controls– Marlene Lindhardt
- All other applicable permits have been issued and obtained prior to issuing the RAO



When to Issue an RAO (cont'd)

Contamination Remains On-Site

- Contamination has been remediated to:
 - levels established in an approved remedial action work plan or a final remediation document has been issued, **and**
 - the appropriate order of magnitude evaluation was conducted – Michael Fowler
- An area of concern RAO can be issued for AOC(s) that have been remediated, regardless of whether contamination remains from the other AOC(s) that are undergoing remediation at the site;
- A soils-only RAO can be issued when it is determined that soils have been fully remediated and soil contamination is no longer impacting ground water, while ground water contamination remains from the site or AOC(s) that are undergoing remediation – Ray Strassler



When to Issue an RAO (cont'd)

Final Notes

- All Immediate Environmental Concern (IEC) conditions must be mitigated prior to issuing an RAO for an AOC associated with that IEC. RAOs for AOC(s) not associated with the IEC condition may be issued prior to mitigation of the IEC
- RAO Service Coming Soon – Scott Tyrrell
- **Do not attach** any RAO correspondence/items to any of the non-RAO (i.e., phase document) online services. Send the RAO as a stand-alone submission via email SRP_submissions@dep.nj.gov



Questions?



Reference “Re:” Section Overview

Candace Baker, LSRP

Senior Project Manager

Langan Engineering

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Remedial Action Type

Must list one of the following for the RAO to be valid:

- Unrestricted Use Remediation
 - No engineering or institutional controls are needed
- Limited Restricted Use Remediation
 - Institutional control is needed
 - Deed Notice or CEA with a Remedial Action Permit (RAP)
- Restricted Use Remediation
 - Both engineering and institutional controls are needed with a RAP



Scope of Remediation

Entire site vs. one or more AOCs

- Entire Site (generally an entire block/lot)
- Area(s) of Concern
 - Can be a specific area or media.
 - Followed by list of remediated AOCs (“and no other areas”)
- ISRA Industrial Establishment
 - Entire Site (Single Tenant) or Multi-Tenant Leasehold
- Child Care Facility



Reference Section

- **Case Name:**
- **Address:**
- **Municipality:**
- **County:**
- **Block(s): Lot(s):**
- **Preferred ID: 000000**
- **KCSL # NJL0000000000**
- **Communication Center # 00-00-00-0000-00 [\$\$List all that apply\$\$]**
- **UST Registration #: 0000000**
- **UST Closure #C00-0000 [\$\$List all that apply\$\$]**
- **ISRA Transaction: [Select as applicable to this ISRA Case: Sale of Property, Cessation, Sale of Business, Bankruptcy - List Type, Foreclosure, Partnership Change, Sale of Assets, Stock Transfer/Corporate Merger, List Other Applicable ISRA Transactions]**
- **ISRA Case # E00000**
- **Well Permit #**



Site Information

Name

- Make sure it's the name used in DataMiner/NJEMs
- Can also add an aka name for clarity

Address, Municipality, County, Block and Lot

- Physical location of the site
- Verify block and lot with the municipality
- If an address does not apply, provide a detailed description
 - Include coordinates, mile marker, right of way descriptions, nearest intersection, or other descriptive information



Site Information

Preferred ID (PI #)

- 000000 or G000000000

LSR Activity Number

- LSRYY0000 – e.g. LSR210001
- This is not included in the original model RAO document. However, you can add it to this section for clarity
 - Could be useful for sites with multiple activity numbers



Site Information

Known Contaminated Site List (KCSL) Number

- NJL0000000000 or NJD0000000000
- May be difficult to find
 - Not readily found on DataMiner or GeoWeb
 - Will not trigger a revision if not present on the RAO



Site Information

Communication Center

- Aka DEP Hotline or Incident #
- 00-00-00-0000-00
- Only numbers that are being closed out should be included in the reference section
 - All contamination and media associated with the incident must be addressed
 - Any incident number used in the reference section should not be used in any notices
 - May call BCAIN (609-292-2943) to reconcile incident numbers



Site Information

UST Registration and Closure

- 00000000
- C00-0000 or N0000000UCLYY000
- Make sure that the UST registration database is up to date for the quantity, size, contents, and status for each UST being closed
 - LSRP must compare the online record to the site records.
 - Reconcile discrepancies before issuing the RAO
 - The reference section of the RAO must match the UST registration database



Site Information

ISRA Transaction

- Options in DEP's database:
 - Bankruptcy
 - Business Sale
 - Property Sale
 - Cessation
 - Declare Closure
 - Foreclosure
 - Partner Change
 - Sale of Assets
 - Stock Transfer
 - Other



Site Information

ISRA Case #

- E00000 or EYYYY000000



Site Information

Considerations for ISRA RAOs

- Include ISRA case number(s) and all ISRA transaction triggering event(s) when issuing Entire Site ISRA RAOs. Do not include ISRA case number(s) and ISRA transaction(s) when issuing AOC RAOs for ISRA subject sites
- When issuing a Multi-Tenant Leasehold RAO, attach a site map identifying the extent of the entire Leasehold area in relationship to the site



Site Information

Well Permit

- EYYYY00000 or 00-00000 (older numbers now listed as 0000000000)
- Only include when wells were installed as part of the remediation of the AOC(s) or Entire Site and are no longer required following the issuance of the RAO
- Well(s) associated with the Site that will no longer be used for site activities but are being transferred must also be listed
 - Transferred wells will be assigned new well permit numbers (see Transfer of Monitoring Well Notice)
- Do not list wells remaining open for evaluating other AOCs still under investigation at the site or as part of your RAP



Thank you!



Scope of Remediation

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Scope of Remediation

- Entire Site (Non-ISRA)
- ISRA Industrial Establishment as defined according to N.J.A.C. 7:26B - Entire Site
- ISRA Industrial Establishment as defined according to N.J.A.C. 7:26B – Leasehold
- Child Care Facility
- Area(s) of Concern: (followed by a list of the remediated area(s) of concern) and no other areas



Scope of Remediation (cont'd)

- Non-ISRA Entire Site RAOs Must have PA
- Area(s) of Concern RAOs – Most variability. PA sometimes required
- ISRA Entire site Triggers North American Industry Classification System (NAICS) code - the 2002 Version. Must have PA
- ISRA Leaseholds: Multiple-tenants; at least one triggers ISRA Must have PA
- Childcare RAOs are issued when you are addressing a Childcare facility for licensing purposes. Must have PA



Test Your Knowledge

True or False:

Non-ISRA Entire Site RAOs must have a PA

- A. True
- B. False

Test Your Knowledge

True or False:

Non-ISRA Entire Site RAOs must have a PA

A. True

B. False

Area of Concern – Limited Conveyance

- Area of Concern - ISRA Industrial Establishment as defined according to N.J.A.C. 7:26B - Limited Conveyance and no other areas
- Requirements for conveyed area:
 - Preliminary Assessment
 - RAO-A figure of entire ISRA property which depicts conveyed area
 - CID must include all potential AOCs and potential off-site sources
 - Block and Lot or “portion of Block/Lot”
 - ISRA site must be operating (Cannot have already ceased operations)
 - Must be remediated



Area of Concern Options

- **Option 1**: All media for one or more AOCs has been evaluated and remediated
- **Option 2**: Individual media for one or more AOCs has been evaluated and remediated however other media associated with these AOCs remain impacted
- **Option 3**: Combination of Option 1 and Option 2. All media for one AOC and individual media for others
- **Option 4**: PA completed RAO-A issued for single medium for the entire site



Option 1- All Media Examples

- **Scope of Remediation:** Areas of Concern: AOC-1: two 10,000-gallon diesel Underground Storage Tanks (USTs) (Tank 001) and associated appurtenances; AOC-2: one 550-gallon waste oil UST (Tank 002) and associated appurtenances; AOC-3: chlorinated volatile organic compounds in ground water and no other areas
- **Scope of Remediation:** Areas of Concern: AOC-3: one diesel fuel surface spill (approximately 110 gallons) located at dispenser #2; and no other areas



Option 1- All Media Examples (cont'd)

- **Scope of Remediation:** Areas of Concern: AOC-4: Suspected discharge associated with incident number xx-xx-xx-xxxx-xx; and no other areas
- **Scope of Remediation:** Areas of Concern: AOC-5: Gasoline Surface Spill at Pump Island #1; and no other areas



Option 2 - Single Media

“Area(s) of Concern: (Soils or Ground Water, etc.); followed by a list of the remediated area(s) of concern; and no other areas”

Example:

Scope of Remediation: Areas of Concern: **SOILS ONLY** associated with AOC-1: two 10,000-gallon diesel Underground Storage Tanks (USTs) and associated appurtenances; and no other areas



Option 3 – Options 1 + 2

Example:

Remedial Action Type: Unrestricted Use

Scope of Remediation: Areas of Concern:

AOC-1: two 3,000-gallon leaded gasoline Underground Storage Tanks (USTs) and associated appurtenances; AOC-2: one 550-gallon waste oil UST and associated appurtenances; and SOILS ONLY associated with AOC-3: two 10,000-gallon diesel USTs and associated appurtenances; and no other areas



Option 4 – PA for Site Wide Single Media

“Area of Concern: (Soils or Ground Water, etc.) for Block(s) ### and Lot(s) #### and no other areas.”

Example:

Scope of Remediation: Areas of Concern: Soils Only associated with Block 3, Lot 25; and no other areas



Questions?



Issuing RAOs Involving Ground Water Remedies and Coordination with Remedial Action Permits

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Remediation to the GWQS - Unrestricted Use RAO

When ground water is in compliance with the GWQS there is no need to obtain a RAP for ground water.

- Issue an Unrestricted Use RAO



Contamination above the GWQS – Limited Restricted Use RAO

When MNA is the selected remedy, a MNA GW-RAP is required prior to the RAO to include long-term ground water monitoring and reporting

MNA should be demonstrated in accordance with the Ground Water RAP Guidance and MNA Guidance prior to applying for a MNA GW-RAP



Contamination above the GWQS – Limited Restricted Use RAO

Prior to applying for an MNA GW-RAP, compliance must be demonstrated as follows:

- All soil contamination above the static ground water table has been remediated to the applicable IGWSSL or MGWSRS; **or**
- Soil compliance has been determined using the Introduction to Soil Remediation Standards Guidance, updated June 2021
(<https://www.state.nj.us/dep/srp/guidance/rs/index.html>)
- Free and residual product addressed



Restricted Use RAO

Treatment or containment required to address product or contamination in ground water when MNA alone is not appropriate:

- Engineering controls such as active ground water treatment system, slurry wall, etc.
- May utilize a combination of MNA and engineering control, such as vapor intrusion mitigation system, Point of Entry Treatment (POET) water system



Restricted Use RAO cont.

Issue a Restricted Use RAO after:

- It has been demonstrated that the engineering control is functioning as designed, and is controlling the contamination for 1 year following system start-up/construction; and
- GW-RAP obtained



Restricted Use RAO cont.

If the final remedy is to use a combination of MNA and engineering control:

- Obtain GW-RAP
- Issue one Restricted Use RAO



Additional Guidance

- MNA Guidance
- Ground Water RAP Guidance
- In Situ Remediation: Design Considerations and Performance Monitoring Technical Guidance
- Ground Water - SI/RI/RA Technical Guidance
- September 2, 2020 Listserv regarding active treatment and free and residual product and Ground Water RAPs

https://www.nj.gov/dep/srp/srra/listserv_archives/2020/202009_02_srra.html



Summary

- Unrestricted Use RAO – Ground water complies with GWQS
- Limited Restricted Use RAO – MNA only
- Restricted Use RAO
 - Active treatment/ containment, or
 - MNA with engineering control



Questions?



BREAK



RAO Notices

Section 1

Introduction, Well Decommissioning, Building Interiors
Natural Background

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RAO Notices: Collaborative Efforts

Sections 1 through 5

- Well Decommissioning, Building Interiors, Natural Background
- Soils Only, Ground Water Contamination Not Yet Investigated, In-Service Rail Lines, HAP
- Historic Fill
- Sediment and Ground Water Contamination From an Off-Site Source, Commingled Plume
- Vapor Intrusion and Order of Magnitude



RAO Notices: Section 1

- Well Decommissioning
- Building Interiors
- Natural Background



Well Decommissioning

- Permanently seal all wells unless:
 - They will be used to evaluate other on-site discharges
 - They will be used to monitor a CEA
 - They are being transferred for use in a case at another site (use the Transfer of Well Notice)



All Wells Decommissioned

“...all wells installed as part of this remediation have been properly decommissioned...and I have verified that the well driller’s well decommissioning report has been submitted to the Bureau of Water Allocation and Well Permitting.”

Don’t change the verbiage in the Notices



Transfer of Monitoring Well Use

“...The following monitoring wells (Well Permit #'s) will remain open as part of an unrelated ground water investigation...these wells are now Redesignated and permitted for use under the Department's Incident number(s) [Case #(s)] and [PI # of the case using the well(s)].”



Some Wells Not Decommissioned

“...any wells installed as part of this remediation that will no longer be used for remediation have been properly decommissioned...**Wells considered to be abandoned, lost, damaged, or destroyed...have been reported**...any monitoring wells remaining onsite shall be properly decommissioned prior to the termination of the applicable remedial action permit...”

**Don't need to have missing/damaged wells
to include this clause in the RAO letter**



Building Interiors Addressed (Non-Child Care)

- Use this clause when a discharge from outside of the building is known to be entering the building (for example, blooms of hexavalent chromium)
- Get pre-approval from the Department for the language to be used



Building Interiors Not Addressed

- Use this clause unless:
 - You will use a “Building Interiors Addressed” clause
 - There is no building on the Site



Building Interiors Not Addressed

“...remediation that is covered by this [RAO] does not address the remediation of hazardous substances that may exist in building interiors or equipment, including, but not limited to, radon, asbestos and lead. As a result, any risks to human health presented by any building interior or equipment remains...[insert]... A complete building interior evaluation should be completed before any change in use or re-occupancy is considered.”



Building Interiors: Bracketed Insert

“...The only exception to this building interior exclusion is the release of [specify contaminant] from [specify the AOC that discharged outside the building]...”

Use this insert when a discharge occurred within an on-site building, prompting remediation of a portion of the building and the media (soil, ground water, etc.) **outside of the building**



Natural Background Notices

- Regional Natural Background Levels of Materials in Soil
- Naturally Occurring Levels of Constituents on Ground Water
- Do not use these inserts for contamination caused by a spill



Natural Background: Soil

“...concentrations of [contaminant] were detected in the soil at this site above the Department’s [Direct Contact* standard name] Remediation Standard(s). However, these concentrations are associated with natural background levels...remediation beyond natural background levels is not required.”

Direct Contact SRSs include the Inhalation and Ingestion-Dermal pathways but not the Migration to Ground Water pathway



Natural Background: Soil Child Care Notice

“However, to minimize potential direct contact at this Child Care Center an impermeable barrier should be installed over the surface of the outdoor play area...in accordance with Department guidance for presumptive remedies found at...”



Natural Background: Ground Water

- Primarily applies to metals
- Not appropriate for petroleum or anthropogenic background contamination



Natural Background: Ground Water

"...concentrations of [constituent(s)] were detected in the ground water at this site above the GWQSs. However, these concentrations are associated with naturally occurring levels of these constituent(s) in the ground water...remediation beyond naturally occurring levels is not required. Development or redevelopment on this site should take into consideration the potential for exposure to constituents that exceed the GWQSs."



Thank You!



RAO Notices

Section 2

Soils-Only Notices, Ground Water Contamination not yet Investigated,
In-Service Rail Lines, Historically Applied Pesticides

Ray Strassler, Supervisor

SRP/BIR

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RAO Notices: Section 2

- Soils Only RAO when Ground Water Contamination Remains from that AOC or Site
- Ground Water Contamination Not Yet Investigated
- In-Service Railroad Line, Spurs and Sidings Not Remediated
- Historically Applied Pesticides Not Addressed



Soils Only RAO when Ground Water Contamination remains from that AOC or Site

Use this notice when:

- Soil contamination at a site has been remediated and ground water contamination remains as a result of the discharge
- Issuing an Area of Concern RAO only
- The Scope of Remediation identifies "SOILS ONLY associated with an AOC or Block and Lot for a site, and no other areas"

Do NOT use this Notice when:

- The requirement for ground water sampling was not triggered at the AOC or at the site



Ground Water Contamination Not Yet Investigated

“This Response Action Outcome does not address the ground water contamination (specifically, **[\$\$identify contaminants\$\$]**) at this site. This contamination was reported to the Department and assigned the Department’s Hotline incident number **00-00-00-0000-00**. ... **[\$\$Select if Applicable** This contamination is being addressed under Department Program Interest #. **\$\$]**...”

- **Note:** any incident numbers used in this Notice are AOCs that remain open. If the same incident number(s) is used in the “Re:” Section of the RAO shell document, an amendment to remove it will be required



Ground Water Contamination Not Yet Investigated

This Notice notifies all parties that a ground water AOC, associated with this site, remains open

- Use for Area of Concern RAOs when one or a combination of any of the below conditions exist:
 - Ground water contamination is detected onsite during the site investigation, but the remedial investigation has not been completed
 - A CEA/Ground Water RA Permit has not been established
 - A Preliminary Assessment and background investigation in accordance with N.J.A.C. 7:26E-3.9 (if an offsite source is being claimed) has not yet been conducted



Ground Water Contamination Not Yet Investigated (cont'd)

- Use for Area of Concern RAOs when one or a combination of any of the below conditions exist:
 - It has been determined that the AOC(s) receiving the RAO has not contributed or is no longer contributing to the observed ground water contamination
 - There is an outstanding remediation obligation at this property, the discharge has been reported to the Department, and the PRCRs are aware of their obligations to remediate the discharge
 - There is knowledge of ground water contamination present at the site that is being remediated by another LSRP or RP

**Do not use this Notice for Entire Site RAOs or
ISRA leaseholds**



In-Service Railroad Line, Spurs and Sidings Not Remediated

Use this notice when:

- one or more railroad lines, spurs and/or sidings have (contamination identified) or have not been investigated and/or remediated and will remain active or in-service at the site
- An Unrestricted, Limited Restricted or Restricted Use RAO-A or RAO-E will be issued



In-Service Railroad Line, Spurs and Sidings Not Remediated

Do NOT use this Notice when:

- The railroad infrastructure is no longer active or in-service
- The railroad infrastructure is located off-site
- The spur or rail siding is not attached to an **active** rail line



Historically Applied Pesticides Not Addressed

Use this Notice when:

- Pesticides may have been historically applied at a site but were not investigated as part of the remediation
- An Unrestricted, Limited Restricted or Restricted Use RAO will be issued

For RAO-E only

Not appropriate for RAO-A without a completed PA



Historically Applied Pesticides Not Addressed

Do NOT use this Notice:

- If analytical data identify pesticides exceeding standards during any phase of the investigation
- When manufacturing, mixing, or other handling of these chemicals resulted in a discharge to the environment
- For properties that are undergoing a change in use to or new construction of residences, schools, child-care centers, and/or playgrounds



Test Your Knowledge

True or False:

Use the HAP notice when samples have been analyzed for pesticides.

- A. True
- B. False

Test Your Knowledge

True or False:

Use the HAP notice when samples have been analyzed for pesticides.

A. True

B. False

Thank You!



RAO Notices

Section 3

Historic Fill Notices

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Known On-site Contamination

Source Not Remediated – Historic Fill

- Area of Concern RAO (RAO-A only)
- Use this Notice when:
 - Historic Fill has been visually characterized (delineated) and/or confirmed via sampling, but has not been remediated via excavation or capping in accordance with the Historic Fill Technical Guidance Version 3.0 issued on 4/29/2013 and N.J.A.C. 7:26E-3.12(a)
- This Notice should not be used for:
 - Any RAO where there will be new construction of, or change in use to, a residence, childcare center or school as it is necessary per N.J.S.A 58:10B-a29(g), to either remove Historic Fill (to issue unrestricted use RAO), implement presumptive remedies, or get approved alternative remedy in accordance with N.J.A.C. 7:26E-5.3
 - ISRA RAOs
 - Entire Site RAOs require remediation of Historic Fill (N.J.A.C. 7:26E)



Soil Examples

- RAO issued for a clean UST closure, but Historic Fill is present (including ground water impacts from this Historic Fill) and has not been remediated via excavation or capping
- RAO issued for remediation limited to one or more AOCs; however, Historic Fill (including ground water impacts) are not remediated via excavation or capping



Ground Water Contamination due to Regional Historic Fill

- RAO–A and RAO-E
- Use this notice when ground water contamination
 - Remains on-site, based on ground water data collected
 - Not from site-related activities
 - Solely from regional Historic Fill that extends beyond property boundaries
 - Historic Fill-impacted soils have been addressed
 - (i.e., Remedial Action Permit, removal of Historic Fill)



Ground Water Contamination due to Regional Historic Fill (cont'd)

- Application for Classification Exception Area (CEA) for Historic Fill submitted prior to issuing RAO
 - CEA is for “indeterminate period”
 - CEA is for the footprint of the property
 - Department maintains a Virtual Institutional Control (VIC) - a “Virtual CEA”
 - No Biennial Certifications required
- VIC needs to be evaluated and recorded prior to LSRP issuing RAO
- No ground water RAP required



Ground Water Contamination due to Regional Historic Fill – No Sampling Completed

- RAO–A and RAO-E
- Ground water sampling not conducted
 - Contamination assumed to be present on-site – not sampled

Notice includes the statement: “ground water contamination may exist above the Ground Water Quality Standards (N.J.A.C. 7:9C), which may limit ground water use at this site”
 - Source is solely regional Historic Fill that extends beyond property boundaries
 - Historic fill-impacted soils have been addressed
 - (i.e., Remedial Action Permit, removal of Historic Fill)



Ground Water Contamination due to Regional Historic Fill – No Sampling Completed (cont'd)

- No RAP required for ground water for RAO to be issued
 - VIC created by Department
- Remediator prepares CEA Fact Sheet
 - CEA covers the property footprint
 - Duration is an “indeterminate period”
 - Remedial Action Type is, at a minimum, “Limited Restricted Use with Permit Requirements”
 - No Biennial Certifications required
- Any discharge not related to Historic Fill requires a separate CEA



Questions?



RAO Notices

Section 4

Off-Site Sediment Source
Contamination Remains On-Site due to Off-site Contamination
Commingled Plume

Brandi Gray, LSRP
Senior Project Manager
Langan Engineering
bgray@langan.com



RAO Notices: Section 4

- Sediment Contamination from an Off-Site Source Not Remediated – General
- Contamination Remains On-site Due to Off-site Contamination
- On-site Commingled Plume Condition Exists
 - Similar constituents - On-site and Off-site Sources
 - Similar constituents – multiple on-site discharges
 - Dissimilar constituents - multiple on-site discharges



Off-Site Source Notices

Sediment Contamination from an Off-Site Source Not Remediated – General

- Notice was added in 2016 following Version 2.0
- Use this notice when sediment contamination is present at a site above ecological screening criterion, Lowest Effects Levels (LELs) and Severe Effects Levels (SELs) that is related to an off-site source



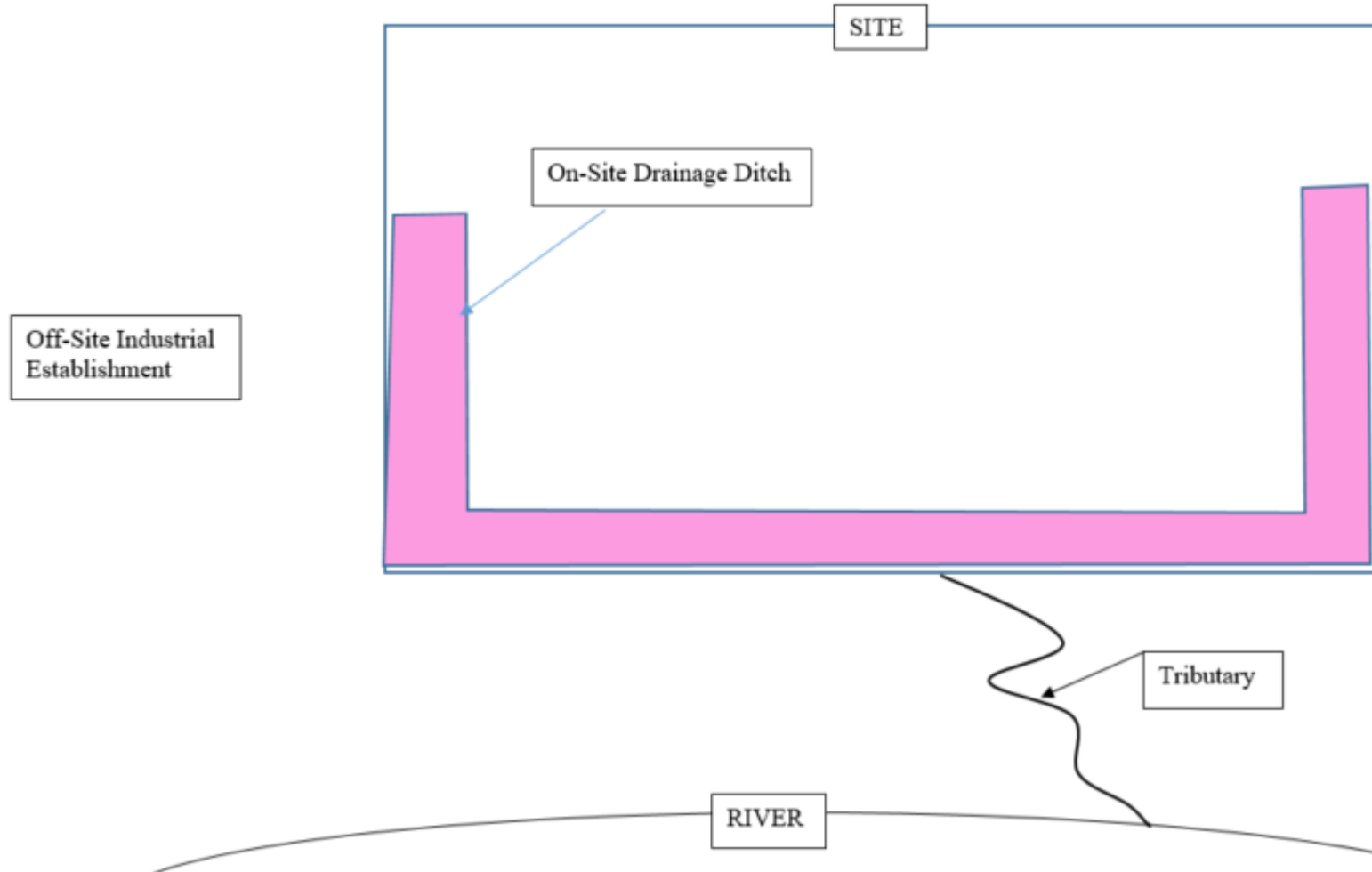
Off-Site Source Notices

Sediment Contamination from an Off-Site Source Not Remediated – General

- Can be used for the following:
 - RAO-A or RAO-E
 - Unrestricted, Limited Restricted or Restricted Use Scenarios
- Requirements for Use of Notice
 - PA and/or PA/SI should be completed
 - Incident No. for the off-site source (Note if an Incident No. does not exist for the off-site source, a discharge should be reported to the NJDEP Hotline)



Off-Site Source Notices



Off-Site Source Notices

Contamination Remains On-site Due to Off-site Contamination

- Notice was previously included in Version 2.0
- Background
 - Use notice when contamination is not being addressed by an RAO due to documented groundwater migrating onto the site from either a known or unknown off-site source
 - Can be used with an RAO-A or RAO-E
 - A PA and an off-site source investigation should be completed
 - Incident No. for the off-site source



Off-Site Source Notices

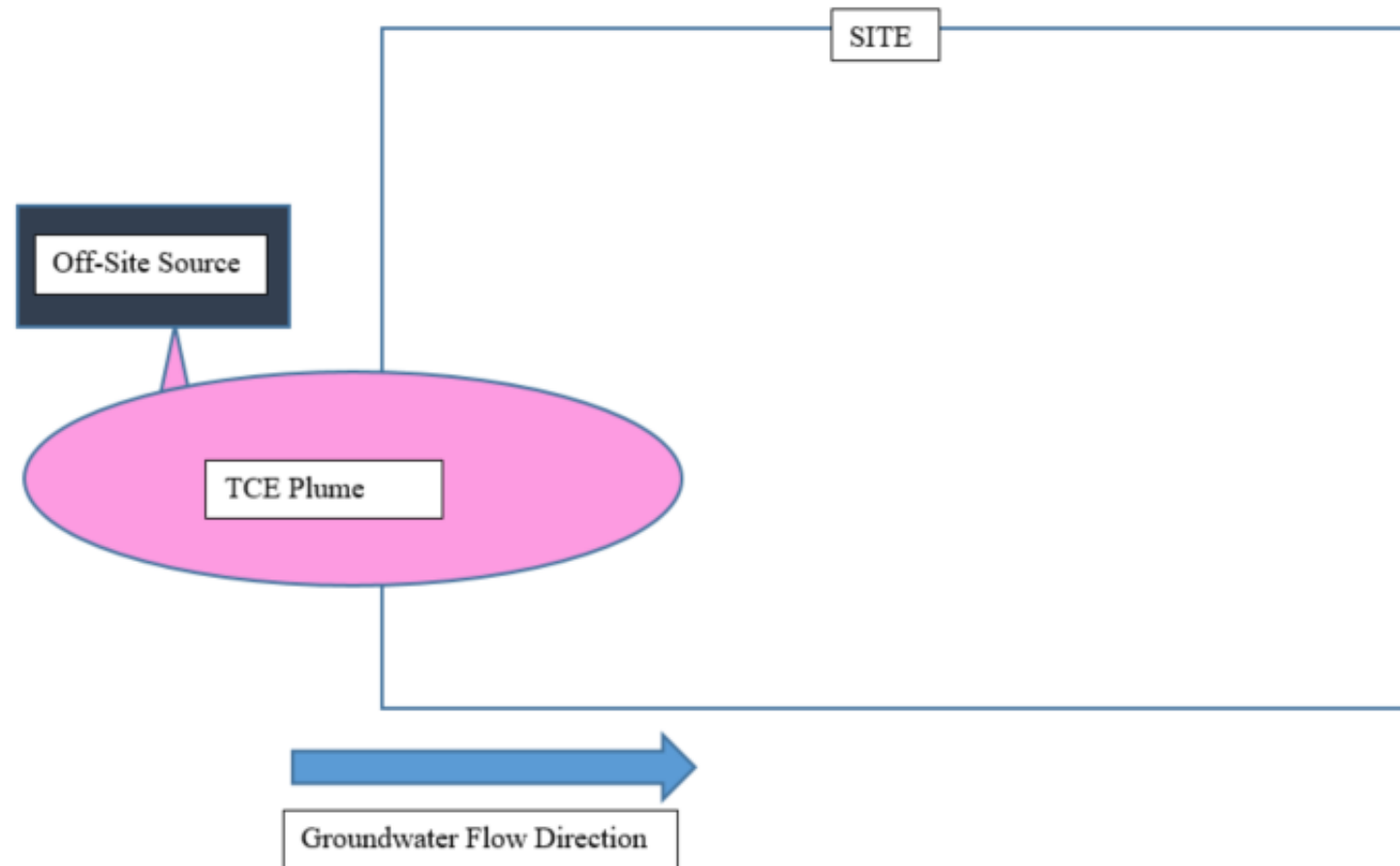
Contamination Remains On-site Due to Off-site Contamination

- Additional use instructions have been added
 - On-site and off-site sources with dissimilar constituents (overlapping or not overlapping) provided RAO addresses on-site plume under a Limited or Restricted Use scenario.
 - Similar constituents but not overlapping (separate on-site plumes resulting from a site discharge and an off-site discharge)
 - DO NOT USE for commingled plume scenarios (see commingled plume notices)



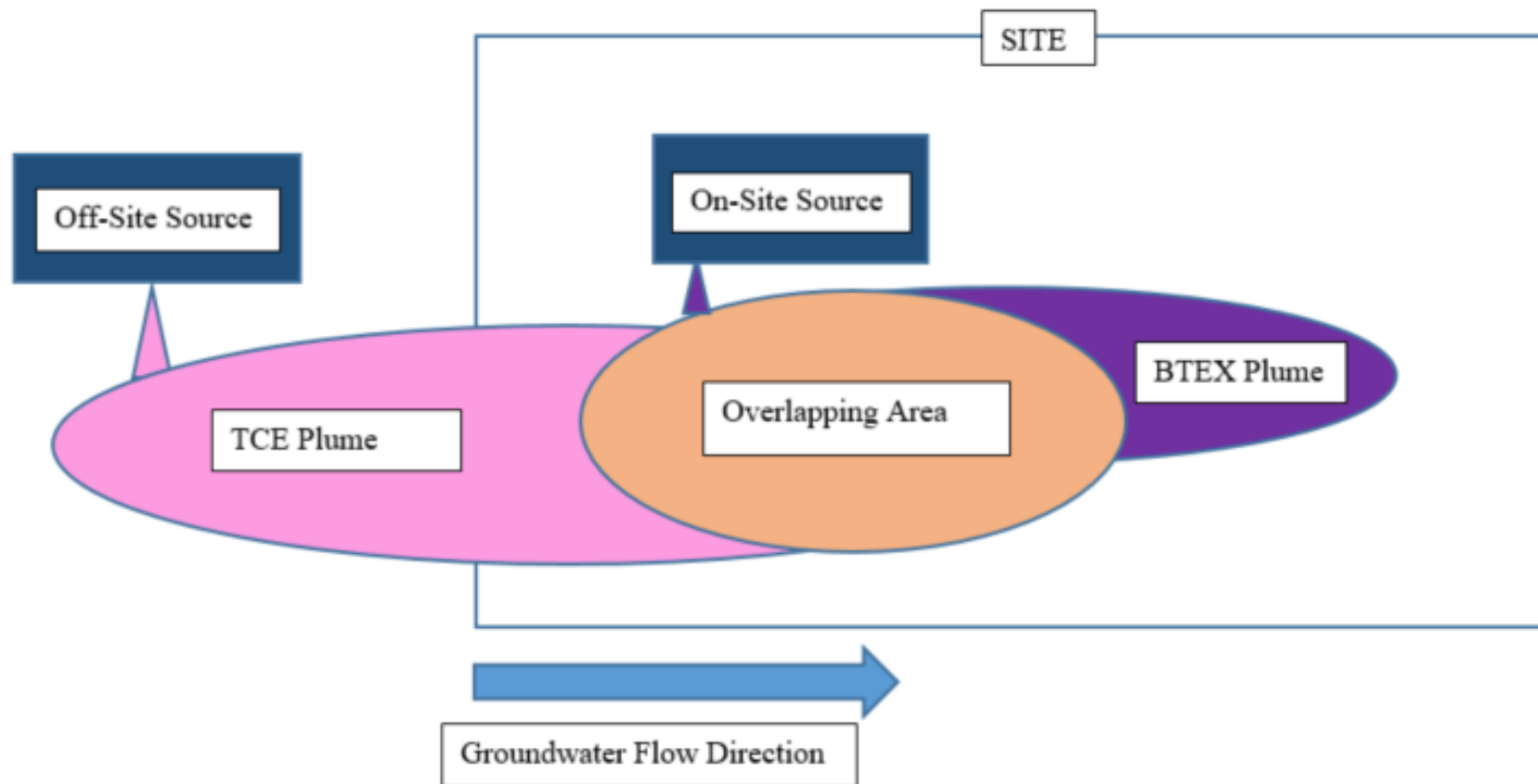
Off-Site Source Notices

Example 1 – Original Scenario – Off-Site Source with no On-Site Source



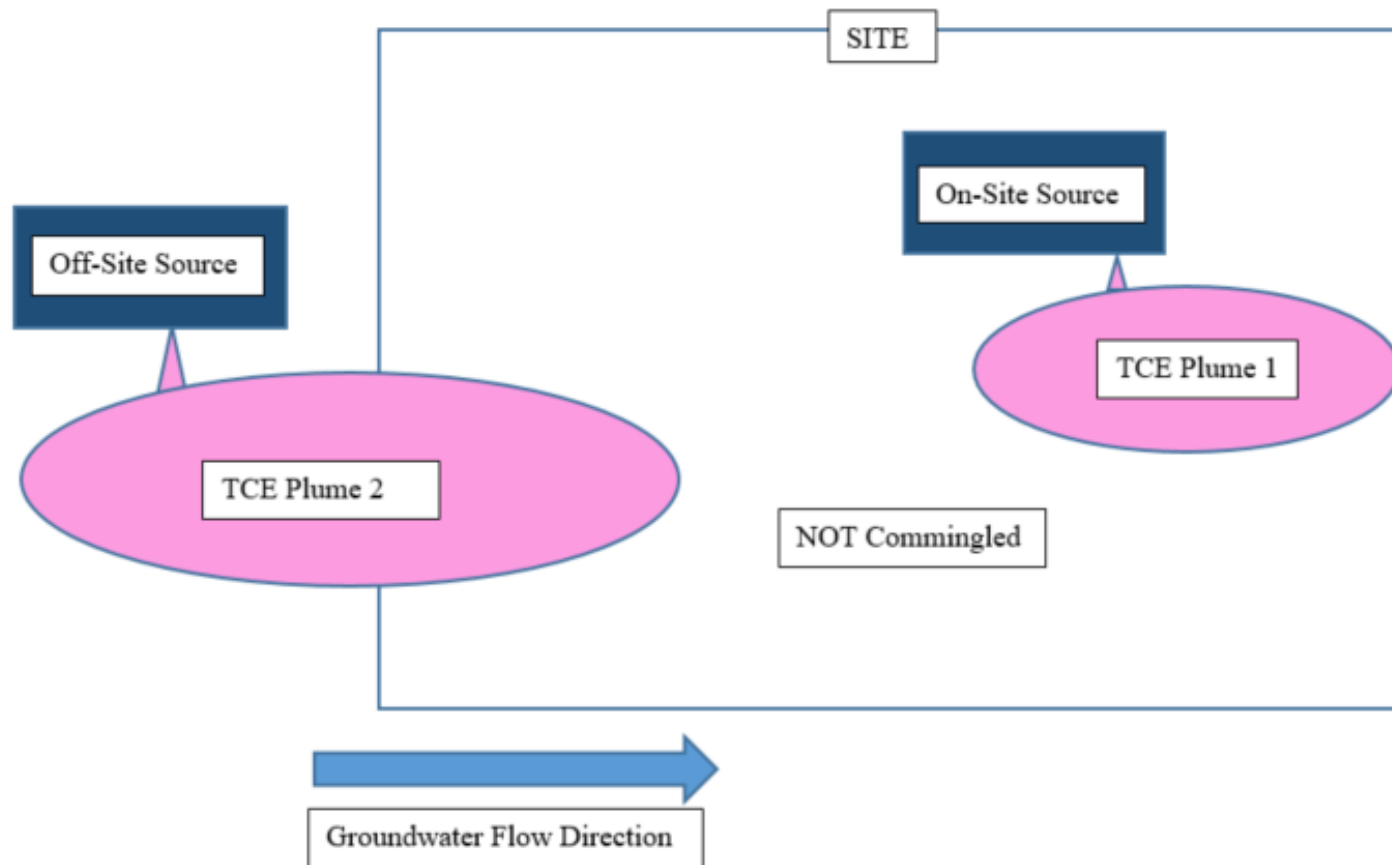
Off-Site Source Notices

Example 2 – Dissimilar Constituents



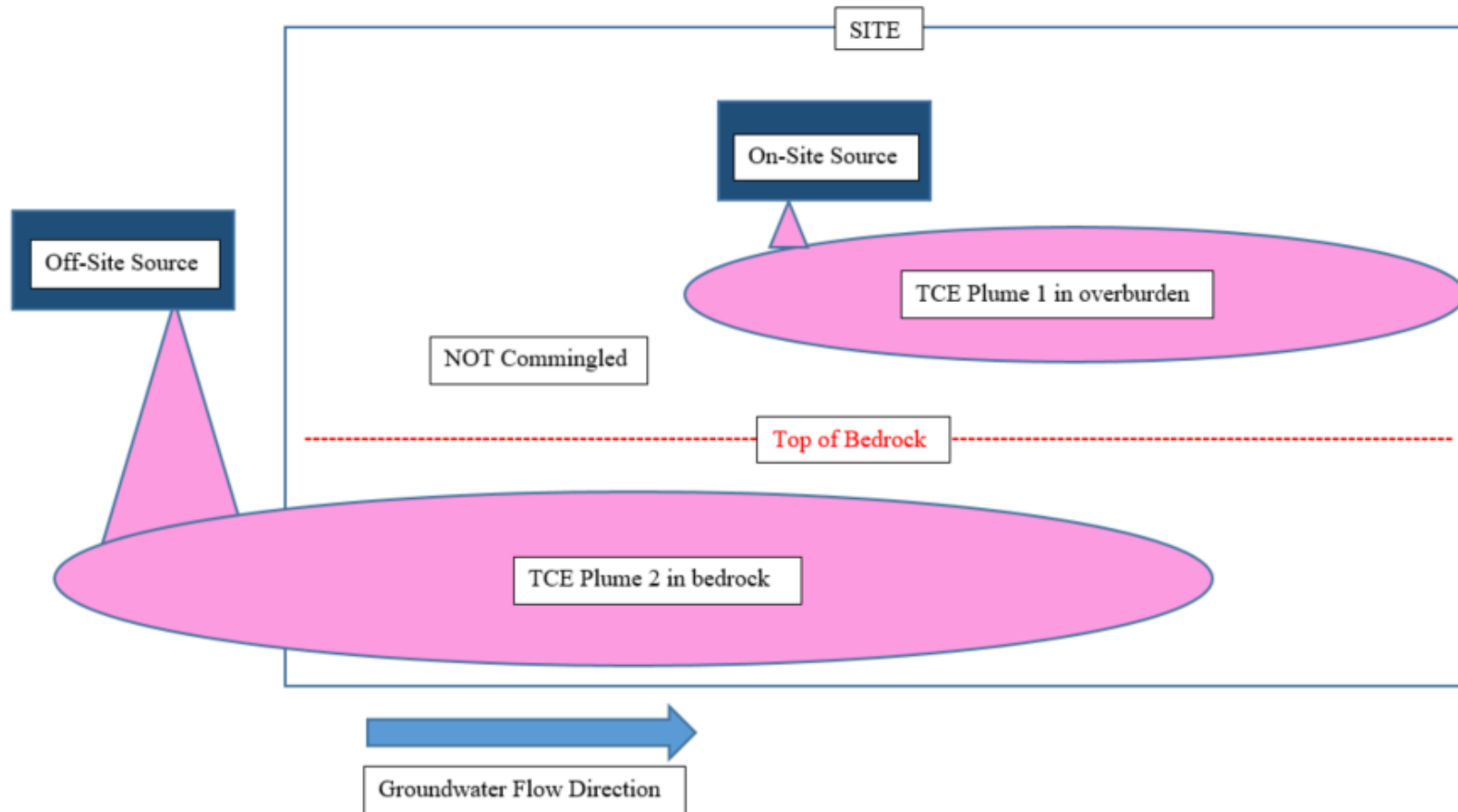
Off-Site Source Notices

Example 3 – Similar Constituents



Off-Site Source Notices

Example 4 – Similar Constituents



Commingled Plume Notices

Three new notices were added to address commingled plume scenarios (not included in Version 2.0)

- Similar constituents – on-site and off-site discharges
- Similar constituents – multiple on-site discharges
- Dissimilar constituents – multiple on-site discharges



Commingled Plume Notices

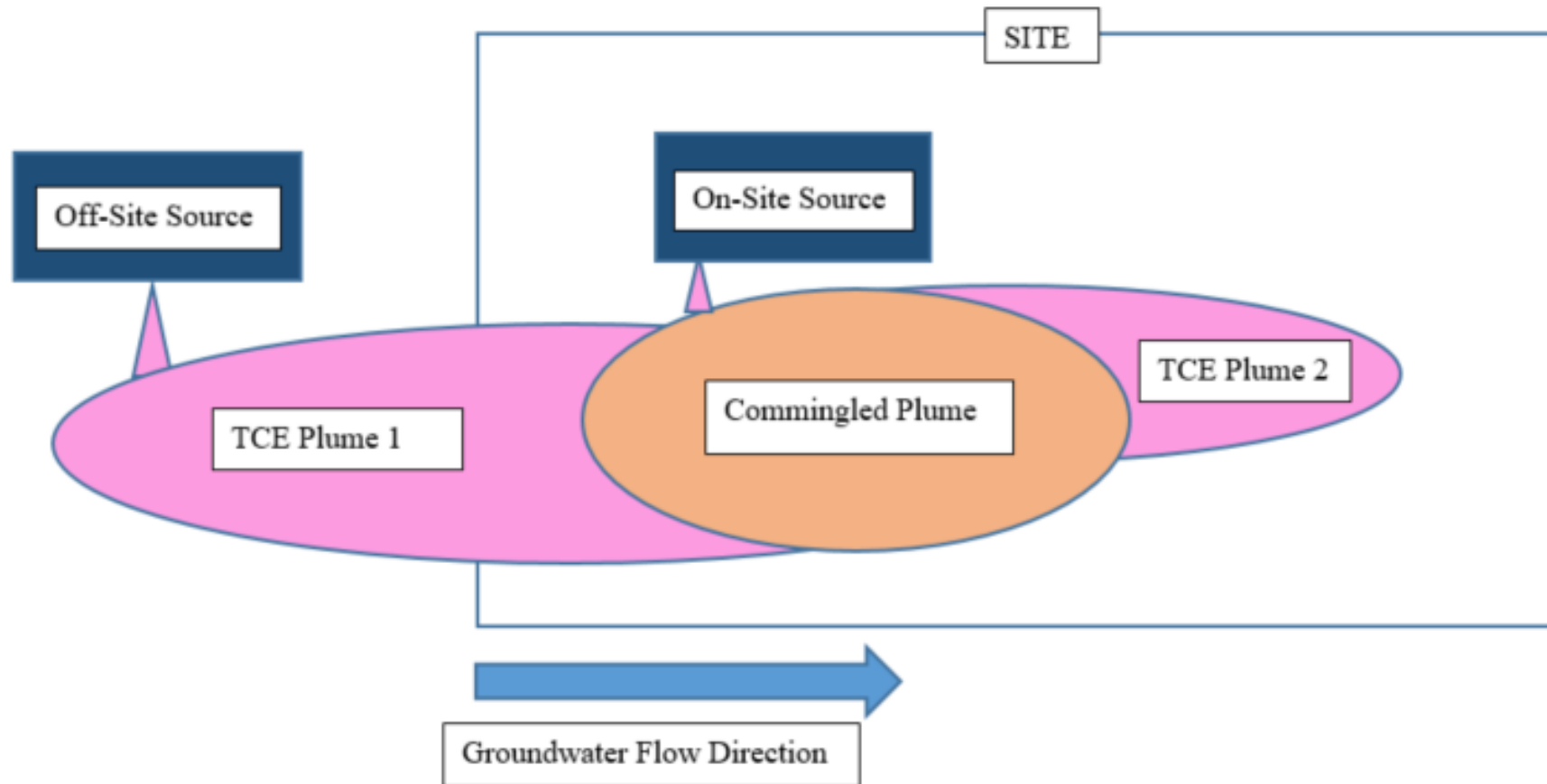
Similar Constituents – On-site and Off-site Discharges

- Use notice when groundwater contamination remains on-site, is a result of both on-site and off-site discharges that overlap, both discharges have similar constituents, and a limited or restricted use RAO is being issued for the on-site plume
- Can be used with an RAO-A or RAO-E
- A PA and off-site source investigation should be completed (Refer to the Off-Site Source Groundwater Technical Guidance, and Commingled Plume Technical Guidance)
- Incident No. for the off-site source

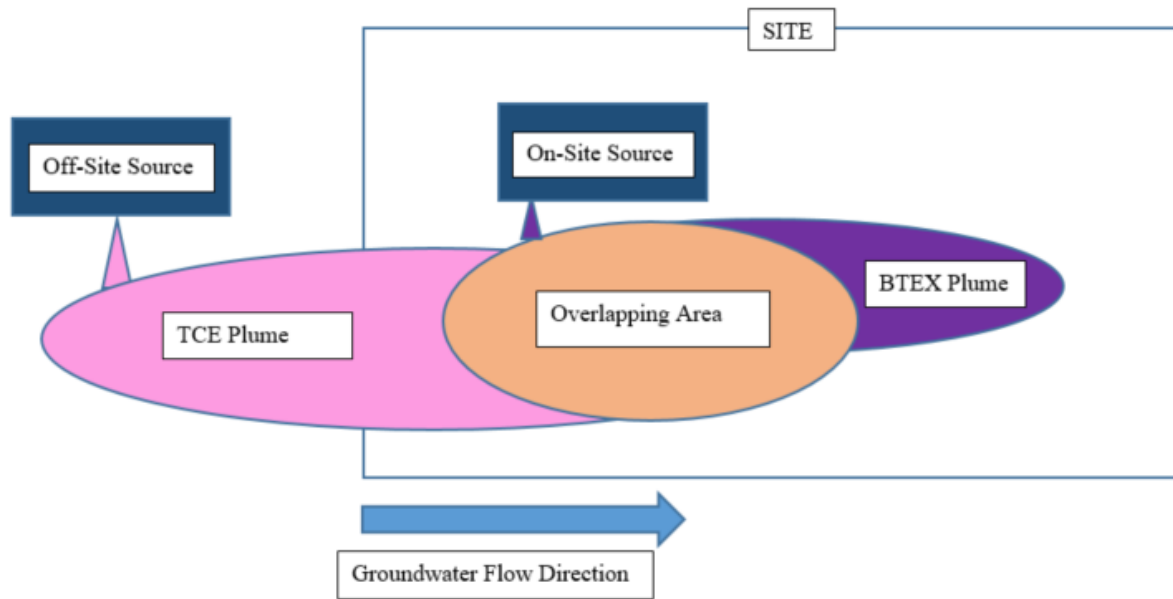


Commingled Plume Notices

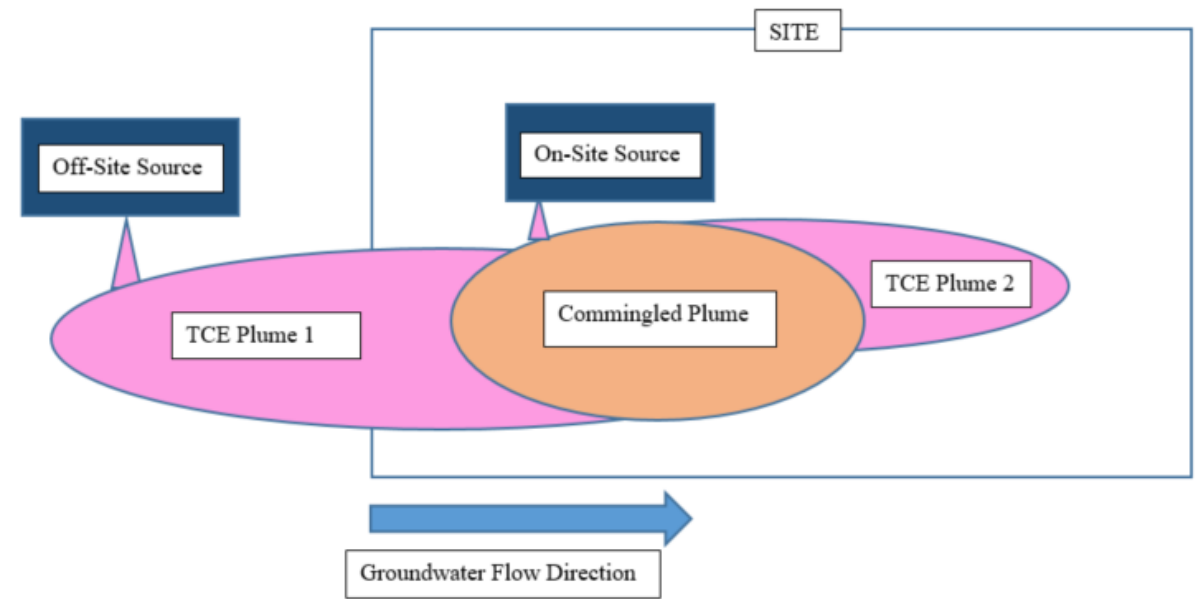
- Similar Constituents – On-site and Off-site - Example



Off-site Source Notice Vs. Commingled Plume Notices



Off-Site Source Notice



Commingled Plume Notice



Commingled Plume Notices

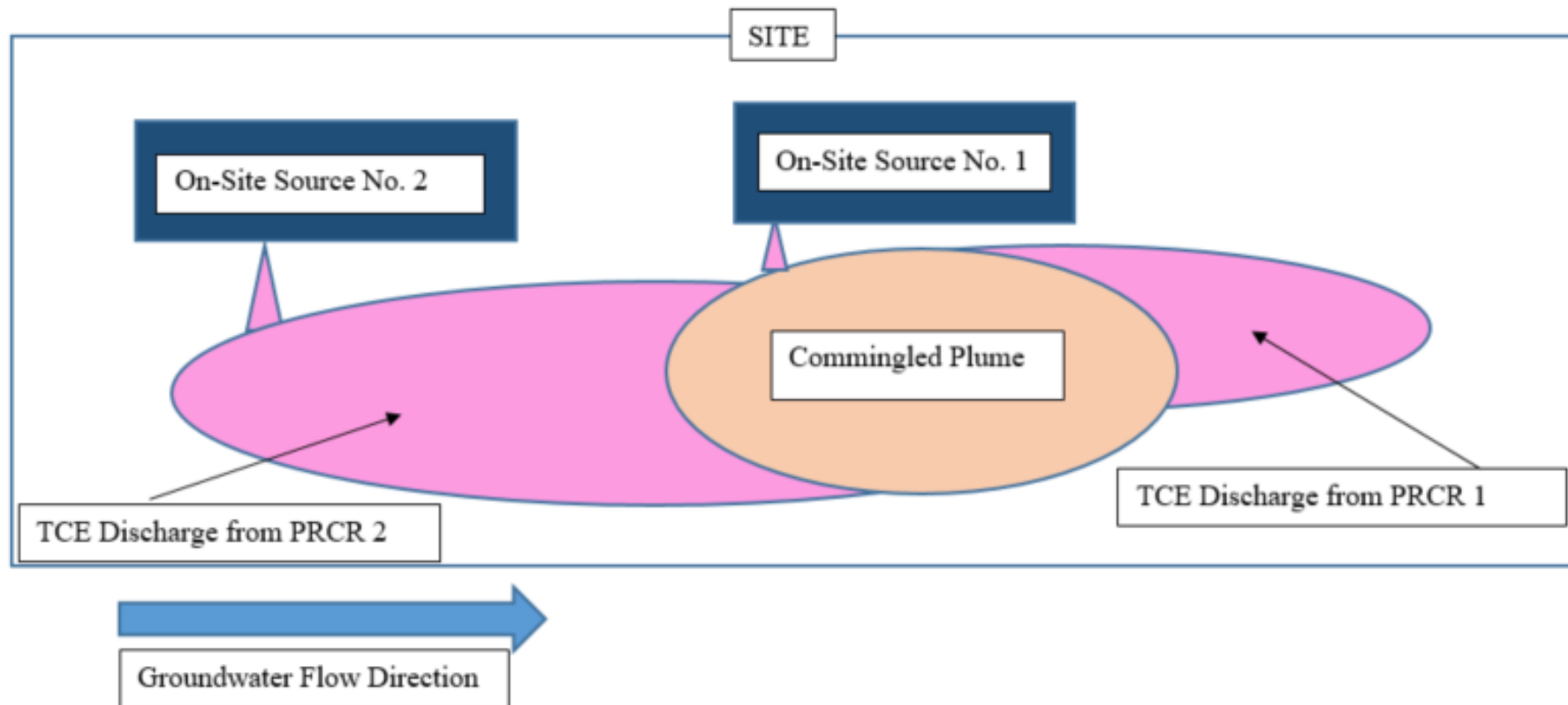
Similar Constituents – Multiple On-site Discharges

- Use notice when on-site groundwater contamination remains, is a result of one or more site discharges that overlap, discharges have similar constituents, and a limited or restricted use RAO is being issued for one or more of the groundwater plumes
- Can be used with an RAO-A or RAO-E
- A PA and site investigation should be completed (Refer to the Commingled Plume Technical Guidance)
- Incident No. for the remaining on-site source



Commingled Plume Notices

- Similar Constituents – Multiple On-site Discharges - Example



Commingled Plume Notices

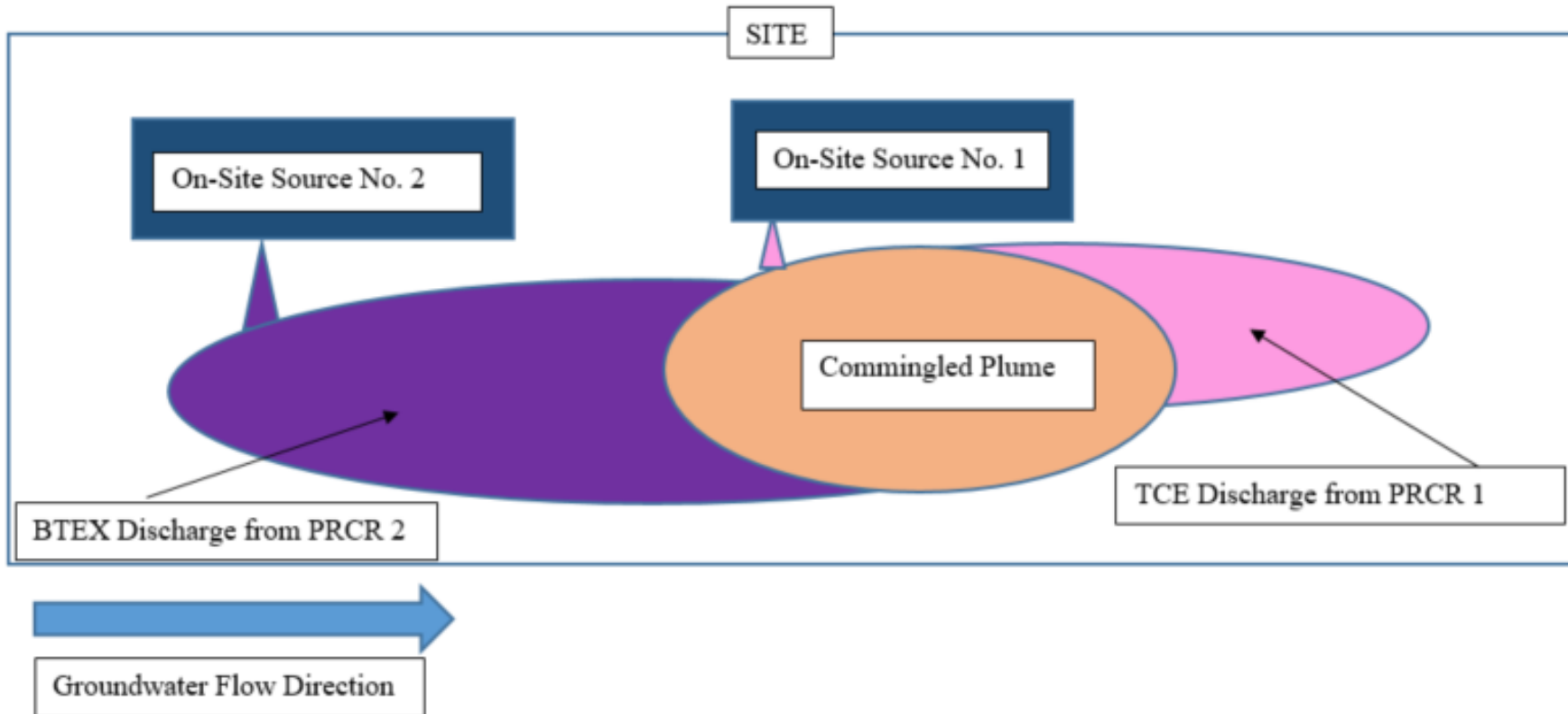
Dissimilar Constituents – Multiple On-site Discharges

- Use notice when on-site groundwater contamination remains, is a result of one or more site discharges that overlap, discharges have dissimilar constituents, and a limited or restricted use RAO is being issued for one or more of the groundwater plumes
- Can be used with an RAO-A or RAO-E
- Incident No. for the remaining on-site source
- Refer to the Commingled Plume Guidance



Commingled Plume Notices

- Dissimilar Constituents – Multiple On-site Discharges - Example



Thank you!



RAO Notices

Part 5

Vapor Intrusion, Order of Magnitude

Mike Fowler, Research Scientist

Bureau of Environmental Evaluation & Risk Assessment

Mike.Fowler@dep.nj.gov



RAO Notices: Section 5

- Indeterminate Vapor Intrusion (VI) Pathway Not Yet Evaluated
- Long-Term Vapor Intrusion Monitoring
- Obligations associated with these notices are applicable to the property owner and not the LSRP
 - IVIP: Conduct IA sampling or Soil Gas/IA sampling
 - LTM: Conduct IA sampling



Indeterminate Vapor Intrusion Pathway (IVIP) Not Yet Evaluated

- IVIP Status: IA samples are not collected due to operational use, handling, or storage of the same investigative COC (or other technical reasons for the inability to complete the VI investigation) VIT 3.5.2
- Must collect SSSG at each building for IVIP to be applied
 - considerate of degradation products
- Specific language discloses the use of IVIP on remediation documents (e.g., RE, RAR, CEA)

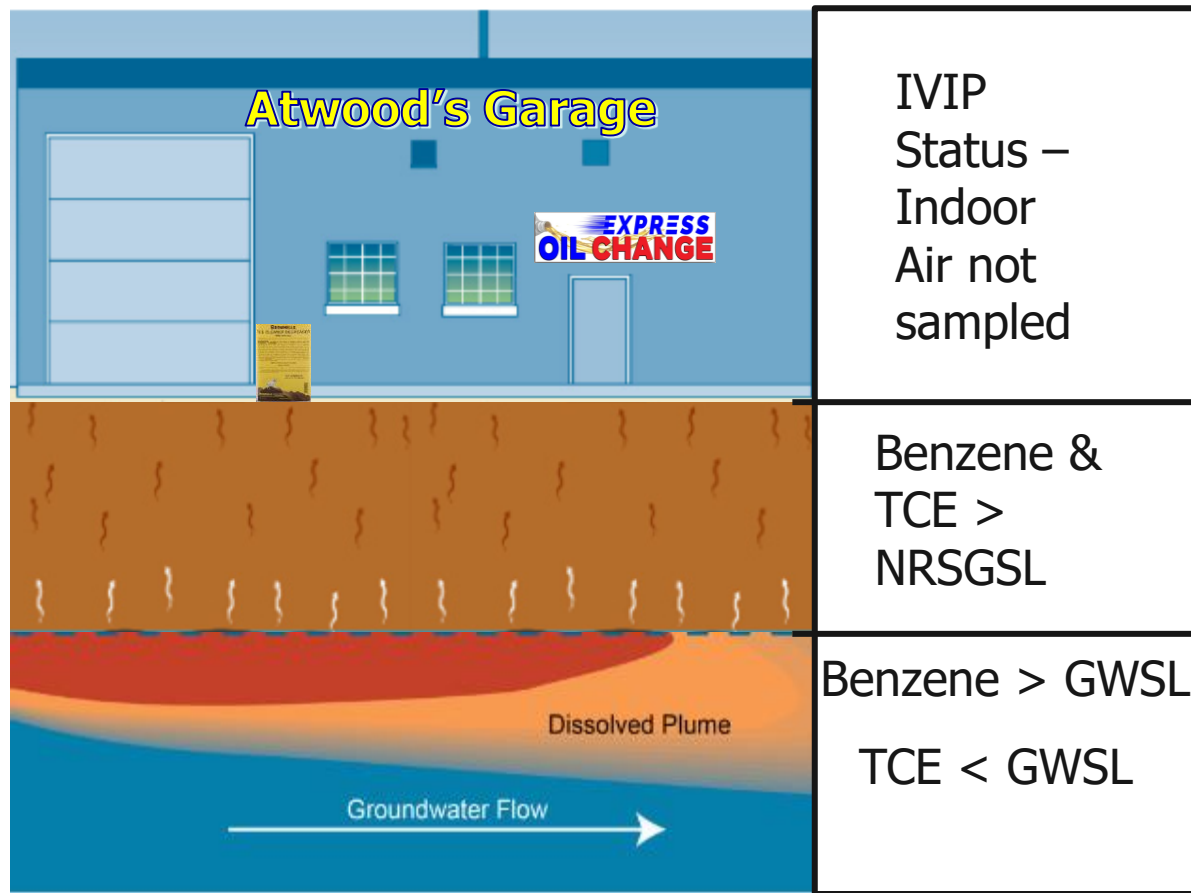


Indeterminate Vapor Intrusion Pathway (IVIP) Not Yet Evaluated

- Use of this notice ensures that any interested party is properly notified of a potential exposure pathway that has not been fully investigated
- Remedial Action Type: unrestricted, limited, and restricted use
- Area of Concern or Entire Site
- Applies specifically to issuance of a RAO when a GW RAP is not established
 - RAO-A when ground water remains open
 - Ground water is below the GWSL, but residual soil gas is above the SGSL
- Not mutually exclusive when the GW RAP is established



Indeterminate Vapor Intrusion Pathway (IVIP) Not Yet Evaluated



- When there is no RAP, benzene & TCE will be referenced in the notice
- When issuing a RAO with an old RAP, use the IVIP notice
- (new) RAP established for benzene with IVIP – Sg/IA to be completed when IVIP no longer applies
 - RAO notice used for TCE but benzene can be stated as well



Image modified from ITRC PVI Guidance, 2014

Long-Term Vapor Intrusion Monitoring (LTM)

- LTM can be performed when the investigation of a building reveals that the soil gas results exceed the applicable Department SGSL and the IA results are below the Department IARS. VIT 6.5.2
- VIT Table 6-2 – Monitoring plan based on likelihood VI occurs based on soil gas concentrations
- Exceedances of residential screening levels at non-residential buildings do not preclude concluding monitoring. As part of the receptor evaluation and vapor intrusion investigation, the investigator must consider current and future occupancy

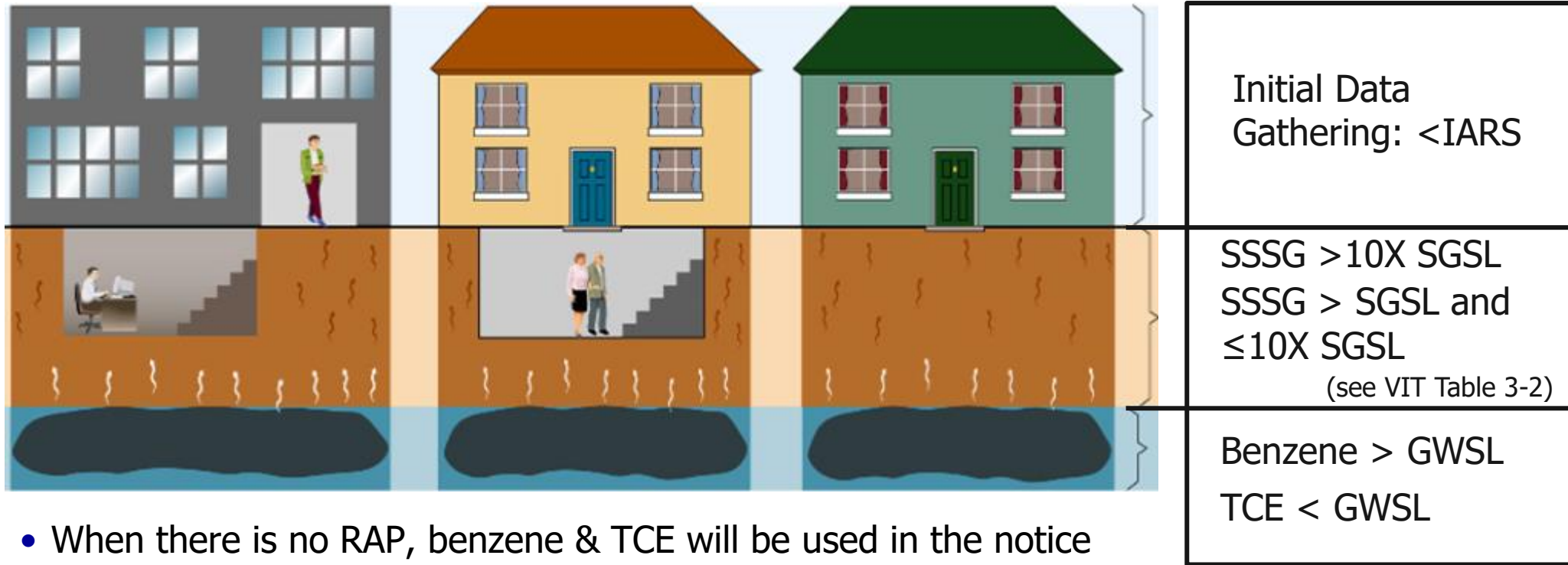


Long-Term Vapor Intrusion Monitoring (LTM)

- Use when VII completed, but a potential vapor intrusion migration pathway remains & monitoring is the protective action
- Remedial Action Type: unrestricted, limited, and restricted use
- Area of Concern or Entire Site
- Applies specifically for issuance of a RAO when a RAP is not established
 - RAO issued prior to establishing a remedial action permit for groundwater
 - Soil gas remains above SGSL and IA is below the IARS



Long-Term Vapor Intrusion Monitoring (LTM)



- When there is no RAP, benzene & TCE will be used in the notice
- RAP established for benzene with monitoring requirements
 - RAO notice used for TCE but benzene can be stated as well

May 2021 Remediation Standards Vapor Intrusion

- Remediation Standards Order of Magnitude and Phase-in of Remediation Standards Frequently Asked Questions (FAQs) September 2021

https://www.nj.gov/dep/srp/guidance/rs/phasein_ord_mag_faq.pdf



Questions?



BREAK



NJDEP Online RAO Service

Scott Tyrrell, Section Chief

Bureau of Information Systems

Scott.Tyrrell@dep.nj.gov

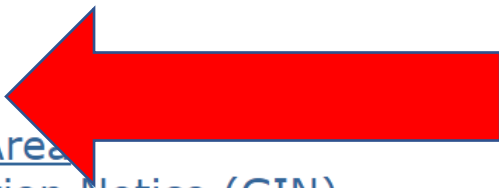


MY WORKSPACE

Service Selection

Note: Access to this electronic service selection and submittal area is granted by selecting facilities using the [user profile](#). Some services are accessible without selecting facilities as shown below.

Site Remediation
[LSRP-Related Services](#)
[Submission Approval Area](#)
[ISRA General Information Notice \(GIN\)](#)
[Confirmed Discharge Notification \(CDN\)](#)



Underground Storage Tank (UST) Program
[Underground Storage Tank Notice of Intent to Close](#)
[UST Registration Services](#)

Water Supply
[WQAA Annual Certification Form](#)

Configure Services

My Services - In Progress

Note: To edit or resume working on an "In Progress" item, please click on the appropriate number in the ID column.

Server: Server 1

[Help](#) | [Logout](#)

LSRP SERVICE SELECTION

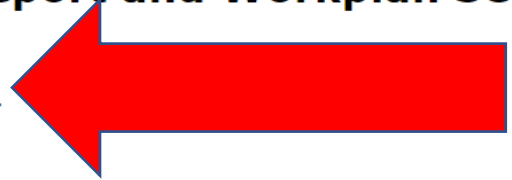
Please select from any one of the services below to begin your online submission by selecting the appropriate radio button before clicking the continue button. If you are not sure which service to select, you may access more information about each service by clicking on that service's hyperlink.

Site Remediation Reform Act (SRRA) - Notifications Services:

- LSRP Notification of Retention or Dismissal
- Public Notification and Outreach Form Submission

Site Remediation Reform Act (SRRA) - Report and Workplan Services:

- ## Remedial Phase Document Submission



Other Site Remediation Reform Act (SRRA) Services:

- Remediation Fee Assessment and Payment
- Updated Receptor Evaluation RRS Submittal

Next Steps...

This presentation will not cover the following in detail:

- the Instructions Page
- Facility Selection
- Case Selection
 - a check for outstanding bills will be run for RAO-Entire Site services



- 1 - Instructions
 - 2 - Facility Selection
 - 3 - Case Selection
 - 4 - Submission Type Selection
- Please Note**

You may click on a previously visited page (above) to navigate back to that screen.

SUBMISSION TYPE SELECTION

Choose from one of the submission types and click 'Continue':

Note: The Remedial Phase Document should NOT be submitted via NJDEP Online unless the Remedial Phase Document is complete for all Contaminated Areas of Concern (CAOCs) addressed in this submission ; or the Remedial Phase focused on a specific media, for example, a Soils Only Remedial Action Outcome (RAO) and the delineation is complete for that media.

Preliminary Assessment (PA) Submissions:

- ☐ [PA](#)
Use this service when the PA as defined under N.J.A.C 7:26E - 1.8 is complete for the site.
- ☐ [PASI](#)
Use this service when the PA and SI are complete for the entire site. Do not use this service if you conducted a PA and then SI for an unknown source investigation, instead use the PA and SI-AOC services.

Site Investigation (SI) Submissions:

- ☐ [SI Area\(s\) of Concern](#)
Use this service when the SI is complete for one or more Areas of Concern, but not for

Remedial Action Outcome (RAO) Submissions:

☒ [RAO Area\(s\) of Concern, RAO ISRA Leasehold or RAO Childcare](#)

Use this service when the RAO for this submission is complete for one or more Contaminated Areas of Concern (CAOCs) or media (e.g. soils), or ISRA Leasehold, or Childcare. NOTE: If a PA as defined under N.J.A.C. 7:26E-1.8 was conducted for this contaminated site and you are addressing ONLY some of the CAOCs with this submission, select this radio button.

☐ [RAO Entire Site or RAO ISRA Entire Site](#)

Use this service when the RAO for this submission is complete for all discharges/Contaminated Areas of Concern (CAOCs) known for the entire contaminated site, based upon the completion of a PA as defined under N.J.A.C. 7:26E-1.8.



Click on the type description to see more information about that type.

Continue

SUBMISSION NAME

The submission name for this Remedial Phase Document has been auto-populated using information from the Department's data management system. The user may edit or rename the submission/project name and add a description for their Remedial Phase Document submission for ease of identification, should the user wish to return to it at a later date.

Use the Comments field to provide additional information as necessary.

***Submission/Project Name:**

Unique Service ID

Facility ID/PI ID

Facility Name

RAO AOC, RAO ISRA Leasehold or RAO Childcare#870005 @ 077777- PI N;

Submission Type

Comments:

SUBMISSION NAME

The submission name for this Remedial Phase Document has been auto-populated using information from the Department's data management system. The user may edit or rename the submission/project name and add a description for their Remedial Phase Document submission for ease of identification, should the user wish to return to it at a later date.

Use the Comments field to provide additional information as necessary.

***Submission/Project
Name:**

RAO AOC#870005 @ 077777- PI Name

Comments:

- Pass through Site information, note that for RAO there is an additional Certification of the Site Blocks and Lots:

***Block and Lot:**

☐ I certify that a valid block/lot combination does not apply for this Project.

Row	*Block	*Lot	County	Municipality	Remove
1	1.1	25	Union ▼	Hillside Twp ▼	

Add Row

Add Range

Note: Each block and lot must be on a separate line.

RAO-AOC, RAO-ISRA Leasehold or RAO-Child Care: The Blocks and Lots must be certified below for the Entire Site.

☐ I certify all the Block and Lots that comprise the Site are displayed above.

Next Steps...

- Populate “The Person Remediating Contact”
- Continue to the CID Upload



Next Steps...

Important Note for CIDs

All AOCs included in the RAO-A submission must have Status Achieved set to the same RAO Scope/RA Type. Any AOCs not included in the RAO are set to their most recent Status Achieved

For Entire Site or ISRA Entire Site Submissions, every AOC in the CID must be set to the same RAO Scope/RA Type in Status Achieved



11 - RAO Details - Notice Specification
12 - RAO Details
13 - RAO Upload (AOC(s), ISRA Leasehold or Child Care)
14 - RAO Supplemental Information
15 - Certification

Please Note
You may click on a previously visited page (above) to navigate back to that screen.

- Please review your CID before upload and make sure the AOC types are correct.
- For USTs that are both Federal and State regulated, choose the AOC Type of "Storage tank and appurtenance - Federal Regulated underground storage tank". The only USTs that are routinely found that are not Federal regulated are the UHOT USTs which are any size heating oil UST used for residential heating, or heating oil USTs at non-residential facilities that are 2000-gallon or less, used for heating purposes. State regulated USTs would be non-residential USTs greater than 2000-gallons used for heating purposes. There are AOC Type options for unregulated USTs and State regulated USTs. You will need to choose Registered USTs to associate to your Federally and State Regulated AOC Types so please make sure the correct AOC Type is chosen.
 - If you see red validation error about the CID version, check to see if the version is 1.5.1. You can transfer an older CID into a new CID by emailing it to srpcidconversion@dep.nj.gov.

Upload your CID. Locate the Case Inventory Document file (version 1.5.1) you wish to upload using the browse feature, then select it to initiate the upload. Click the continue button after the upload is complete.

Attachment Type	*Attachment Description	Upload File Name	File Size Mb	Remove
*Case Inventory Document (CID)-.xls	Case Inventory Document (CID)	<input type="button" value="Choose File"/> No file chosen	0 Mb	<input type="button" value="X"/>

CID Upload Confirmation Page

AOC(s) in Submission	AOC ID	New AOC?	Asso
<input checked="" type="checkbox"/>	Unleaded Gasoline USTs (AOC-1)	Yes ▾	
<input type="checkbox"/>	Waste Oil UST (AOC-2)	Yes ▾	
<input checked="" type="checkbox"/>	Former Dry Well (AOC-3)	Yes ▾	

Check/Uncheck All

ated	AOC Status Achieved	Status Achie
	RAO-AOC (Unrestricted Use)	10/05/2
	RI	02/25/2
	RAO-AOC (Unrestricted Use)	10/05/2

To obtain additional information regarding each of the AOC's asso



RAO Specific Items on the Submission Scope Page

Are there any outstanding contaminated AOCs associated with the case where a final remediation document has not been filed?

Is this ISRA facility multi-tenant?

Number of acres subject to RAO:

Did the remedial action render the property unusable for future redevelopment to residential, school, childcare, or recreational use?

Is there ground water contamination from historic fill associated with the AOC(s) of this RAO?



RAO Specific Items on the Submission Scope Page

Are there any outstanding contaminated AOCs associated with the case where a final remediation document has not been filed?

Is this ISRA facility multi-tenant?

Number of acres subject to RAO:

Did the remedial action render the property unusable for future redevelopment to residential, school, childcare, or recreational use?

Is there ground water contamination from historic fill associated with the AOC(s) of this RAO?

Based on the information provided, the system has determined your RAO Remedial Action Type is:
RAO-AOC (Unrestricted Use)

☐

I certify that I am submitting an RAO with the Remedial Action Type displayed above.

RAO DETAILS

Select "Yes" for all the applicable notices that were used in the issued RAO. Refer to "Guidance for Issuance of Response Action Outcomes" for detailed descriptions of RAO notices. Notices in the RAO are used to properly advise interested parties about limitations of the RAO and other site conditions.

RAO NOTICE SELECTION

General Notices	Y/N
Well Decommissioning - all wells were decommissioned	No ▾
Well Decommissioning - all wells were not decommissioned	No ▾
Well Decommissioning - well(s) could not be located (if applicable-select with one of the above)	No ▾
Building Interiors Not Addressed (Non-Child Care)	Yes ▾
Building Interiors Not Addressed (Non-Child Care) - exception (release from AOC to outside the building)	No ▾
Building Interiors Addressed	No ▾

Contamination Remaining Onsite	Y/N
Regional Natural Background Levels of Materials in Soil - Residential	No ▾
Regional Natural Background Levels of Materials in Soil - Non-Residential	Yes ▾
Regional Natural Background Levels of Materials in Soil - involving Child Care Facilities Only	No ▾
Existing Classification Exception Area or Deed Notice from Prior Remediations - Classification Exception Area(s)	No ▾

ISRA Specific Notices	Y/N
RCRA Situations - Bureau of Case Assignment and Initial Notice Referral	No ▾
RCRA Situations - Bureau of Case Assignment and Initial Notice Referral - contamination is being addressed under another Department Program Interest	No ▾
Multi-Tenant Situations - Bureau of Case Assignment and Initial Notice Referral - It does not include any other areas of concern on the property	No ▾
Multi-Tenant Situations - Bureau of Case Assignment and Initial Notice Referral - It does not include the AOC(s) located at the	No ▾

Additions to Model Document	Y/N
In-Service Railroad Line, Spurs and Sidings Not Remediated	No ▾
Known On-site Contamination Source Not Remediated - Historic Fill (Area of Concern RAO)	No ▾
Soil Contamination From an Off-Site Source Not Remediated- General	No ▾
Soil Contamination From an Off-Site Source Not Remediated - Diffuse Anthropogenic Pollution	No ▾
Soil Contamination From an Off-Site Source Not Remediated - Diffuse Anthropogenic Pollution - Childcare	No ▾

Childcare Notices	Y/N
Child Care Building Interiors Not Addressed - any risks to human health presented by any building interior or equipment remains	No ▾
Child Care Building Interiors Not Addressed - Indoor Environmental Health Assessment	No ▾
Child Care Building Interiors Not Addressed - exception (release from AOC to outside the building)	No ▾
Child Care Center Notices - potable well at this location has been sampled within the past 3 years	No ▾
Child Care Center Notices - Child Care Center is connected to a public community water system	No 154 ▾
Child Care Center Notices - there is no impact to this Child Care Center from offsite contamination	No ▾

RAO DETAILS

If notices were selected, review and confirm they are the notices used in the RAO, and click continue.

RAO NOTICE SPECIFICATIONS

Building Interiors Not Addressed (Non-Child Care)

Please be advised that the remediation that is covered by this Response Action Outcome does not address the remediation of hazardous substances that may exist in building interiors or equipment, including, but not limited to, radon, asbestos and lead. As a result, any risks to human health presented by any building interior or equipment remains. A complete building interior evaluation should be completed before any change in use or re-occupancy is considered.

Regional Natural Background Levels of Materials in Soil - Non-Residential

Please be advised that concentrations of **[\$\$Insert specific materials\$\$]** were detected in the soil at this site above the Department's Non-residential Direct Contact Remediation Standards. However, these concentrations are associated with natural background levels of these material(s) in the soil. Pursuant to N.J.S.A. 58:10B, remediation beyond natural background levels is not required.

RAO PRE-APPROVED LANGUAGE

Was there a pre-approved modification to any of the notices?

Yes



Date of approval: 09/01/2021



Enter the Pre-Approved Modified Language in the text box below:

Test Language

REMEDATION TOTAL COSTS

What was the total cost of the remediation associated with this RAO? \$10,000

REMEDATION FUNDING SOURCE

Has a Remediation Funding Source been posted for this site?

Yes



- ☐ This RAO serves as Notice to NJDEP to decrease or return the RFS posted to this site.
- ☐ No adjustments to the RFS are requested at this time.

Upload RAO and Conditional Childcare or ISRA Leasehold Maps



UPLOAD RESPONSE ACTION OUTCOME (RAO)

Note:

The signed RAO-AOC, signed RAO-ISRA Leasehold or signed RAO-Child Care as submitted to the Client is uploaded here. Upload as one PDF, that INCLUDES any required maps. In addition, upload the Authorization Form, and if required, to aid inspection also upload a separate ISRA Leasehold Map, ISRA Limited Conveyance map, Childcare Play Area Map and/or Child Care Leasehold map.

1. On each row, click the 'Browse' button and navigate to each file required to be uploaded, choose it, and click open. The file will take a moment to upload. The 'Browse' button will disappear when the file is finished uploading, then click 'Browse' and repeat for the other rows.
2. Do not click the 'Bypass Upload' checkbox unless your file fails to upload.

Maximum Size per File: 10Mb

Attachment Type	*Attachment Description	Upload File Name		File Size Mb	Remove	Bypass Upload
*Signed Affidavit	Authorization to Submit through NJDEP Online	<input type="button" value="Choose File"/>	No file chosen	0 Mb		<input type="checkbox"/>
*Signed RAO (AOC, ISRA Leasehold or Child Care)	Signed RAO (AOC, ISRA Leasehold or Child Care)	<input type="button" value="Choose File"/>	No file chosen	0 Mb		<input type="checkbox"/>
Total Uploaded:				0 Mb		


[How do I upload a File?](#)

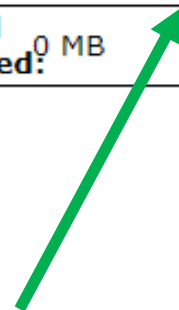
RAO SUPPLEMENTAL INFORMATION

Help | Logout

This page is only to upload items supporting the RAO that have not yet been provided to the department. If there are no additional supporting items, click the red x and continue.


1. To upload the file, click the 'Browse...' button and navigate to the file to be uploaded, choose it, and click open. The file will take a moment to upload. The Browse button will disappear when the file is finished uploading.
2. If any file fails to upload, click 'Bypass upload'. If you must bypass any attachment, your submission will not be complete until the attachment is received by NJDEP by mail. The acknowledgement letter will contain a detailed attachment cover page to submit. If the complete Remedial Phase Report is not submitted here it must be sent to the NJDEP on CD within 14 days or this submission will be deemed administratively incomplete, and will have to be resubmitted.

Attachment Type	Attachment Description	Allowed Extensions	Upload File Name	Status	File Size (MB)	Remove	Bypass Upload
Supplemental RAO Information	Supplemental RAO Information	pdf	<input type="button" value="Choose File"/> No file chosen		0		<input type="checkbox"/>
					Total Uploaded:	0 MB	



* Required

[How do I upload a File?](#)

Add Attachment... 

Add Attachment

Continue

Next Steps...

LSRP Certifies Service

Service Summary Appears

Confirmation email goes out



Next Steps...

There will be a listserv announcing the Service is Ready for Optional Use

Later there will be a Notice Published in the New Jersey Register with a date the RAO service will become mandatory



Contact Information:

Scott Tyrrell, Section Chief

Bureau of Information Systems

Scott.Tyrrell@dep.nj.gov



Thank You!



RAO Issues Modifications, Amendments, and Withdrawals

Jon Balog

Bureau of Inspection and Review

Jonathan.balog@dep.nj.gov



Administrative Issues - BCAIN

- Missing components of submittal (Forms, CID, etc)
- Fees not paid
- RAO package should be submitted separately from supporting documents (srp_submissions@dep.nj.gov)
- RAO not submitted to DEP when issued to PRCR (30 days ARRCs)
- Each PI and LSR Activity require separate RAO submissions



Common Administrative Issues

- Conflicting information in Online Service Submission/CID/Reports
- Scope of Remediation is vague
- Incorrect communication center (Hotline) numbers
 - Only use the communication center numbers to be **closed** in the **RAO Reference Section**
 - Communication center numbers to be left **open** should be called out using **Notices**
- UST Registration does not match CID/RAO
- Contamination identified but not called in to the hotline
- RAO does not conform to model document
- No Further Investigation ≠ No Further Action



Common Technical Issues

- Independent professional judgment not adequately justified
- Off-site source contamination not properly documented
- Delineation not complete
- IEC case must be resolved before entire site RAO is issued
- RA Permits must be issued by DEP prior to RAO issuance
- CEA lifted and Deed Notice must be terminated prior to issuance of Entire Site **Un**restricted Use RAO



RAO Modifications

- Occasionally, reasons to alter the RAO model document language may arise
- Language modification(s) **must** receive approval from the Department PRIOR to issuance of the RAO
- Call/Email first before issuing the RAO letter. If/when language is approved, then issue the RAO
- Language modifications are rare
- Usually unnecessary. There is likely a Notice that addresses the situation



RAO Modifications

- Discuss with the Department the case-specific issues
 - email Atwood Davis and the RAO Point of Contact
- Document the case-specifics in the report/CID
 - Anyone who looks at the submittal should understand why the Model Document was not followed

Pre-approval is required for any RAO language changes



Test Your Knowledge

True or False: RAO modifications require pre-approval by the Department

- A. True
- B. False

Test Your Knowledge

True or False: RAO modifications require pre-approval by the Department

A. True

B. False

RAO Amendments

- Changes to the RAO are made through the issuance of Amendments
- The RAO Amendment has its own model language
- Multiple Amendments to the same RAO are possible (but discouraged – wait for BIR contact)



RAO Amendments

- BIR staff will contact the LSRP for an Amendment if necessary
 - Amendment language provided in an email
 - DEP will work with LSRP to get the Amendment issued
- LSRPs are responsible for the RAOs they issue for the lifetime of the document
 - RAOs can **only** be amended by the LSRP that issued the original RAO
 - The Department has 3 years from the date of issuance to audit the RAO



RAO Withdrawals

- Used for situations where an Amendment cannot be issued in a timely manner/or technical issues remain
- Letter/email to PRCR & DEP required. Specifies what submission is being withdrawn and why
- DEP will provide “new” withdrawal shell language (attachment 3)



RAO Invalidations

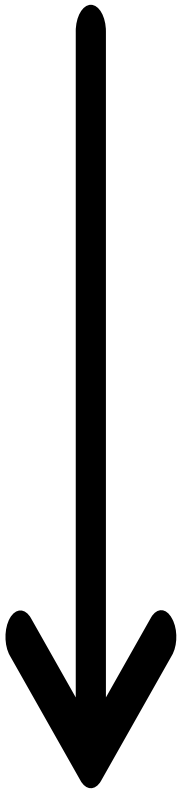
- Reason for invalidation will be provided in DEP letter:

RAO is not protective or LSRP unable to withdraw

- Very uncommon. As of October 1, 2021, there have only been **23** RAO invalidations



Summary: RAO Compliance Process

- 
- RAO is received by the Department
 - If an issue with the RAO is identified, BIR staff will contact the LSRP
 - A 7-day timeframe is given for the LSRP to amend the RAO
 - If the Amendment is not received within 7 days, possibly extended to 30 days
 - If issues are unable to be resolved within 30 days, the Department will request that the RAO be withdrawn
 - If the withdrawal letter cannot be issued, the RAO may be invalidated by the DEP



Resources

Guidance for the issuance of response action outcomes
<http://www.nj.gov/dep/srp/guidance/>

RAO Points of Contact (after November 30):

Christina Page

Christina.Page@dep.nj.gov

Jon Balog

Jonathan.Balog@dep.nj.gov



Questions?



RAO Shell Scenarios/Instructions

Atwood Davis, Chief

Bureau of Inspection and Review

Atwood.Davis@dep.nj.gov



Shell Scenarios/Instructions

Located in Attachment 4 of the RAO Guidance Document

- The development of the scenarios were based on:
 - Common LSRP inquiries over time and
 - Reoccurring issues requiring amendments to RAOs
- 7 scenarios in total
 - Instruction provided as “how to” in some scenarios
 - Other scenarios DEP provides guidance on how to approach



Pre-existing Restriction when Issuing RAO-E

For Entire Site, ISRA Entire Site, ISRA Leasehold or Childcare Facility

- Final remediation document with a restriction was previously issued
 - No additional remediation was performed to change original restriction
 - No new permit modifications or permit requirements for subsequent case
- New RAO-E must maintain same level of restriction



RAO Issued for Multiple Media with Multiple Restrictions

Only one RAO Remedial Action Type is appropriate

- Media with restriction is defined in the remedial action permit and the institutional control
- Not necessary to issue separate RAO for each media
- Overall status of the AOC defaults to most restrictive



Multiple AOCs in an RAO

Issue one RAO for multiple AOCs

- Scope of Remediation will allow for the listing of each AOC
 - Each AOC does not require its own separate and distinct RAO
- Department understands potential need for Billing Fee Categories



Issuing U-RAO-A while a Restricted RAO-A exists at the Site

- Unrestricted Use RAO-A can be issued provided:
 - No discharge occurred; or
 - Discharge was remediated and did not contribute to contamination associated with the existing restriction
- Scope of Unrestricted RAO cannot be Entire Site
- “Existing Classification Exception Area or Deed Notice from Prior Remediation” Notice is a must



Soil Contamination Remains Off-Site due to On-site Discharge

Discharge occur on-site, which resulted in impacts to soils off-site

- Off-site property has limitations preventing remediation
 - Active in-service roadways, utilities, railways, etc.
 - Remediation is prohibited until such a time of permanent or temporarily closure, repairs or out of service
- Delineation must be completed for the contamination associated with the on-site discharge



Soil Contamination Remains Off-Site due to On-site Discharge

- Institutional control will be needed for off-site
 - Deed Notice
 - Notice in Lieu of Deed Notice
- Soil Remedial Action Permit
 - To Person Responsible for Conducting the Remediation and
 - Co-permittees (owner of off-site property)
- One RAO-A for on-site and off-site with most restrictive status
- If RAO-E needed, most restrictive status
- Attach scaled map depicting impacted off-site areas



CEA/Deed Notice Terminations and RAO Status

Soil or Ground water Remedial Action Permit (RAP) is terminated

- No requirement to submit a new or amended RAO
 - Case is already closed
 - Billing turned off
- RAP Termination Letter will provide additional guidance



Test Your Knowledge

True or False: The Tech Regs require an LSRP to issue a new RAO when a CEA is lifted, or a Deed Notice is terminated.

A. True

B. False

Test Your Knowledge

True or False: The Tech Regs require an LSRP to issue a new RAO when a CEA is lifted, or a Deed Notice is terminated.

A. True

B. False

Historic Fill Ground Water Only RAO

Historic Fill related contaminants in soil are remediated or not present

- Ground water impacts identified, and Virtual Institutional Control (VIC) established
- RAO Limited Restricted Use
- Scope: "Ground water contamination associated with Historic Fill and no other areas"
- "Ground Water Contamination due to Regional Historic Fill" Notice



Questions?



Thank you!

Please fill out the course evaluation:

<https://www.surveymonkey.com/r/FVPL2SW>

