



**New Jersey Department of Environmental Protection
Site Remediation Program**

Guidance for the Issuance of Response Action Outcomes

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Guidance for the Issuance of Response Action Outcomes

I. Introduction

The New Jersey Department of Environmental Protection has issued this guidance document to assist licensed site remediation professionals in the structure of a response action outcome (RAO), the different types of response action outcomes, when a licensed site remediation professional may issue a response action outcome, to whom it may be issued and when the licensed site remediation professional is to include specific inserts and reporting requirements in a response action outcome.

With the enactment of the Site Remediation Reform Act (N.J.S.A. 58:10C), and related amendments to the Brownfield and Contaminated Sites Act (N.J.S.A. 58:10B), the determination that a remediation of a contaminated site or area of concern is protective of public health, safety and the environment, will rest initially, in most circumstances, with a licensed site remediation professional. A licensed site remediation professional shall make that determination based on the remediation conducted, supervised and/or reviewed, and ultimately accepted by the licensed site remediation professional using their independent professional experience. In accordance with the Site Remediation Reform Act, a licensed site remediation professional is authorized to memorialize the completion of remediation by issuing a response action outcome to the person responsible for conducting the remediation which renders their opinion that the site has been remediated in accordance with all applicable statutes, regulations, and guidance.

The response action outcome represents the licensed site remediation professional's opinion that:

1. There are no discharged hazardous substances or hazardous wastes present at a site or area of concern; or
2. There are discharged hazardous substances or hazardous wastes, present at the site, area of concern and/or migrating from the site that have been remediated in accordance with all applicable statutes, regulations, and guidance; and
3. The remedial action undertaken is protective of public health, safety and the environment.

The Site Remediation Program has prepared a single response action outcome shell document to ensure content consistency. The licensed site remediation professional is expressly prohibited from modifying the content of a response action outcome except as explicitly provided for in this guidance. The licensed site remediation professional can not apply variance provisions in any Department rule to this document.

II. Response Action Outcome Variations

The licensed site remediation professional shall take into account the following two factors to determine which variation of response action outcome is to be issued:

- 1) The scope of the remediation: the entire site or an area(s) of concern; and
- 2) The use of institutional or engineering controls.

A. Scope of Remediation

There are two major types of response action outcomes that are determined by the scope of the remediation. These are either an "Area of Concern" response action outcome or an "Entire Site" response action outcome. A licensed site remediation professional may issue a response action outcome as remediation is concluded for individual areas of concern or for the entire site. However, issuing a single response action outcome that covers all areas of concern undergoing remediation, or the entire site once remediation is concluded, will streamline reporting obligations for the person conducting the remediation.

By definition, each area of concern includes all contaminants at that area of concern as well as all contaminants in all media that have migrated from the area of concern. For a licensed site remediation professional to issue an "Area of Concern Response Action Outcome", the licensed site remediation professional must first determine that all contaminants from that area of concern, whether on or offsite, have been remediated pursuant to all applicable statutes, rules, and guidance.

For a licensed site remediation professional to issue an "Entire Site" response action outcome, the person responsible for conducting the remediation is required, at a minimum, to conduct a preliminary assessment for the entire site or the ISRA industrial establishment.

B. Extent of Remediation

The person responsible for conducting the remediation may use institutional and engineering controls to protect the public health and safety and the environment. As a result, there are three different response action outcome types defined by how remediation standards have been met, that is, whether institutional and/or engineering controls are used as part of the final remedial action. To define the extent of remediation, the licensed site remediation professional shall include in each response action outcome one of the following designations in the subject portion of the response action outcome:

1) An Unrestricted Use Response Action Outcome: A licensed site remediation professional may only issue an unrestricted use response action outcome when either:

a) There are no contaminants found at a site or area of concern following the completion of a preliminary assessment and/or, if needed, a site investigation; or

b) All contaminants were remediated to the most stringent remediation standards, including any site specific or alternative remediation standards.

2) A Limited Restricted Use Response Action Outcome: A licensed site remediation professional may only issue a limited restricted use response action outcome when either situation below exists;

a) Soil is remediated at a non-residential site to the more restrictive of the non-residential direct contact or the impact to ground water soil standard, including any site specific or alternative remediation standards, no engineering control is utilized and the Department has issued a remedial action permit for the deed notice.

For example, a limited restricted use response action outcome would be appropriate at a non-residential property, where the “non-residential” soil remediation standard was achieved, but contamination remains above the “residential” soil remediation standard, provided that an engineering control (e.g., a cap) is not required to prevent an unacceptable exposure in a non-residential use scenario. However, a deed notice would be required to ensure that a change to residential use does not occur without additional remediation protective of a residential exposure scenario.

b) Contaminants exist above applicable remediation standards for ground water, no engineering control is utilized and the Department has issued a ground water remedial action permit.

For example, a limited restricted use response action outcome would be appropriate in the following two examples: for ground water contamination where a natural attenuation remedy is implemented, no engineering control is needed, and the Department has issued a ground water remedial action permit.

3) A Restricted Use Response Action Outcome: A licensed site remediation professional may only issue a restricted use response action outcome when a remedial action permit including an engineering control in combination with an institutional control has been issued by the Department to ensure the long-term protectiveness of the remedy.

III. Issuing Response Action Outcomes

A. To Whom an Response Action Outcome is issued

Once remediation is completed and remedial action permits have been issued by the Department, if necessary, a licensed site remediation professional shall issue the response action outcome to the person(s) conducting the remediation.

B. When to issue an Response Action Outcome

A licensed site remediation professional may issue a response action outcome after the completion of any phase of remediation that demonstrates that the area being remediated has been investigated and remediated, if necessary, in accordance with the Administrative Requirements for the Remediation of Contaminated Sites, N.J.A.C. 7:26C, and the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, and applicable guidance.

A licensed site remediation professional may issue a response action outcome with contamination remaining onsite, only when a licensed site remediation professional determines and documents that:

1. Contamination is migrating, or has migrated, onto the subject property and a preliminary assessment and site investigation, etc., has shown that the site receiving the response action outcome has not contributed to that contamination;
2. Ground water contamination is found on-site that has triggered a ground water remedial investigation and has not otherwise been investigated. A PA\SI and background investigation have not been conducted to evaluate this contamination. (Note: If this situation applies, Area of Concern RAOs only can be issued until the ground water is investigated and remediated if necessary);
3. Remediation is not required for a naturally occurring contaminant beyond the regional natural background levels for that contaminant;
4. Contamination has been remediated and a remedial action permit containing engineering and/or institutional controls has been issued by the Department;
5. Contamination has been remediated to levels established in an approved remedial action work plan and subsequently a new remediation standard was established for a contaminant at the site that decreased by less than an order of magnitude;
6. Contamination has been remediated and there is less than an order of magnitude difference between a new remediation standard and residual contamination that has been left on a site that is subject to a final remediation document;
7. Contamination remains from the site or area(s) of concern that is/are undergoing remediation while an area of concern response action outcome is issued for other area(s) of concern that have been remediated;
8. Ground water contamination remains from the site or area of concern that is undergoing remediation while an area of concern, soil-only response action outcome is issued; or
9. Contamination remains onsite associated with specific ISRA industrial establishment exempted areas of concern.

When Child Care Center RAOs are issued, a LSRP must copy the Department of Children and Families (DCF) for issuance or reissuance of the Child Care Center license.

When issuing response action outcomes involving Child Care Center 3-Year license renewals, the licensed site remediation professional may issue a response action outcome to a center (that has been in continuous use as a child care center) based on the following: a pre-existing NJDEP issued Child Care Approval letter or No Further Action letter, completion of a Site Conditions Certification Form from the center owner, certification that clean drinking water is supplied, and a determination that the site is not being impacted from off site sources of contamination.

After November 3rd, 2009, all new (proposed) child care facilities, and centers that initiate remediation after that date, must get a response action outcome issued by a licensed site remediation professional prior to issuance of a license by DCF.

C. Issuing Response Action Outcomes Involving Ground Water Remedies and Coordination with Remedial Action Permits

A licensed site remediation professional shall issue a response action outcome for ground water contamination as follows:

1. Ground water is remediated to the Ground Water Remediation Standards (N.J.A.C. 7:26D): Unrestricted response action outcome - In this option, there is no need for the person responsible for conducting the remediation to obtain any site remediation permits for long term ground water monitoring since the ground water is considered in compliance with ground water remediation standards; or
2. Ground water remains above the Ground Water Remediation Standards: Limited Restricted Use response action outcome - Whenever ground water contamination remains above a remediation standard and a remedial action is selected, the person responsible for conducting the remediation is required to obtain a ground water remedial action permit prior to the licensed site remediation professional issuing a response action outcome. The permit will include the necessary long-term monitoring and reporting conditions. For remedial actions involving natural attenuation as the selected remedy, the licensed site remediation professional shall only issue a limited restricted use or a restricted use response action outcome when the licensed site remediation professional determines that there is compliance with all soil remediation standards or the appropriate engineering and/or institutional controls are in place, and demonstrates a successful program implementing natural attenuation for ground water. This requires the licensed site remediation professional to demonstrate a decreasing trend is representative across the range of observed water table elevations or the conditions in Attachment 2 are met. For soil contamination related to impact to ground water criteria only, this includes either a determination that soil contamination has

either been remediated to the default or site specific impact to ground water standards or soil compliance has been determined via the demonstration of a low and decreasing contaminant trend in ground water per N.J.A.C. 7:26E-6.7(e) and "Volatile Organic Contamination including methyl tertiary butyl ether (MTBE) and tertiary butyl alcohol (TBA) derived from discharges of Petroleum Mixtures" guidance listed at http://www.nj.gov/dep/srp/guidance/rs/petroleum_mixtures.htm.

3. Ground water remains above the standards and can not be remediated due to technical impracticability: Restricted Use response action outcome.

An example would be a case with high concentrations of chlorinated compounds where it may be technically impracticable to achieve the applicable Ground Water Remediation Standards yet an engineering control is required. The ground water remedial action may utilize a long-term containment strategy (e.g., slurry walls, hydraulic control, etc.) to prevent migration of the contaminated ground plume while another portion of the plume is remediated via natural attenuation. A ground water remedial action permit for the classification exception area and the operating system must be obtained prior to issuance of the response action outcome.

The licensed site remediation professional may issue a restricted use response action outcome for ground water when the following criteria are met:

(i) When the remedial goal is containment, the person responsible for conducting the remediation has demonstrated the engineering control is deemed operational and functional and is effectively controlling the contaminated ground water for a period of one year following completion of construction\system start-up and a ground water remedial action permit has been obtained. For the purposes of this document, "operational and functional" means when the active remedy is determined to be functioning properly and is performing as designed for a minimum of one year. The one year starts after the system has gone through the initial shake-down and testing period.

(ii) When the ground water remedial action involves splitting the plume (i.e., a portion of the plume will be contained via an engineering control while the other portion will be left to naturally attenuate), the person responsible for conducting the remediation has demonstrated the engineering control is effectively controlling the contaminated ground water for a period of one year following completion of construction\system start-up, a ground water remedial action permit has been obtained, and has demonstrated a decreasing trend for the portion of the plume subject to natural attenuation per N.J.A.C. 7:26E-6.7(e).

IV. Payment of Department Fees

Prior to the issuance of any response action outcome, the person responsible for conducting the remediation and the licensed site remediation professional must ensure that all fees and outstanding oversight costs have been paid.

V. Significance of the Response Action Outcome to the Department of Community Affairs

The procedure located at <http://www.njba.org/PRED%20Registration%20Procedures.pdf> was developed by the Department of Community Affairs (DCA) under the "Planned Real Estate Development Full Disclosure Act" in coordination with the Department. This applies to multi-family developments (i.e. condos, townhouses, etc.) that are offered for sale via a Public Offering Statement. The response action outcome for the site or portions of the site allows the final transfer of property to occur.

In addition, certain educational facilities and child care centers must comply with P.L.2007 c.1 prior to issuance of a construction permit and/or certificate of occupancy by the local code official, when the following occur: new building construction or building rehabilitation (changing square footage) occurs on a site that is contaminated or is suspected to be contaminated; or there is a change in building use which results in the educational facility being located in a building that was previously used for industrial purposes, storage, high hazard use, a nail salon, dry cleaner or gas station (UCC Codes F, S, B, H, M),. In addition, the educational facility must also obtain certification for indoor environmental quality from the Department of Health and Senior Services (DHSS).

VI. Compliance with All Remedial Action Permits

Long term monitoring and reporting requirements will be outlined in the Remedial Action permits issued to the person responsible for the remediation. The response action outcome must include the permit identification number(s) and effective date of the permit(s) to ensure responsible parties and subsequent purchaser are aware of the permit and associated responsibilities that are required to remain in full compliance with the response action outcome. Response action outcome and site remediation permit compliance is required to maintain the benefits a covenant not to sue provides. Non-compliance with the remedial action permit could result in the revocation of the response action outcome.

Whenever a property is sold, transferred or a new entity becomes the person(s) responsible for the cleanup, the new entity is responsible for requesting a remedial action permit transfer per N.J.A.C. 7:26C-6.8.

VII. List of notices in the response action outcome

Notices are used in the response action outcome letter when appropriate and applicable to site conditions.

- Well Decommissioning – This insert is used to provide notice regarding the status of any monitoring wells installed as part of remedial activities. Monitoring wells that will no longer be used for monitoring purposes must be sealed prior to the issuance of the response action outcome per N.J.A.C. 7:26E-6.4(c). Any wells that will be used for monitoring under a remediation permit may remain open but must be decommissioned later as part of the permit termination process. In addition, if monitoring wells are lost and could not be properly abandoned, the licensed site remediation professional shall contact the Bureau of Water Supply and Well Permitting and shall document that all appropriate steps have been taken to locate and properly decommission the lost wells.
- **Building Interiors - The Department of Environmental Protection does not regulate the remediation of building interiors unless there is a known or suspected discharge of a hazardous substance or hazardous waste that may result in a discharge to the environment. The insert is intended to clarify to all parties that the response action outcome did not address contamination that may be in the building. When remediation at a site does include building interiors because contamination was found to be migrating out of the building to soils and/or ground water, the licensed site remediation professional shall add case specific language to the response action outcome. In this situation, the licensed site remediation professional shall consult with the Department before issuing the response action outcome. Use this notice whenever there is a building on the site or area of concern that was remediated and the building interiors were not remediated. If however, the remediation did address some aspects of the building interior (i.e., contamination from inside the building discharging to the soil or ground water) the licensed site remediation professional shall modify this notice to reflect the remediation conducted.**
- Regional Natural Background Levels of Contamination – Use this notice whenever soil contamination has been associated with natural background levels. An additional subsection is included for use when a Child Care Center is involved.
- Existing Classification Exception Area or Deed Notice from Prior Remediations - Use this notice whenever the site receiving the response action outcome has an existing Classification Exception Area or deed notice established as part of a previously issued NFA or response action outcome.
- **Child Care Potable Water Notice – Use this notice to identify compliance with the appropriate source of potable water.**
- Child Care Specific - Multi-Tenant Situations – Use this notice whenever the child care center is part of a larger structure/facility.
- Child Care Center Play Area - Use this notice to identify one of the three options to define the location of the Child Care Center play area

- Child Care Center Notice – Use this notice to advise the child care center operator that the relocation and/or expansion of the existing licensed child care center into other portions of the building or play areas, on or off-site, requires a new response action outcome.
- Soils Only Response Action Outcome - Use this notice whenever only the soils at a site have been remediated and ground water contamination remains.
- Known Onsite Contamination Source Not Yet Remediated - Use this notice whenever a known contaminated area of concern is not being addressed by the Response Action Outcome that is being issued. This could be an area of concern that was newly discovered, being addressed by a different responsible party or other AOCs that require remediation at a site. This provides notice that there is an outstanding remediation obligation at this property, the discharge has been reported to the Department and the responsible parties are aware of their obligation to remediate the discharge. This notice would be used in Area of Concern Response Action Outcomes only
- Ground Water Contamination Not Yet Investigated – Use this notice whenever ground water contamination is found onsite and this contamination has not yet been investigated. This insert is used when a remedial investigation (including a background investigation if an offsite source is being claimed) in combination with a PA\SI to identify if there are any onsite sources, have not been conducted offsite. This notice would be used in Area of Concern Response Action Outcomes only when the area of concern receiving the response action outcome has not contributed to the observed ground water contamination
- Contamination remains on-site due to migration from off-site source - Use this notice whenever contamination is not being addressed by a response action outcome due to documented migration from an off-site source.
- Order of magnitude remediation standard change for a site that had an approved remedial action work plan prior to a new remediation standard – Use this notice whenever a remedial action work plan was approved for a site prior to adoption of a new remediation standard and only when there is no order of magnitude difference between previous remediation standard and the new remediation standards and as such the Department cannot compel cleanup to the lower standard.
- Order of magnitude remediation standard change for a site that has a final remediation document prior to a new remediation standard - use whenever a final remediation document has been issued at the site and there is less than an order of magnitude difference between the residual contaminant(s) of concern at the site and the new remediation standards and as such the Department cannot compel cleanup to the lower standard.
- **ISRA Specific Notices**
 - ISRA Specific - RCRA Situations - Use this notice whenever there is an area at the site that is regulated under the Federal Resource Conservation and Recovery Act (RCRA) and that area is being addressed under a RCRA Closure Plan and not under ISRA.
 - ISRA Specific - Multi-Tenant Situations – Use this notice whenever the ISRA case only addresses a “leasehold portion” of the above referenced industrial establishment. This insert also includes a note that the response action outcome does not address specific area(s) of concern located at the above referenced property which service(s) the multi-tenant facility including non-subject tenants.
 - ISRA Specific - Landfill Situations – Use this notice whenever a sanitary landfill is located at the industrial establishment. This insert provides notice that the response action outcome does not cover or address the environmental impacts of the sanitary landfill.

Attachment 1 - RAO Shell Document

[\$\$Only Insert Name and address of Person(s) Responsible for Conducting the Remediation \$\$]

[\$\$Date\$\$]

Re: Response Action Outcome

Remedial Action Type: [\$\$\$Select One\$\$ Restricted Use with Permit Requirements OR Limited Restricted Use with Permit Requirements OR Unrestricted Use\$\$]

Scope of Remediation: [\$\$\$Select One\$\$ Area(s) of Concern: (followed by a list of the remediated area(s) of concern and no other areas OR Entire Site \$\$Note: Entire Site RAO can only be issued if full site PA/SI was completed\$\$ OR Industrial Establishment as defined according to N.J.A.C. 7:26B\$\$]

Case Name:

Address:

Municipality :

County:

Block: ___ Lot: ___

Preferred ID: 000000

Child Care License #

KCSL # NJL000000000

Communication Center # 00-00-00-0000-00 [\$\$List all that apply\$\$], UST Registration # 0000000, UST Closure #C00-0000

ISRA Transaction: , ISRA Case # E00000

Well Permit #

Dear :

As a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey, I hereby issue this Response Action Outcome for the remediation of the **[\$\$Select one: site OR, industrial establishment as defined according to N.J.A.C. 7:26B OR area(s) of concern\$\$]** specifically referenced above. I **[\$\$Select one or both of the following:** directly oversaw and supervised all of the referenced remediation, **AND/OR** personally reviewed and accepted all of the referenced remediation**\$\$]** and based upon this work, it is my professional opinion that this remediation has been completed in compliance with the Administrative Requirements for the Remediation of Contaminated Sites - N.J.A.C. 7:26C-6.2(c), that is protective of public health, safety and the environment and full payment has been made for all Department fees and oversight costs pursuant to N.J.A.C.7:26C-4.

[\$\$Select One: This remediation includes the completion of a **[\$\$Select all that apply: Preliminary Assessment, Site Investigation, Remedial Investigation and Remedial Action\$\$]** as defined pursuant to the Technical Requirements for Site Remediation (N.J.A.C. 7:26E), **OR for RAOs involving Child Care Facilities in Support of License Renewal Only:** This Child Care Center has previously been issued a Final Remediation Document or Child Care Approval Letter. This RAO is issued to update the Child Care Center 3-year license renewal. This RAO is based on the "Site Condition Certification Form" and my determination that clean potable water is supplied to this Child Care Center and there is no impact to this Child Care Center from offsite contamination.**\$\$]**

My decision in this matter is made upon the exercise of reasonable care and diligence and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals in good standing practicing in the State at the time these professional services are performed.

As required pursuant to N.J.A.C. 7:26C - three electronic copies of all records related to the remediation activities that occurred at this location is being simultaneously filed with the New Jersey Department of Environmental Protection (Department). These records contain all information upon which the decision was based to issue this Response Action Outcome.

By operation of law a Covenant Not to Sue pursuant to N.J.S.A. 58:10C-31 applies to this remediation. The Covenant Not to Sue is subject to any conditions and limitations contained herein. The Covenant Not to Sue remains effective only as

long as the real property referenced above continues to meet the conditions of this Response Action Outcome **\$\$\$Select if Limited Restricted Use or Restricted Use RAO: and applicable permits\$\$**.

CONDITIONS

Pursuant to N.J.S.A. 58:10C-35o, * and any other person who is liable for the cleanup and removal costs, and remains liable pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. shall inform the Department in writing, on a form available from the Department, within 14 calendar days of when its name or address changes,. Any notices you submit pursuant to this paragraph shall reference the above case numbers and shall be sent to: New Jersey Department of Environmental Protection, Bureau of Case Assignment and Initial Notice – Case Assignment Section, P.O. Box 434, Trenton, N.J. 08625.

\$\$\$Select if Limited Restricted Use or Restricted Use RAO: Based on my professional opinion you have obtained all applicable permit(s) and authorization(s) to ensure this remedial action remains protective of public health, safety and the environment into the future provided that you remain in full compliance with the terms and conditions of those permit(s) and authorization(s). The designated remediation permit number(s) is/are **\$\$\$Add Permit Number(s)\$\$\$** effective **\$\$\$Date(s)\$\$\$**

NOTICES

\$\$\$START APPLICABLE NOTICES \$\$\$.

Well Decommissioning

\$\$\$Select One: Pursuant to N.J.A.C. 7:9D-3.1 (et seq.) all wells installed as part of this remediation have been sealed by a New Jersey licensed well driller and the well driller's well decommissioning report has been submitted to the Bureau of Water Systems and Well Permitting. **OR** Pursuant to N.J.A.C. 7:9D-3.1 (et seq.) any wells installed as part of this remediation that will no longer be used for remediation have been sealed. If any wells have been sealed the well driller's well decommissioning report has been submitted to the Bureau of Water Systems and Well Permitting. Pursuant to N.J.S.A. 58:4A, any monitoring wells remaining onsite shall be properly decommissioned prior to the termination of the applicable remediation permit. A New Jersey licensed well driller shall decommission the well(s) in accordance with the requirements of N.J.A.C. 7:9D-3.1 (et seq.) and submit the decommissioning report on your behalf to the Bureau of Water Systems and Well Permitting. More information about regulations regarding the maintenance and decommissioning of wells in New Jersey can be found at <http://www.nj.gov/dep/watersupply/> For a list of New Jersey licensed well drillers, click on the "reports" button in the left column and select "access the well permit reports." Questions can be emailed to wellpermitting@dep.state.nj.us. **\$\$\$** **[Select if applicable:** Please note that **\$\$\$add count of wells to which this applies\$\$\$** well(s) could not be located or abandoned properly. Contact has been made with the Bureau of Water Systems and Well Permitting regarding appropriate steps to document and conclude efforts this regard.**\$\$\$**

Chapter 2 Building Interiors Not Addressed

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. **\$\$\$Select if applicable:** The only exception to this building interior exclusion is the release of **\$\$\$specify contaminant\$\$\$** from **\$\$\$specify the AOC\$\$\$** that discharged outside the building.**\$\$\$** A complete building interior evaluation should be completed before any change in use or re-occupancy is considered. **\$\$\$ select for RAOs involving Child Care facilities:** To meet the requirements in the Department of Children and Families (DCF) licensing regulation, the Department of Health and Senior Services (DHSS), Indoor Environments Program, should be contacted to determine what steps, if any, are necessary to address the risks posed by the prior historical use. The DHSS, Indoor Environments Program can be reached at 609-631-6749. DHSS Guidance can be found on the DHSS web site at www.nj.gov/health/eoh/tsrp. **\$\$\$**

Building Interiors Addressed

Site specific: to be developed by licensed site professional in coordination with the Department.

Chapter 3

Chapter 4 Regional Natural Background Levels of Contaminants

Please be advised that concentrations of **[\$\$ Insert specific contaminant\$\$]** were detected in the soil at this site above the Department's **(\$\$Select: Residential OR Non-residential\$\$)** Direct Contact Remediation Standards. However, this contamination has been found to be associated with natural background levels of this analyte in soil. Pursuant to N.J.S.A. 58:10B, remediation beyond natural background levels shall not be required. **[\$\$Select for RAOs involving Child Care Facilities Only:** 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 its entirety in accordance with Department guidance for presumptive remedies found at www.nj.gov/dep/srp/guidance/srra/presumptive_remedy_guidance_DRAFT.pdf. The barrier should consist of impermeable materials, such as hard surfacing, poured rubber, or rubber matting, etc. The child care center should maintain documentation that provides proof of installation and documentation concerning maintenance of the integrity of the barrier. **\$\$]**

Existing Classification Exception Area or Deed Notice from Prior Remediations

Please be advised that this Response Action Outcome does not address the contamination at this site covered under the **[\$\$Select if applicable: Classification Exception Area(s) OR Deed Notice(s) OR Classification Exception Area(s) and Deed Notice(s)\$\$]** for the case(s) covered under Department Program Interest # 00000.

Chapter 5 Child Care Center Potable Water Notice

[\$\$Select one: The potable well at this location has been sampled within the past 3 years and it has been demonstrated that the potable water utilized at the Child Care Center does not contain contaminants above the Maximum Contaminant Levels (MCLs) established for all contaminants required to be tested pursuant to N.J.A.C. 7:10-5.1 et. seq. for nontransient noncommunity water systems or private wells, including radiological contaminants, nitrates and coliform. **OR** I certify that the Child Care Center is connected to a public community water system. **\$\$]**

Child Care Center Specific - Multi-Tenant Situations

Please be advised that this Response Action Outcome is for the leasehold portion of the above referenced site only, including all play areas where the potential for direct contact with soil exists. It does not include the **[\$\$Specify any known: Area(s) of Concern \$\$]** located at the above referenced property which service(s) the multi-tenant facility. The leasehold portion is the area defined by **[\$\$ Define the Area of the leasehold portion \$\$]** and identified on the enclosed map. Relocation and/or expansion of the existing licensed Child Care Center into other portions of the multi-tenant facility requires a new Response Action Outcome determination.

Child Care Center Play Area

[\$\$Select ONE for each RAO involving Child Care Facilities: The outdoor play area is located on-site, and is adjacent to/near *(Briefly describe location, size, fence and construction of play area)*. **{Add the following sentence if there is capped play area contamination:** The integrity of the play area shall be maintained at all times. **} OR** The outdoor play area is located off-site. *(Briefly describe size and construction of play area, and provide location identification (park name, etc.), address, block and lot, and ownership with description)*. **{Add the following sentence if the play area is on public land:** This site is not listed on the Department's Known Contaminated Site List (KCSL) as either an active or pending case. **} OR** There is no outdoor play area for this child care center.**\$\$]**

Child Care Center Notice

Be advised that any relocation and/or expansion of the existing licensed child care center into other portions of the building or play areas, on or off-site, requires a new RAO Letter.

Soils Only RAO when Ground Water Contamination remains from that Area(s) of Concern or Site

This Response Action Outcome only applies to the soils at the referenced remediation. By issuing this Response Action Outcome, I have relied on the completion of remedial activities for soil and on the ground water data to support that soil contamination is no longer affecting ground water. Please be advised that if changes in future ground water data no longer support this conclusion, additional soil remediation and possibly excavation may be necessary. Please note that there is an affirmative obligation to remediate the remaining contamination, within specific regulatory and mandatory timeframes, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq,

Known Onsite Contamination Source Not Yet Remediated

This Response Action Outcome specifically does not address the **[[Specify any known areas of concern at the site]]** contaminated with **[[Add contaminant type, i.e. lead, benzene, etc.]]**. This aspect of this site was reported to the Department and assigned the Department's Hotline incident number(s) 00-00-00-0000-00. **[[Select one: ---Name of LSRP--- is the Licensed Site Remediation Professional hired to address this/these discharge(s). OR Pursuant to the Administrative Requirements for Contaminated Sites (N.J.A.C. 7:26) [[Either list the responsible parties and copy them in the RAO OR select: you] are required to hire a licensed site remediation professional and remediate this/these discharge(s).]]** Please note that there is an affirmative obligation to remediate the remaining contamination, within specific regulatory and mandatory timeframes, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq, Please consult <http://nj.gov/dep/srp/srra/> for additional guidance.

Ground Water Contamination not yet Investigated

Ground water contamination (specifically, **[[identify contaminants]]**) has been detected at this site that has not been investigated. This aspect of the site was reported to the Department and assigned the Department's Hotline incident number 00-00-00-0000-00. Pursuant to the Technical Requirements for Site Remediation – N.J.A.C. 7:26E-4.4(a)1. a remedial investigation of ground water (including a background investigation pursuant to N.J.A.C. 7:26E-3.7(g) if an offsite source is being claimed) is required. In order to identify any onsite areas of concern that may be contributing to the noted contamination a Preliminary Assessment (PA) and Site Investigation (SI) (as applicable), pursuant to N.J.A.C. 7:26E-3 is required. **[[Select one: ---Name of LSRP--- is the Licensed Site Remediation Professional hired to address this contamination. OR Pursuant to the Administrative Requirements for Contaminated Sites (N.J.A.C. 7:26) [[Either List the responsible parties and copy them in the RAO OR select: you] are required to hire a licensed site remediation professional and investigate and possibly remediate this discharge.]]** Please note that there is an affirmative obligation to remediate the contamination, within specific regulatory and mandatory timeframes, not otherwise determined to be from an offsite source, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq, Please consult <http://nj.gov/dep/srp/srra/> for additional guidance. Be advised that ground water contamination exists above the Ground Water Quality Standards (N.J.A.C. 7:9C-1.7) which may limit ground water use at this site.

Contamination Remains On-Site due to Off-site Contamination

Please be advised that contamination in the ground water at this site exists above the Ground Water Quality Standards (N.J.A.C. 7:9C-1.7) which may limit ground water use at this site. Based on completion of a Preliminary Assessment (PA) and Site Investigation (SI) (as applicable), pursuant to N.J.A.C. 7:26E-3, and completion of a background investigation pursuant to N.J.A.C. 7:26E-3.7(g), there is no onsite contribution to this contamination and I have confirmed the source of this contamination is from offsite. This aspect of the site was reported to the Department and assigned the Department's Hotline incident number 00-00-00-0000-00. **[[Select if applicable: This ground water contamination is being addressed under Department Program Interest # _____.]]**

Order of Magnitude Change to a Remediation Standard after approval of a Remedial Action Workplan

Please be advised that this Response Action Outcome is based on the implementation and completion of the Remedial Action Workplan and any addenda in accordance with the terms of the **[[Select]]: [[date]]** Department approval **OR [[date]]** Remedial Action Workplan approved by **---Name LSRP---**, Licensed Site Remediation Professional. Subsequent to the approval of the Remedial Action Workplan, the Department changed applicable remediation standards as such, **[[list contaminants]]** exist on site above the current **[[Select as applicable: soil, groundwater or surface water]]** remediation standards. However, as the standards for these contaminants did not change by an order of magnitude, the Department does not have the authority to require any additional remediation at this time pursuant to N.J.S.A. 58:10B - (12)j.

Order of Magnitude Change to a Remediation Standard after Approval of a Final Remediation Document

Please be advised that this Response Action Outcome is being issued for a site that is subject to a No Further Action Letter issued by the **[Select\$: [date\$] Department OR [date\$] Response Action Outcome prepared by ---Name LSRP---**, Licensed Site Remediation Professional. Subsequent to the issuance of that final remediation document, the Department changed applicable remediation standards. **[\$list contaminants\$]** exist on site above the current **[\$Select as applicable: soil, groundwater or surface water\$]** remediation standards. However, these contaminant concentrations are within an order of magnitude of the current remediation standards and as a result the Department does not have the authority to require any additional remediation at this time pursuant to N.J.S.A. 58:10B – (13)e.

ISRA Specific - RCRA Situations – Bureau of Case Assignment and Initial Notice Referral

Please be advised that this Response Action Outcome does not cover the **[\$ Area(s) of Concern \$]** area regulated under the Federal Resource Conservation and Recovery Act (RCRA) and currently being addressed under a RCRA Closure Plan. The environmental impact of this area was not evaluated. This aspect of this site was reported to the Department and assigned the Department's Hotline incident number(s) 00-00-00-0000-00. **[\$Select one: ---Name of LSRP---** is the Licensed Site Remediation Professional hired to address this\these discharge(s). **OR** Pursuant to the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C) **[\$Either list the responsible parties and CC or select: you]** are required to hire a licensed site remediation professional and remediate this\these discharge(s).**[\$]** Please note that there is an affirmative obligation to remediate the contamination, within specific mandatory timeframes, associated with the RCRA Unit pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq; Please consult <http://nj.gov/dep/srp/srra/> for additional guidance.

ISRA Specific - Multi-Tenant Situations– Bureau of Case Assignment and Initial Notice Referral

Please be advised that this Response Action Outcome is for the leasehold portion of the above referenced industrial establishment only. It does not include the **[\$specify any known Area(s) of Concern \$]** located at the above referenced property which service(s) the multi-tenant facility including non-subject tenants. This aspect of this site was reported to the Department and assigned the Department's Hotline incident number(s) 00-00-00-0000-00. **[\$Select one: ---Name of LSRP---** is the Licensed Site Remediation Professional hired to address this\these discharge(s). **OR** Pursuant to the Administrative Requirements for Contaminated Sites (N.J.A.C. 7:26) **[\$Either list the responsible parties and CC or select: you]** are required to hire a licensed site remediation professional and remediate this\these discharge(s).**[\$]** Please note that there is an affirmative obligation to remediate the remaining contamination, within specific mandatory timeframes, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq. Please consult <http://nj.gov/dep/srp/srra/> for additional guidance.

ISRA Specific - Landfill situations – Bureau of Case Assignment and Initial Notice Referral

Please be advised that this Response Action Outcome does not cover or address the **[\$ Landfill name \$]** sanitary landfill and the environmental impacts of the landfill were not evaluated under this ISRA case. This aspect of this site was reported to the Department and assigned the Department's Hotline incident number(s) 00-00-00-0000-00. **[\$Select one: ---Name of LSRP---** is the Licensed Site Remediation Professional hired to address this\these discharge(s). **OR** Pursuant to the Administrative Requirements for Contaminated Sites (N.J.A.C. 7:26) **[\$Either list the responsible parties and CC or select: you]** are required to hire a licensed site remediation professional and remediate this\these discharge(s).**[\$]** Please note that there is an affirmative obligation to remediate any contamination associated with the landfill pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq and the Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq, including mandatory timeframes. Please consult <http://nj.gov/dep/srp/srra/> for additional guidance.

[\$End APPLICABLE Notices\$]

In concluding that this remediation has been completed, I am offering no opinions concerning whether either primary restoration (restoring natural resources to their pre-discharge condition) or compensatory restoration (compensating the citizens of New Jersey for the lost interim value of the natural resources) has been completed.

Pursuant to N.J.S.A. 58:10C-28, the Department may audit this Response Action Outcome and associated documentation up to three years following issuance. Based on a finding by the Department that a Response Action Outcome is not protective of public health, safety and the environment, the Department can invalidate the Response Action Outcome. In

addition, a Department audit following issuance of this document may be initiated at any time if: a) undiscovered contamination is found that should have been addressed by the Response Action Outcome, b) if the Licensed Site Remediation Professional Board conducts an investigation of the Licensed Site Remediation Professional issuing the Response Action Outcome or, c) if the license of that person is suspended or revoked.

Thank you for your attention to these matters. If you have any questions, please contact me at () .

Sincerely,

Name,
Licensed Site Remediation Professional #

Enclosure(s): Child Care Center map (including all play areas) (as applicable for Child Care Centers)

- c: Local, County Environmental Health Act Agency and Regional Health Department(s)**
- Mayor/Clerk/Town Council, City of [\$\$ City \$\$]**
- Municipal Clerk**
- Case Manager (If assigned)**
- ISRA Authorized Agent (as applicable)**
- Highlands Commission (as applicable)**
- Pinelands Commission (as applicable)**
- NJDEP Bureau of Case Assignment and Initial Notice**
- NJDEP Bureau of Enforcement and Investigations – (ACO, Remediation Agreement or Child Care Center Applicable)**
- NJDEP-Bureau of Water Systems and Well Permitting (Applicable to Well Sealing)**
- NJ Department of Children and Families (NJDCF) – Office of Licensing (Child Care Center applicable)**
- NJ Department of Health and Senior Services (NJDHSS) (Child Care Center applicable)**
- Others**

Attachment 2

Protective Ground Water Remedies with Non-decreasing Levels of Ground Water Contamination under a Natural Attenuation Remedial Action

This guidance outlines when the Department will allow a Licensed Site Remediation Professional (LSRP) to issue a Limited Restricted Use Response Action Outcome (RAO) when ground water contamination is present in low concentrations that exceed applicable remediation standards but poses no risk to human health and the environment and the person responsible for conducting the remediation is unable to demonstrate a decreasing trend in the concentration of contaminants in the ground water.

In a situation where the person responsible for conducting the remediation is unable to demonstrate a decreasing trend in the concentration of contaminants in the ground water, that person or their LSRP may vary from the requirement in the Technical Requirements for Site Remediation, N.J.A.C. 7:26E-6.7(e) requiring a decreasing trend for a natural remediation ground water remedial action, if the LSRP can demonstrate that:

- (i) no receptors are impacted or threatened (e.g., potable wells, wellhead protection areas, surface water, vapor intrusion to indoor air, utilities);
- (ii) all sources of ground water contamination have been identified and remediated (including both free product and soils exceeding the Impact to Ground Water Soil Default or a Site Specific Impact to Ground Water Criteria. This must include an evaluation of soils above and below the water table to ensure that no source of ground water contamination remains including, if applicable, evaluating and ruling out any ground water contaminant concentration correlation with ground water elevation changes;
- (iii) the site is a candidate for a natural remediation program pursuant to N.J.A.C. 7:26E-6.3(e), including sentinel well placement and delineation to the Ground Water Remediation Standards (N.J.A.C. 7:26D) according to the Department policy articulated in *SRP Newsletter*, May 2001);
- (iv) the ground water data set is representative of ground water elevation fluctuations (e.g., seasonal, tidal, water-use changes); and
- (v) the person responsible for conducting the remediation has collected a minimum of eight rounds of ground water data from key monitoring wells following source removal and has attempted to demonstrate a decreasing concentration of contaminants in the ground water.

When the above conditions are met, the ground water contaminant levels are below the criteria in Table 2, and a Ground Water Remedial Action Permit has been obtained, the LSRP may issue a Limited Restricted Use RAO.

TABLE 2: Guidance Concentrations (in parts per billion, ppb) for Ground Water Constituents. These Guidance Concentrations can be used only through a variance and these Guidance_Concentrations are not to be used as default ground water remediation standards.

Contaminant	Existing GWRS or interim criterion or MCL (in ug/l or ppb) (6)	Added Factor (10x) Demonstrated No Threat to Receptors (1)
Tetrachloroethene	1	10
Trichloroethene	1	10
Cis-1,2-dichloroethene	70	700
Vinyl chloride	1	10
1,1,1-trichloroethane	30	300
1,1-dichloroethylene	1	10
Carbon tetrachloride	1	10
Methylene chloride	3	30
Benzene	1	10
Toluene (2)	600	(1000)
Ethylbenzene (2)	700	(1000)
Xylenes (total) (2)	1000	(1000)
MTBE (3)	70	140
TBA (3)	100	200
Petroleum TICs (ind)(4)	100	1000
Petroleum TICs (total) (4)	500	5000
Arsenic (5)	3	30
Iron (5)	300	3000
Lead (5)	5	50
Mercury (5)	2	20

NOTES: Decisions to utilize these criteria are made by the LSRP on a case-by-case basis as submitted as a Variance notice from N.J.A.C. 7:26E-6.3(e)3iii. [N/A = not applicable]

- (1) All minimum criteria must apply to site and receive NJDEP approval, including:
 - (a) no receptors impacted or threatened (e.g., potable wells, surface water bodies, vapor intrusion to buildings);
 - (b) all sources of groundwater contamination are removed (including free product and soils exceeding the Impact to Ground Water Soil Default or a Site Specific Impact to Ground Water Criteria. This must include a evaluation of soils above and below the water table to ensure no source of ground water contamination remains as source including, if applicable, evaluating and ruling out any ground water contaminant concentration correlation with ground water elevation changes;
 - (c) site is candidate for a natural remediation program pursuant to *N.J.A.C. 7:26E-6.3(e)* including sentinel well placement and delineation to the *Ground Water Remediation Standards (N.J.A.C. 7:26D)* per Department policy
 - (d) data set is representative of groundwater elevation fluctuations (e. g., seasonal, tidal, water-use changes) and,
 - (e) a minimum of eight rounds of ground water data has been collected from key monitoring wells following source removal and an attempt has been made to demonstrate a decreasing trend.
- (2) Individual organic compounds are “capped” at 1,000 ppb and total organic compounds are “capped” at 10,000 ppb due to aesthetic qualities and potential vapor migration.
- (3) Due to their very high mobility and solubility, limited biodegradation and frequent releases from USTs, gasoline additives MTBE and TBA are limited to an added factor of 2 times the Ground Water Remediation Standards.
- (4) Petroleum-related Tentatively Identified Compounds (TICs) are those compounds that are demonstrated to be associated with fuel or gasoline spills that have been identified as non-carcinogenic compounds.
- (5) Inorganic constituent levels are based on analysis of unfiltered samples.
- (6) Ground Water Remediation Standards (*N.J.A.C.7:26D*) may be modified by repromulgation, NJDEP interim criterion or Safe Drinking Water Act (*N.J.A.C.7:10*) Maximum Contaminant Level (MCL). This policy can not be used for chromium.

The concentrations noted in Table 1 were developed by applying a 10 times factor to the existing groundwater remediation standard (or NJDEP-approved interim criteria or Maximum Contaminant Levels, MCLs) provided that there are no threats to human or the environment unless noted otherwise. If all of the minimum criteria (a through e) listed above are met, an added factor of 10 will be multiplied to the existing ground water remediation standard unless noted otherwise or excluding chromium.

Ground water Classification Exception Areas (CEAs) established or revised pursuant to this guidance requires a CEA duration estimate and a Remediation Permit to monitor progress in achieving compliance with the Ground Water Remediation Standards.

Attachment 3

Extent of Remediation	RAO Type
A SI (based on a PA if needed) for an entire site or area of concern show no discharged contaminants	Unrestricted use RAO for the Entire Site or Area(s) of Concern; as applicable.
PA, SI, RI and/or RA conducted at the entire site or Area(s) of Concern and all discharged contaminants are remediated to below, or otherwise in compliance with, unrestricted use soil remediation standards and default impact to ground water screening levels or impact to ground water site specific remediation standard and ground water remediation standards	Unrestricted use RAO for the Entire Site or Area(s) of Concern, as applicable.
PA, SI, RI and/or RA conducted at the entire Site or Area(s) of Concern. Soils remediated to below the most stringent remediation standards. GW contamination above standards but decreasing GW concentrations (i.e., passes Mann-Whitney test).	Limited Restricted Use RAO for the Entire Site or Area(s) of Concern, as applicable.
PA, SI, RI and/or RA conducted at the entire Site or Area(s) of Concern. Soil contaminants remain above non-residential soil remediation standards under a cap. No GW contamination.	Restricted Use RAO for the Entire Site or Area(s) of Concern, as applicable.
PA, SI, RI and/or RA conducted at the entire Site or Area(s) of Concern. Soil contaminants remain above residential soil remediation standards at a commercial/non-residential property but not above non-residential soil remediation standards. No cap proposed. No GW contamination.	Limited Restricted Use RAO for the Entire Site or Area(s) of Concern, as applicable.
PA, SI, RI and/or RA conducted at the Site or Area(s) of Concern. Soil contaminants remain above non-residential soil remediation standards under a cap (soils allowed to remain do not impact GW). GW contamination above standards but decreasing GW concentrations (i.e., passes Mann-Whitney).	Restricted Use RAO for the Entire Site or Area(s) of Concern, as applicable.
Remediation is for an Area of Concern only or Person Responsible for Conducting the Remediation requested a RAO for an Area of Concern ahead of completing remediation at the entire site based on a full site PA\SI or other Areas of Concern	RAO for AOC only. Could be restricted use, unrestricted use or limited restricted use RAO depending on extent of remediation
Soils Only RAO is requested in order to allow onsite construction to proceed ahead of completion of GW remediation. This insert, for example, can also be used if other offsite impacts to surface water, sediments, etc. will take longer to remediate and issuing the "soils-only" RAO will assist with onsite development.	RAO issued using the "soils only" insert
RAO requested for post-RAO removal of a CEA or Deed Notice	RAO issued based on the scope of original RAO (i.e. If original NFA or RAO was for 1- 5000 g gasoline UST, the RAO removing the institutional control would be for the same 1-5000 g gasoline UST only) If all institutional/engineering controls are no longer needed, the RAO would now be for "unrestricted use".