



Guidance for Conducting a Receptor Evaluation

N.J.A.C. 7:26E- 1.15 – 1.19

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Receptor Evaluation Guidance Committee

Steve Maybury NJDEP

Dave Barskey NJDEP

Renee Wright NJDEP

Neil Rivers Langan Engineering & Env. Services

Philip I. Brilliant Brilliant Env. Services LLC





Purpose of a receptor evaluation?

- To ensure an **ongoing** evaluation process
- To ensure that the **protection of receptors** is our top priority by requiring
 - Early identification of receptors at or near the site
 - Evaluation of all contaminant migration pathways
 - Receptor sampling when contamination is within trigger distances/criteria
 - Evaluation and implementation of response actions to protect human health in a timely manner





Receptor Evaluation Process Vs Receptor Evaluation (RE) Form

- During the RE process the LSRP must focus on collection of data and conduct an ongoing evaluation of receptors
- The RE Form is a compliance evaluation tool only





When does the Receptor Evaluation Process Start and End?

- The RE process starts
 - When “Remediation is Initiated” i.e., when a discharge is confirmed or ISRA is triggered
- The RE process ends
 - When a unrestricted remedial action is completed, or
 - When a restricted or limited restricted remedial action is completed (includes a RA Permit)
 - The Biennial Certification takes the place of the RE Form





Regulatory Time Frames for the initial RE Form

- For Existing Cases - **March 1, 2011** (initiated remediation before March 1, 2010)

Are all your cases in compliance?

- For New Cases - **1 year** after remediation is initiated (initiated remediation after March 1, 2010)
- Update the RE Form with the submission of each “milestone” document
- Time frame extensions





Specific Regulatory Time Frames Based on Environmental Conditions

- **Potable Water**
 - 90 days to conduct well search
 - 120 days to sample wells
- **Vapor Intrusion**
 - 60 days to evaluate structures
 - 150 days to sample potentially impacted structures
- Use the Regulations, RE Quick Reference Guide and the Summary of Regulatory and Mandatory Time Frames on the DEP website





Mandatory Time Frames for the Initial RE Form

- For Existing Cases - **March 1, 2012** (initiated remediation before March 1, 2010)
- For New Cases - **2 years** after remediation is initiated (initiated remediation after March 1, 2010)
- Time frame extensions
- Non-compliance = Direct Oversight (Shall)





What should you use to ensure compliance?

- Technical Regulations
<http://www.nj.gov/dep/srp/regs/techrule/techrule.pdf>
- Quick Reference Guide
http://www.state.nj.us/dep/srp/srra/training/matrix/new_responsibilities/receptor_eval.pdf
- FAQs
<http://www.nj.gov/dep/srp/regs/techrule/techrule.pdf>
<http://www.state.nj.us/dep/srp/guidance/vaporintrusion/faqs.htm>
- RE Form & Instructions
http://www.state.nj.us/dep/srp/srra/forms/receptor_evaluation_report.pdf
http://www.state.nj.us/dep/srp/srra/forms/receptor_evaluation_report_instructions.pdf





Section by Section Guidance

- Land use
- Description of Contamination
- Groundwater use
 - New spreadsheet and well search guidance
- Vapor Intrusion
 - IECs
 - Vapor Concern Conditions
- Ecological





General Concepts - Timing

- Start the Receptor Evaluation early, and update it routinely

It's not just about completing the form, it's about an ongoing assessment process to identify and protect receptors.





Similarities Between RE and Conceptual Site Model (CSM)

- Develop early in project
- Identify sources, migration pathways and potential receptors
- Iteratively update as new information is developed





General Concepts – The RE Form

- Form is intended to document the RE status and ensure completeness.
- FAQs and instructions will answer most questions.
- Justification should be focused and brief.





Initial vs. Interim

- Initial – All Cases
 - Is the first RE form submitted for a case
 - Even if previous reports contained well search, BEE, etc.
 - Brief Summary of Contaminant Data - Summary table/figure
- Interim – All Cases
 - Is any subsequent submission of the RE form
 - Remedial Investigation Report
 - Remedial Action Report





Land Use

Who may be or become exposed to contamination from the site?

- Identify potential receptors
- Current land use
- Identify planned land use changes over time





Land Use

- Identify all land-use at site and within 200 feet of property boundary
 - Visual, maps, etc.
 - Degree of Certainty
 - Large site/Single AOC – variance – See FAQ
- Locate sensitive populations within 200 feet on a scaled map
 - Residence, school, child care center, playground, park, other recreation





Ground Water Use Initial Well Search

- Required when ground water contamination is detected at concentration greater than the Ground Water Remediation Standards
- Initial low level exceedances can be confirmed first (within 30 days).





Ground Water Use Initial Well Search

- Identify and map
 - All wells within ½ mile of known extent
 - All public supply, irrigation and industrial wells within 1 mile of known extent
 - Not required to map monitoring wells
- Submit hard copy of entire well search with next milestone report
- Submit spreadsheet only with the RE Form





Initial Well Search Resources

- NJDEP GIS
 - Public Supply Wells
 - Well Head Protection Areas
 - Water Purveyor Service Areas
- NJDEP Well Records
 - Bureau of Water Allocation
 - Paper search
 - Electronic search
- NJDEP Well Records on line
- County & Local Records





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Well Search Spreadsheet 101

- Electronic well search
- More efficient and focused way to identify wells
- Helping to amass a library of accurate well locations
- “How to” video





Assessing Well Search Records

- Determine well locations vs. plume extent
- Conduct a visual survey of the area
 - Reconcile well search data
 - Water supply lines
 - Vacant properties





Assessing Well Search Records

- Door-to-door survey
 - Potable wells in ½ mile
 - Do when there is uncertainty about ground water use in the area
- Door-to-door can be modified based on
 - Known ground water flow direction
 - Plume delineated





Well Sampling

- Within 120 days, sample all potable wells within 1,000 feet of ground water contamination
 - If ground water flow direction is known may limit sampling to
 - 250 feet upgradient
 - 500 feet sidegradient
 - 1,000 feet downgradient
- Should sample “worst first” and work your way out
- Irrigation wells if exposure concern





Well Sampling

- Notify DEP prior to sampling (form)
- Step out until clean wells are found
- Report results to DEP
 - For exceedances – Follow IEC requirements
 - No exceedances – Report in 14 days





Vapor Intrusion (VI)

- VI investigation triggers in Tech Rule
 - Ground water contamination
 - 30 feet of a building (petroleum products)
 - 100 feet of a building (all other volatile compounds)
 - Free product 100 feet of a building (except for # 2 fuel oil or diesel)
 - Soil gas or indoor air impacts above VI screening levels
 - On-site landfills
 - Methanogenic conditions





Vapor Intrusion Investigation

- Within 60 days of the trigger
 - Identify structures and utilities
 - Determine ground water flow direction
- Within 150 days of the trigger
 - Implement VIG/sampling





Vapor Intrusion Investigation

- Notify DEP prior to indoor or sub-slab sampling (form)
- Report results to DEP
 - For exceedances – Follow IEC requirements
 - No exceedances – Report in 14 days





VI – Mapping utilities FAQ

- Map laterals servicing larger buildings (apartment, commercial, industrial)
- Map main lines servicing groups of residential developments
- Map utility vaults and other underground structures





Vapor Intrusion – mapping utilities

- Interim approach pending VIG update
- For single family homes/townhomes
 - Assume service lines run to each structure
 - Therefore, mapping is not needed





Ecological

- Conduct a Baseline Ecological Evaluation (BEE) pursuant to N.J.A.C. 7:26-3.11
- Report on the RE form that the BEE was conducted
- Update BEE as more data is collected and Eco Conceptual Site Model (CSM) is refined
 - Sources
 - Migration pathways
 - Ecological receptors





Problems identified by reviewers

- Incomplete forms being submitted
- The wording of some questions may be confusing
- Many LSRPs are leaving questions blank

When in doubt about how to answer?????

Attach a written explanation

