The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environmental Preservation and Conservation

BILL:	SB 92
INTRODUCER:	Senator Evers
SUBJECT:	Contaminated Sites
DATE:	October 5, 2015
REVISED:	

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Hinton	Rogers	EP	**Pre-meeting**
2.			AGG	
3.			AP	

I. Summary:

SB 92 provides clarifying language and allows for additional considerations in the use of risk-based corrective action (RBCA) in contamination cleanup and brownfield site rehabilitation. It authorizes the Department of Environmental Preservation (DEP) to use alternative cleanup target levels without requiring institutional controls in remediating contaminated sites.

The bill defines "long-term natural attenuation" as "natural attenuation approved by the DEP as a site rehabilitation program task for a period of more than five years" The DEP will be required to include rules using long-term natural attenuation as a technique for site rehabilitation.

The bill creates a definition for "background concentration" that includes natural and other manmade impacts unrelated to the discharge of pollutants at a contaminated site. DEP is prohibited from requiring cleanup target levels that are more stringent than the site-specific background concentration.

II. Present Situation:

Risk-Based Corrective Action

Risk-based corrective action (RBCA) (pronounced "Rebecca") is a decision-making process used to assess and respond to incidents of contamination. The American Society of Materials and Testing established RBCA in 1994 based on guidance from the U.S. Environmental Protection Agency (EPA), which directs states to consider the current and prospective use of groundwater and the relative risk to human health and the environment when remediating contaminated sites.[1]

[1] EPA, Use of Risk-Based Decision-Making in UST Corrective Action Programs, OSWER Directive 9610.17 1 (1995) http://www2.epa.gov/risk/human-health-risk-assessment (last visited Oct 1, 2015).

The RBCA process uses a tiered approach that couples site assessment and response actions with human health, public safety, and environmental risk assessment to determine the extent and urgency of corrective action used in remediating contaminated sites. Alternative cleanup target levels,[2] institutional[3] and engineering controls,[4] and remediation by natural attenuation[5] are RBCA strategies used by the DEP on a case-by-case basis that allows the use of cost-effective remediation measures in lieu of conventional cleanup technologies. RBCA is implemented in all 50 states for the remediation of contaminated sites.[6]

Section 376.30701, F.S., was created in 2003 to apply RBCA principles to all contaminated sites (referred to as "Global RBCA") resulting from a discharge of pollutants when site rehabilitation is required.[7] The DEP is required to develop a site rehabilitation program by rule that use RBCA concepts already developed for the petroleum cleanup, brownfield, and dry cleaning programs. Specifically, the law requires the DEP to:

- Consider current exposure and potential risk of exposure to humans and the environment;
- Establish the point of compliance at the source of the contamination;
- Ensure that site-specific cleanup goals are that all contaminated sites being cleaned ultimately achieve the applicable cleanup target levels;
- Allow the use of institutional or engineering controls at contaminated sites;
- Consider the additive effects of contaminants, including synergistic and antagonistic effects;
- Provide for the DEP to issue a "No Further Action" order;
- Establish appropriate cleanup target levels for soils;
- Allow for alternative cleanup target levels in conjunction with institutional and engineering controls; and
- Consider the additive effects of contaminants.

The DEP adopted Florida Administrative Code Rule 62-780, in 2005 to implement these provisions and provide the procedures necessary to implement site rehabilitation for all sites using RBCA criteria. RBCA criteria are administered in conjunction with Florida Administrative Code Rule 62-777, which provides the default groundwater, surface water, and soil cleanup target levels, as well as the natural attenuation default concentrations for groundwater, in order to determine the appropriate cleanup target levels for a contaminated site.

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[2] Section 376.301(7), F.S., defines "cleanup target level" as "the concentration for each contaminant identified by an applicable analytical test method, in the medium of concern, at which a site rehabilitation program is deemed complete."
[3] Section 376.301(21), F.S., defines "institutional control" as "the restriction on use or access to a site to eliminate or minimize exposure to petroleum products' chemicals of concern, dry cleaning solvents, or other contaminants. Such restrictions may include, but are not limited to, deed restrictions, restrictive covenants, or conservation easements."
[4] Section 376.301(16), F.S., defines "engineering controls" as "modifications to a site to reduce or eliminate the potential for exposure to petroleum products' chemicals of concern, dry cleaning solvents, or other contaminants. Such modifications may include, but are not limited to, physical or hydraulic control measures, capping, point of use treatments, or slurry walls."
[5] Section 376.301(24), F.S., defines "natural attenuation" as a "verifiable approach to site rehabilitation that allows natural processes to contain the spread of contamination and reduce the concentrations of contaminants in contaminated groundwater and soil. Natural attenuation processes may include the following: sorption, biodegradation, chemical reactions with subsurface materials, diffusion, dispersion, and volatilization."
[6] EPA, *supra* note 1, at 2-3.
[7] Ch. 2003-173, s. 1, Laws of Fla.

No Further Action

RBCA principles provide a three-tiered approach to close contaminated sites and issue a No Further Action (NFA) order. The first tier is the Risk Management Option Level I, which grants an NFA without institutional controls or engineering controls if the following conditions are met:

- Free product is not present and there is no risk of fire or explosion;
- Contaminated soil is not present in the unsaturated zone;
- Contaminated groundwater is not present;
- Contaminated surface water is not present; and
- Soil data indicates the contaminants do not exceed the default cleanup target levels or background concentrations.[8]

The second tier is the Risk Management Option Level II, which grants an NFA with institutional controls and engineering controls, if appropriate, if the controls are protective of human health, public safety, and the environment and agreed to by the property owner and:

- Free product is not present or free product removal is not feasible and there is no risk of fire or explosion;
- Alternative soil cleanup target levels have been established by the person responsible for the site rehabilitation and certain criteria are met for soil in the unsaturated zone; and
- Alternative groundwater cleanup target levels have been established by the person responsible for the site rehabilitation depending on current and projects use of groundwater near the site and certain criteria are met.[9]

The third tier is the Risk Management Option Level III, which grants an NFA with institutional controls and engineering controls if the controls are protective of human health, public safety, and the environment and agreed to by the property owner and:

- Free product is not present or free product removal is not feasible and there is no risk of fire or explosion;
- Alternative soil contamination levels have been established by the person responsible for the site rehabilitation and certain criteria are met for soil in the unsaturated zone; and
- Alternative groundwater contamination levels have been established by the person responsible for the site rehabilitation depending on the current and projected use of groundwater near the site and certain criteria are met.[10]

Alternative Cleanup Target Levels

Section 376.30701(2)(g)3., F.S., authorizes The DEP is authorized to approve alternative cleanup target levels in conjunction with institutional and engineering controls. Alternative cleanup target levels are established using site specific data, modeling results, risk assessment studies, toxicity assessments, exposure assessments, and any other relevant public health information. The DEP may approve alternative cleanup target levels once the responsible party has demonstrated that human health, public safety, and the environment are protected based on these factors. The law

[8] Fla. Admin. Code R. 62-780.680(1), (2014).
[9] Fla. Admin. Code R. 62-780.680(2), (2014).
[10] Fla. Admin. Codes R. 62-780.680(3) (2014) *See also* EPA, Human Health Risk Assessment (2015), http://www2.epa.gov/risk/human-health-risk-assessment (last visited Mar. 27, 2015).

specifies that alternative cleanup target levels may only be established on a site specific basis under careful evaluation by the DEP. [11]

Natural Attenuation

Florida Administrative Code Rule 62-780.690 provides for natural attenuation depending on the individual site characteristics if human health, public safety, and the environment are protected. "Natural attenuation" is defined as, "a verifiable approach to site rehabilitation that allows natural processes to contain the spread of contamination and reduce the concentrations of contaminants in contaminated groundwater and soil. Natural attenuation processes may include the following: sorption, biodegradation, chemical reactions with subsurface materials, diffusion, dispersion, and volatilization."[12] The criteria to allow for natural attenuation monitoring are:

- Free product is not present or free product removal is not technology feasible and there is no risk of fire or explosion;
- Contaminated soil is not present in the unsaturated zone;
- Contaminants present in the groundwater above background concentrations or applicable cleanup target levels are not migrating beyond the temporary compliance point or vertically;
- The physical, chemical, and biological characteristics of each contaminant and its transformation product are conducive to natural attenuation;
- The available data shows an overall decrease in contamination; and
- One of the following are met:
  - The site is expected to achieve NFA criteria in five years or less, background concentrations or the applicable cleanup target levels are not exceeded at the temporary point of compliance, and contamination concentrations do no exceed certain criteria;[13] or
  - Appropriateness of natural attenuation is demonstrated by:
    - A technical evaluation of groundwater and soil characteristics that confirms the contaminants have the capacity to degrade under site-specific conditions;
    - A scientific evaluation of the plume migration, the estimate of the annual reduction in contaminant concentrations in monitoring wells, and an estimate of the time required to achieve NFA status; and
    - A life-cycle cost analysis of remedial alternatives.

The Brownfields Redevelopment Act

The term "brownfield" was originally coined in the 1970s and referred to any previously developed property, regardless of any contamination issues. The term as it is currently used is defined by the U.S. Environmental Protection Agency (EPA) as, "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."[14] In 1995, the EPA created the Brownfields Program in order to manage contaminated property through site remediation and redevelopment. The program was designed to provide local communities access to federal funds allocated for

[11] Section 376.30701(2)(g)3., F.S.
[12] Section 376.301(24), F.S.
[13] Fla. Admin. Codes R. 62-777
[14] Robert A. Jones and William F. Welsh, Michigan Brownfield Redevelopment Innovation: Two Decades of Success 2 (Sept. 2010), *available at* http://www.miseagrant.umich.edu/downloads/focus/brownfields/10-201-EMU-Final-Report.pdf (last visited Oct. 1, 2015).

redevelopment, including environmental assessments and cleanups, environmental health studies, and environmental training programs.[15]

In 1997, the Florida Legislature enacted the Brownfields Redevelopment Act (Act).[16] The Act provides financial and regulatory incentives to encourage voluntary remediation and redevelopment of brownfield sites in order to improve public health and reduce environmental hazards.[17] The Act provides liability protection for program participants who have not caused or contributed to the contamination of a brownfield site on or after July 1, 1997.[18]

III. Effect of Proposed Changes:

Sections 1 and 3 amend ss. 376.301 and 376.79, F.S., related to contaminated sites and the Brownfield Program, respectively, to define "background concentration" as "the concentration of contaminants naturally occurring or resulting from the anthropogenic [(manmade)] impacts unrelated to the discharge of pollutants or hazardous substances at a contaminated site undergoing site rehabilitation." DEP may not require site rehabilitation to achieve a cleanup level that is more stringent than the site-specific background concentration for that contaminant.

The bill defines "long-term natural attenuation" as "natural attenuation approved by the DEP as a site rehabilitation program task for a period of more than five years." In current law, "natural attenuation" means a "verifiable approach to site rehabilitation that allows natural processes to contain the spread of contamination and reduce the concentrations of contaminants in contaminated groundwater and soil. . ."[19] The DEP will be required to adopt rules that include using long-term natural attenuation as a technique for site rehabilitation.

Sections 2 and 4 amend ss. 376.30701 and 376.81 F.S., related to contaminated sites and the Brownfield Program, respectively, to require the DEP to establish rules for the use of long-term natural attenuation.

The bill directs the DEP to consider interactive, rather than additive effects of contaminants, and clarifies that additive, synergistic, and antagonistic effects should be considered equally when determining what constitutes a rehabilitation program task or completion of a site rehabilitation program task or site rehabilitation program.

The bill allows the DEP to establish alternative cleanup target levels based the site-specific background concentration for a particular contaminant.

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[15] The Florida Brownfields Association, Brownfields 101 2, *available at* http://c.ymcdn.com/sites/www.floridabrownfields.org/resource/resmgr/imported/Brownfields101.pdf (last visited Oct. 1, 2015).
[16] Ch. 97-173, s. 1, Laws of Fla.
[17] DEP, Florida Brownfields Redevelopment Act-1998 Annual Report 1 (1998), *available at* http://www.dep.state.fl.us/waste/quick_topics/publications/wc/brownfields/leginfo/1998/98final.pdf (last visited Oct. 1, 2015).
[18] Section 376.82, F.S.
[19] Sections 376.301(24) and 376.79(12), F.S.

The DEP is required to base cleanup target levels for contaminants on the more protective of the groundwater or surface water standards, as established by rule. The bill exempts cleanup target levels from being based on these standards if it is shown that the contaminants do not cause or contribute to the exceedance of applicable surface water quality criteria.

In establishing alternative cleanup target levels for soil and groundwater, any relevant data and information, risk assessment modeling results, and results from probabilistic risk assessment modeling may be used. Probabilistic risk assessment is a risk assessment that yields a probability distribution for risk, generally by assigning a probability distribution to represent variability or uncertainty in one or more inputs to the risk equation.[20] The bill allows the DEP to consider alternative cleanup target levels based on comprehensive assessments and information.

Section 2 also amends s. 376.30701(2)(g)3., F.S., to allow the use of alternative cleanup target levels that do not require institutional controls if:

- The only cleanup target levels exceeded are the groundwater cleanup target levels derived from nuisance, organoleptic (meaning something that a person can sense, e.g., smell, taste, see), or aesthetic factors;
- Concentrations of all contaminants meet state water quality standards or minimum criteria, based on the protection of human health, public safety, and the environment;
- All of the established groundwater cleanup target levels are met at the property boundary;
- The responsible party has demonstrated that the contaminants will not migrate beyond the property boundary at concentrations that exceed the groundwater cleanup target levels established as state water quality standards;
- The property has access to and is using an offsite water supply, and an unplugged private well is not used for domestic purposes; and
- The property owner does not object to the NFA proposal submitted to the DEP or to the local pollution control program.

Sections 5, 6, and 7 amend ss. 196.1995, 287.0595, and 288.1175, F.S., respectively, to correct cross references related to the DEP's Brownfields program.

Section 8 provides an effective date of July 1, 2016.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

[20] EPA, Risk Assessment Guidance for Superfund (RAGS) Volume III - Part A: Process for Conducting Probabilistic Risk Assessment at 1-3 (December 2001), *available at* http://www.epa.gov/oswer/riskassessment/rags3adt/ (last visited Oct. 4, 2015).

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

SB 92 provides an indeterminate positive fiscal impact to those financially responsible for the cleanup of contaminated site and brownfields.

C. Government Sector Impact:

The DEP will incur nominal, non-recurring costs associated with rulemaking to amend Florida Administrative Code Rule 62-780.

VI. Technical Deficiencies:

None.

VII. Related Issues:

As noted by the DEP, except for some of the proposed definition changes in section 1 of the bill that are more broadly applicable, the proposed changes apply primarily to waste cleanup sites and brownfield cleanup sites. The proposed changes would not modify similar wording for petroleum discharges and dry cleaning facilities. The DEP recommends that proposed changes also be applied to other RBCA programs.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 376.301, 376.30701, 376.79, and 376.81.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.