

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: CS/SB 1302

INTRODUCER: Environmental Preservation and Conservation Committee and Senator Evers

SUBJECT: Contaminated Sites

DATE: April 2, 2015

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Gudeman	Uchino	EP	Fav/CS
2.			AGG	
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1302 amends ss. 376.301, F.S. and 376.79, F.S., to provide definitions for “background concentration” and “long-term natural attenuation.” The bill amends ss. 376.30701 and 376.81, F.S., to provide clarifying language and allow for additional considerations in the use of risk-based corrective action (RBCA) (pronounced “Rebecca”) 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 under s. 376.30701, F.S. The bill also makes conforming changes to correct cross references related to RBCA.

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 (1995), <http://epa.gov/swerust1/directiv/od961017.htm> (last visited Mar. 27, 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 institutional³ and engineering controls,⁴ and remediation by natural attenuation⁵ are RBCA strategies used on a case-by-case basis that allow 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

RBCA principles were officially introduced in Florida in 1995 by the Florida Petroleum Efficiency Task Force that recommended them to remediate contaminated petroleum sites. Section 376.3071(5)(b), F.S., was created in 1996 and specifies that the DEP must incorporate RBCA principles to achieve protection of the public health, safety, and welfare, water resources, and the environment in a cost-effective manner. The use of RBCA was later expanded to the state's dry cleaning site remediation program under s. 376.3078, F.S., and the brownfields program under s. 376.81, F.S.

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 pursuant to chs. 376 and 403, F.S. The law requires the DEP to develop a site rehabilitation program by rule that uses RBCA concepts already developed for the petroleum cleanup, brownfield, and dry cleaning programs. Specifically, the law requires the DEP to establish:

- Cleanup target levels in soil and groundwater using the one in one million cancer risk for carcinogenic constituents;
- Cleanup target levels for groundwater, surface water, and soil using a hazard index of one for non-carcinogenic constituents;
- Cleanup target levels for groundwater based on nuisance, taste, sight, smell, and aesthetic considerations; and
- Alternative cleanup target levels in conjunction with institutional and engineering controls.

The law also requires the DEP to consider:

- Relocating a compliance point away from the contamination source area to the edge of the plume or property boundary to allow for natural attenuation;

² Section 37.301(7), F.S., defines "cleanup target levels" 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 *Supra* note 1.

- The additive,⁷ synergistic,⁸ and antagonistic⁹ effects of contaminants;
- The current and projected land use of the site;
- The current and projected use of groundwater and surface water
- The exposed population; and
- The rate of plume migration.

The DEP adopted Rule 62-780, F.A.C., in 2005, to implement these provisions and provide the procedures necessary to implement site rehabilitation for all sites using RBCA criteria. Rule 62-780.150, F.A.C., specifies the rule must be administered in conjunction with Rule 62-777, F.A.C., 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.

No Further Action

Rule 62-780.680, F.A.C., implements RBCA principles to 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 or free product removal is not feasible and there is no risk of fire or explosion;
- Contaminated soil is not present in the unsaturated zone; and
- Soil data indicates the contaminants do not exceed the default cleanup target levels or background concentrations.¹⁰

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 cleanup target levels have been approved by the DEP; and
- Soil data indicates the contaminant concentrations do not exceed the alternative cleanup target levels.¹¹

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; or

⁷ Section 376.301(2), F.S., defines “additive effects” as “a scientific principle that the toxicity that occurs as a result of exposure is the sum of the toxicities of the individual chemicals to which the individual is exposed.”

⁸ Section 376.301(44), F.S., defines “synergistic effects” as “a scientific principle that the toxicity that occurs as a result of exposure is more than the sum of the toxicities of the individual chemicals to which the individual is exposed.”

⁹ Section 376.301(3), F.S., defines “antagonistic effects” as “a scientific principle that the toxicity that occurs as a result of exposure is less than the sum of the toxicities of the individual chemicals to which the individual is exposed.”

¹⁰ Fla. Admin. Code R. 62-780.680(1), (2013).

¹¹ Fla. Admin. Code R. 62-780.680(2), (2013).

- Soil data indicates the contaminant concentrations do not exceed alternative cleanup target levels, which are established using the Human Health Risk Assessment and are based on exposure, toxicity, and other relevant public health information.¹²

Alternative Cleanup Target Levels

Section 376.30701(2)(g)3., F.S., authorizes the DEP 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.¹³ 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 specifies that alternative cleanup target levels may only be established on a site specific basis under careful evaluation by the DEP.

Natural Attenuation

Rule 62-780.690, F.A.C., allows 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.”¹⁴ The criteria to allow for natural attenuation monitoring are:

- Free product is not present or free product removal is not 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 not exceed the criteria in Rule 62-777, F.A.C.; 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; and
 - 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.

¹² Fla. Admin. Codes Rs. 62-780.680(3) (2013) and 62-780.650 (2013). See also EPA, *Human Health Risk Assessment*, http://www.epa.gov/risk_assessment/health-risk.htm (last visited Mar. 27, 2015).

¹³ Fla. Admin. Codes R. 62-780.650 (2013).

¹⁴ Section 376.301(24), F.S.

The Brownfields Redevelopment Act

The term “brownfield” came into existence in the 1970s and originally referred to any previously developed property, regardless of any contamination issues. The term, as it is currently used, originated in 1992 during a U.S. Congressional field hearing and 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.”¹⁵ 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 redevelopment, including environmental assessments and cleanups, environmental health studies, and environmental training programs.¹⁶

In 1997, the Florida Legislature enacted the Brownfields Redevelopment Act (Act).¹⁷ 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.¹⁸ 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. Since the inception of the program in 1997, 64 contaminated sites have been cleaned and 362 sites have been designated brownfield area.¹⁹

III. Effect of Proposed Changes:

Sections 1 and 3 amend ss. 376.301 and 376.79, F.S., respectively, to define “background concentration” as “the concentration of contaminants naturally occurring or resulting from the anthropogenic impacts unrelated to the discharge of pollutants or hazardous substances at a contaminated site undergoing site rehabilitation .” This allows the DEP to consider anthropogenic contamination that is not associated with the discharge that is being remediated and may lead to an alternative cleanup target levels.

It also defines “long-term natural attenuation” as “natural attenuation approved by the [DEP] as a site rehabilitation program task for a period of more than 5 years.”

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, which will allow contaminated sites that are currently in natural attenuation to remain in natural attenuation longer than five years.

¹⁵ 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 Apr. 1, 2015).

¹⁶The Florida Brownfields Association, *Brownfields 101, 2*, available at <http://c.yimcdn.com/sites/www.floridabrownfields.org/resource/resmgr/imported/Brownfields101.pdf> (last visited Apr. 1, 2015).

¹⁷ Chapter 376.77, F.S.

¹⁸ 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 Apr. 1, 2015).

¹⁹ *Supra* note 16.

The bill adds the term “interactive” and rearranges the terms additive, synergistic, and antagonistic effects to clarify that these effects should all be considered equally. Recent toxicological studies reveal a better understanding of synergistic and antagonistic effects; therefore, these terms may now be considered equal to additive effects.

The bill allows the DEP to establish alternative cleanup target levels based on anthropogenic concentrations for contamination and clarifies that the use of anthropogenic background concentrations is appropriate.

The bill revises the cleanup target levels for surface water that is exposed to contaminated groundwater. It allows the cleanup target levels to be based on the groundwater standard when it is demonstrated the groundwater contaminants did not cause water quality exceedances in surface water.

The bill 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 is the groundwater cleanup target levels derived from nuisance, taste, smell, sight 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 groundwater cleanup target levels established as state water quality standards 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.

In establishing an alternative cleanup target levels for soil and groundwater in ss. 376.30701 and 376.81, F.S, the bill specifies that any relevant data and information, risk assessment modeling results, and results from probabilistic risk assessment modeling may be used. The bill allows the DEP to consider an alternative cleanup target levels based on comprehensive assessments and information.

Sections 5 and 6 amend ss. 196.1995 and 288.1175, F.S., respectively, to correct cross references related to the DEP’s brownfields program.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

The bill 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 a nominal, non-recurring cost associated with rulemaking to amend Rules 62-780, F.A.C.²⁰

The DEP will experience a positive fiscal impact as the costs to remediate contaminated sites and brownfields that are funded by a state cost-share agreement are reduced.²¹

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

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

²⁰ DEP, *Senate Bill 1302 Agency Analysis*, 5-6 (Feb. 18, 2015) (on file with the Senate Committee on Environmental Preservation and Conservation).

²¹ *Id.*

IX. Additional Information:

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

CS by Environmental Preservation and Conservation on March 31, 2015:

The CS amends s. 376.79, F.S., to provide definitions for “background concentration” and “long-term natural attenuation” related to the Brownfield Redevelopment Act. The bill amends s. 376.81, F.S., to provide clarifying language and include the following additional RBCA provisions in brownfield site rehabilitation:

- The DEP must establish rules for the use of long-term natural attenuation at brownfield sites;
- The terms additive, synergistic, and antagonistic effects should all be considered equally;
- Cleanup target levels may not exceed background concentrations for a contaminant;
- Cleanup target levels must be based on the groundwater standard when it is demonstrated the groundwater contaminants did not cause water quality exceedances in surface water; and
- Any relevant data and information, risk assessment modeling results, and results from probabilistic risk assessment modeling may be used in establishing alternative cleanup target levels.

The CS also makes conforming changes to correct cross references related to RBCA.

- B. **Amendments:**

None.