



New Jersey Department of Environmental Protection
Site Remediation Program
PRESUMPTIVE REMEDY GUIDANCE

Pursuant to Section 47g of P.L. 2009 c.60 which amends the Brownfields Act (C.58:10B-12) (See <http://www.nj.gov/dep/srp/regs/statutes/srra.pdf>), the Department of Environmental Protection (Department) is required to establish presumptive remedies for any remediation initiated after May 7, 2010 at a site or area of concern where new construction is proposed for residential purposes, for use as a licensed child care center or as a public school, private school, or charter school, or where there will be a change in the use of the site to residential, child care, or public school, private school, or charter school purposes or another purpose that involves use by a sensitive population.

It is necessary that all remedial actions conducted at these facilities are either unrestricted use remedies, restricted use remedies listed in the attached table or an alternate remedy that is pre-approved by the Department. All other facilities are not required to use a presumptive remedy but can choose to use one at their own discretion.

The following requirements apply to all presumptive remedies at all schools, child care centers and residential properties:

- Free and/or residual product must be removed and/or treated in accordance with N.J.A.C.7:26E.
- With the exception of historic fill contamination, it is necessary to address the impact to ground water and surface water pathways pursuant to N.J.A.C. 7:26E.
- All backfill/fill material must be sampled at a frequency to be determined by the Department in the guidance document, to ensure compliance with the most stringent soil remediation standards.
- Contaminated soils that exceeds acute exposure soil levels must be removed and/or treated to a depth of 10 feet.
- For new construction, installation of a vapor barrier as wells as a passive subslab depressurization system that can be converted, if necessary, to an active system pursuant to the Department's Vapor Intrusion Guidance (See <http://www.nj.gov/dep/srp/guidance/vaporintrusion/vig.htm>).

The attached table provides preliminary guidance on the requirements of each presumptive remedy. A more detailed guidance document is being drafted and will be posted as soon as it has been completed. The guidance document will provide detailed requirements for each presumptive remedy as well as the Department's rationale for each remedy, which could then be used when proposing an alternate remedy.

(DRAFT) Presumptive Remedies for Soils at: Schools, Child Care Centers, and Residences

The deadline to submit comments on the Presumptive Remedies Table is Friday, August 28, 2009.

This table applies to new construction and change in use to schools, child care centers and residences.

This table is intended to be used in conjunction with a Presumptive Remedy Guidance document (currently in preparation) and the Technical Requirements for Site Remediation (N.J.A.C. 7:26E)

Criteria below apply to ALL sites to be used as a school, child care center, or residence:

- a. Free and/or residual product must be removed and/or treated in accordance with N.J.A.C. 7:26E.
- b. With the exception of historic fill contamination, it is necessary to address the impact to ground water and surface water pathways pursuant to N.J.A.C. 7:26E.
- c. All backfill/fill material must meet the most stringent soil remediation standards.
- d. Contamination that exceeds acute exposure soil levels (currently in preparation) must be removed and/or treated to a depth of 10 feet.
- e. All actions must comply with all federal, state (NJ Department of Children & Families, NJ Department of Health & Senior Services, and NJ Department of Community Affairs, etc.) and local requirements.

Criterion below applies to sites undergoing NEW CONSTRUCTION at a school, child care center or residence:

- a. Site must include installation of a vapor barrier as well as a passive subslab depressurization system that can be converted, if necessary, to an active system pursuant to the NJDEP Vapor Intrusion Guidance document.

	Contamination type	Subcategories/Scenarios	Presumptive Remedy/ Remediation Goal	Remedial Action-Schools	Remedial Action - Child Care Centers	Remedial Action - Residential (single family and fee simple ownership)	Remedial Action - Residential (apartment buildings)
1	Discrete Area Discharge	Discharge/Spill area where contamination does not exceed 8000 cubic feet in volume.	Unrestricted Use	Remove and/or treat contamination to unrestricted levels.	Remove and/or treat contamination to unrestricted levels.	Remove and/or treat contamination to unrestricted levels.	Remove and/or treat contamination to unrestricted levels.
2	Pesticide Storage & Mixing Areas		Unrestricted Use	Remove to unrestricted levels	Remove to unrestricted levels	Remove to unrestricted levels	Remove to unrestricted levels
3	Historic Fill	a) End use of a Play Area					
		1. Proposed Surface of Loose Fill (mulch, sand, wood chips, bark)	Restricted Use	Option #1. Minimum of 2 feet soil (18 inches fill & 6 inches topsoil) with GeoTextile Membrane or Option #2. Minimum of 4 feet of fill with visible contamination boundary marker.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		2. Proposed Surface of Unitary Material (prefabricated surfaces)					
		i. Porous Material (Tile, Rubber Matting)	Restricted Use	Option #1. Prefabricated material on top of crushed stone minimum 12 inches base with GeoTextile Membrane or Option #2. Prefabricated material on top of minimum 6 inches of concrete or asphalt	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		ii. Non-Porous Material (Turf)	Restricted Use	Turf surface and shock pad on top of crushed stone with a minimum of 12 inches base with GeoTextile Membrane	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		3. Proposed Surface of All Other Unpaved Playing Surfaces		Option #1. Minimum of 2 feet soil (18 inches fill & 6 inches topsoil) with GeoTextile Membrane or Option #2. Minimum of 4 feet of fill with visible contamination boundary marker.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		b) Driveways, Walkways, Parking	Restricted Use	Minimum of 4 inches of concrete or minimum of asphalt with 6 inches of sub base. Both require a visible contamination boundary marker.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools

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	Contamination type	Subcategories/Scenarios	Presumptive Remedy/ Remediation Goal	Remedial Action-Schools	Remedial Action - Child Care Centers	Remedial Action - Residential (single family and fee simple ownership)	Remedial Action - Residential (apartment buildings)
3	Historic Fill (cont.)	c) Construction of new building foundations	Restricted Use	Option #1. For instances without pile cap construction a minimum of 6 inches of concrete with 6 inches of sub base (may include recycled concrete) with visible contamination boundary marker; or Option #2. For instances with pile cap construction a minimum of 6 inches of concrete with visible contamination boundary marker.	Same capping requirement as schools	Option #1. 2 feet of fill with a visible boundary marker or Option #2. GeoTextile Membrane in addition to the requirements for schools.	Same capping requirement as residential for all buildings with a basement or constructed as slab on grade. Same requirements as schools for all other buildings.
		d) Lawn Areas (Vegetative Cover)	Restricted Use	Minimum of 12 inches of material such as soil, stone, or mulch with a visible contamination boundary marker and a vegetative cover.	Same capping requirement as schools	Option #1. Minimum of 2 feet of material, which consists of 18 inches of fill and 6 inches of topsoil with GeoTextile Membrane and a vegetative cover or Option #2. 4 feet of fill with visible contamination boundary marker and a vegetative cover.	Same capping requirement as residential.
		e) Landscaped Areas	Restricted Use	Excavation for trees and shrubs require fill and a visible contamination barrier based on mature root ball size.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		f) Maintenance areas or other areas restricted to workers	Restricted Use	Minimum of 1 foot of any stable material with visible contamination boundary marker.	Same capping requirement as schools	Not Applicable	Same capping requirement as schools
		g) Underground utilities:	Restricted Use	Piping & conduits placed in trenches require a minimum of a visible contamination boundary marker and at least 6 inches of backfill below piping, and appropriate top cap.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
		h) All other Areas	Restricted Use	Option #1. Minimum of 2 feet soil (18 inches fill & 6 inches topsoil) with GeoTextile Membrane or Option #2. Minimum of 4 feet of fill with visible contamination boundary marker.	Same capping requirement as schools	Same capping requirement as schools	Same capping requirement as schools
4	Landfills	For Landfills with Engineering Controls (gas or leachate controls)	Restricted Use	Prohibited	Prohibited	Prohibited	It is necessary to submit a Remedial Action Work Plan for the Department's approval
5	Landfills	For Landfills without Engineering Controls (gas or leachate controls)	Restricted Use	It is necessary to submit a Remedial Action Work Plan for the Department's approval	It is necessary to submit a Remedial Action Work Plan for the Department's approval	It is necessary to submit a Remedial Action Work Plan for the Department's approval	It is necessary to submit a Remedial Action Work Plan for the Department's approval
6	Immobile chemicals NOTE: Does NOT apply to Chromium, PCBs, or Coal Tar Sites	Widespread/non-discrete contamination	Restricted use	Same capping requirement as Historic Fill.	Same capping requirement as Historic Fill.	Same capping requirement as Historic Fill.	Same capping requirement as Historic Fill.
7	Mobile Chemicals		Unrestricted Use	Remove and/or treat contamination to unrestricted levels. Refer to Vapor Intrusion Chemicals, line 8 of this chart, if VOC/VI trigger exists.	Same requirement as schools	Same requirement as schools	Same requirement as schools
8	Vapor Intrusion Chemicals		Unrestricted use	a) Remove and/or treat all soil sources that cause ground water contamination above the VI GW screening levels where VI pathway is complete and ground water is sole source for VI, and	Same requirement as schools	Same requirement as schools	Same requirement as schools

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	Contamination type	Subcategories/Scenarios	Presumptive Remedy/ Remediation Goal	Remedial Action-Schools	Remedial Action - Child Care Centers	Remedial Action - Residential (single family and fee simple ownership)	Remedial Action - Residential (apartment buildings)
			Restricted Use	depressurization system in new and/or existing buildings where VI pathway is complete per the Vapor Intrusion Guidance document.	Same requirement as schools	Same requirement as schools	Same requirement as schools
9	Hexavalent Chromium		Unrestricted and/or Restricted	February 8, 2007 Memorandum from DEP Commissioner Jackson	February 8, 2007 Memorandum from DEP Commissioner Jackson	February 8, 2007 Memorandum from DEP Commissioner Jackson	February 8, 2007 Memorandum from DEP Commissioner Jackson
10	Dioxin		Unrestricted Use	Remove and/or treat to NJDEP soil action level	Remove and/or treat to NJDEP soil action level	Remove and/or treat to NJDEP soil action level	Remove and/or treat to NJDEP soil action level
11	PCBs	Discrete areas (8000 cubic feet)	Unrestricted use	Remove and/or treat to unrestricted levels	Remove and/or treat to unrestricted levels	Remove and/or treat to unrestricted levels	Remove and/or treat to unrestricted levels
		PCBs widespread or >10ft deep	Restricted use	a) Remove and/or treat all PCB contamination greater than 10 ppm.	Same requirement as schools	Remove and/or treat to unrestricted levels	Same requirement as schools
			Restricted Use	b) Contamination greater than 0.2 ppm and less than or equal to 10 ppm requires minimum of 2 feet fill; 18 inches compacted material and 6 inches asphalt or concrete with visible contamination boundary marker.	Same capping requirement as schools	Remove and/or treat to unrestricted levels	Same requirement as schools

This table applies to new construction and change in use to schools, child care centers and residences.

This table is intended to be used in conjunction with a Recommended Remedy Guidance document (currently in preparation)

NOTE: NJDEP does not have authority to require remediation.

	Contamination type	Subcategories/Scenarios	Presumptive Remedy/ Remediation Goal	Remedial Action-Schools	Remedial Action - Child Care Centers	Remedial Action - Residential (single family and fee simple ownership)	Remedial Action - Residential (apartment buildings)
1	Historic Pesticide Farm/Agricultural Areas	Widespread/non-discrete contamination	Unrestricted Use	Soil Blending allowed only when: 1. surficial contamination exists (top 2 feet) and 2. contamination is not > 5x the soil cleanup standard	Same recommendations as schools	Same recommendations as schools	Same recommendations as schools
			Restricted Use	Consolidation of contaminated soil placed a minimum of 5 feet above seasonally high water table; same capping requirements as Historic Fill in Presumptive Remedy Table.	Same capping recommendations as schools	Same capping recommendations as schools	Same capping recommendations as schools
2	Munitions and Explosives of Concern (MEC)		Restricted Use	The Department does not recommend building on MEC sites for schools, child care centers and/or residences. Any of these uses on MEC sites should be under the direction of a munitions expert.	Same recommendations as schools	Same recommendations as schools	Same recommendations as schools
3	Arsenic derived from Geologic Formations (determined by Background Investigation N.J.A.C. 7:26E-3.10)	Widespread/non-discrete contamination	Minimize Exposure	Minimize direct contact exposure. Notify the municipal health department.	Same recommendations as schools	Same recommendations as schools	Same recommendations as schools