



PAT MCCRORY
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MEMORANDUM

TO: ENVIRONMENTAL REVIEW COMMISSION
The Honorable Jimmy Dixon, Co-Chairman
The Honorable Chuck McGrady, Co-Chairman
The Honorable Trudy Wade, Co-Chairman

FROM: Mollie Young, Director of Legislative Affairs

SUBJECT: Contaminated Sites Report

DATE: April 7, 2016

Pursuant to Session Law 2015-286, section 4.8.(b), “the Department shall report to the Environmental Review Commission on its activities conducted pursuant to subsection (a) of this section, together with any pertinent findings or recommendations, including any legislative proposals that it deems advisable.” The attached document satisfies this reporting requirement.

If you have any questions or need additional information, please contact me by phone at 919-707-8618 or via email at mollie.young@ncdenr.gov.

cc: Tom Reeder, Assistant Secretary for Environment, DEQ
Michael Scott, Acting Director of Waste Management, DEQ



Report to the Environmental Review Commission on Remediation of Contaminated Sites

S.L. 2015- 286 Sections 4.8(a) and (b)

April 1, 2016

This report is submitted to meet the requirements of Session Law 2015-286 Section 4.8(b), which requires a report on the Department of Environmental Quality's activities conducted pursuant to Section 4.8(a), and any pertinent findings or recommendations, including any legislative proposals that it deems advisable.

For organizational purposes, the information contained within is divided into the following sections:

- (1) Internal processes to govern remediation that are consistent across all programs or requirements.
- (2) Coordinated programs and processes for remediation of contaminated sites.
- (3) Reforms to expand the role, and otherwise enhance the use of, registered environmental consultants.
- (4) Criteria for development of site-specific remediation.
- (5) Recommendations.

Further information on activities related to remediation of contaminated sites is found on the Department of Environmental Quality's webpage. The website is regularly updated with new information related to contaminated sites: their locations, remedial actions, and cleanup guidance.

1. Internal processes to govern remediation that are consistent across all programs or requirements

The Division of Waste Management established a Remediation Team under its quality management structure to gain consistency in remediation approaches and share knowledge across the division program areas. In 2014, the Remediation Team implemented standard assessment protocols and remediation guidelines for vapor intrusion into structures from groundwater contamination. Efforts in 2015 focused on risk-based remediation, and included involvement of the Division of Water Resources. This DEQ Remediation Team identified differences among Department programs and is currently writing guidance to establish consistency in risk-based remediation decision-making across the agency. Session Law 2015-

286 expanded the Department's ability to approve risk-based remediation strategies for groundwater at almost all types of regulated facilities.

Remediating parties have a choice. They can clean up properties to an unrestricted use level by meeting existing standards for groundwater and surface water, and screening levels for soil contamination and potential vapor intrusion. Alternatively, they can pursue a risk-based option to clean up the environmental contamination to levels that do not pose an unacceptable risk to human health or the environment based on site conditions and future use of the property, with engineering and/or institutional controls defining the allowed future use. Property owner consent to land-use restrictions, plus business decisions, are expected to drive remedy selection.

The DEQ Remediation Team wrote guidance (attached in draft form) to give remediating parties a clear set of administrative instructions, forms, and fee schedules to begin pursuing risk-based cleanup under the provisions of Session Law 2015-286. When the law allows groundwater contamination to be cleaned up to risk-based standards, consent must be obtained from owners of affected properties. The publication required by Session Law 2015-286, a brochure entitled "*Contaminated Property: Issues and Liabilities*" (also attached) was produced in conjunction with the North Carolina Real Estate Commission, the North Carolina Department of Justice Consumer Protection Division, North Carolina Real Estate Association and a member of a lending institution with experience in contaminated property redevelopment. Feedback from regulated community stakeholders is being solicited and will be incorporated into the guidance and the brochure by April 1.

The DEQ Remediation Team is currently developing technical tools: 1) a set of standard web-accessible assessment and remediation guidance documents for evaluating each contaminant exposure pathway, such as exposure via drinking contaminated groundwater or exposure to indoor vapors and 2) risk screening and evaluation procedures, including online calculators to support human health risk evaluations, 3) consistent land-use restriction templates, and 4) web-accessible GIS-based tools to track contaminated sites and land-use controls. These tools are slated for completion by the summer of 2016. DEQ and the Remediation team will improve all of these tools continuously, and in regular communication with the regulated community.

2. Coordinated programs and processes for remediation of contaminated sites

Owners, remediating parties and their consultants for sites with multiple types of releases are encouraged to meet with DEQ staff from all relevant programs in an initial coordinated session to resolve questions on the data and information needed to identify optimal remediation strategies. Internal DEQ coordination early in the process will ensure assessment and remediation planning is done in an efficient manner, considering available options, including involvement of trust funds, if applicable. This approach has already worked well for remediators that have initiated risk-based remediation efforts under the 2011 Session Law.

3. Reforms to expand the role, and otherwise enhance the use of Registered Environmental Consultants

The petroleum Underground Storage Tank (UST) Section is evaluating the use of the Registered Environmental Consultant (REC) concept to manage releases from non-commercial USTs, other petroleum releases from Above-Ground Storage tanks (ASTs) and other non-UST sources. Session Law 2015-241 phases out the non-commercial trust fund, though state oversight of cleanups of these releases will need to continue into the future. The REC concept may be a viable manner to make the best use of resources while ensuring protection of human health and the environment.

Further refinement of the existing REC program will continue to be evaluated for enhanced use. Expanding the use of RECs to some or all of the above types of sites would require the adoption of additional rules to those currently governing petroleum cleanups. Such rules could be slightly modified versions of the current rules governing cleanups at hazardous substance release sites under the Inactive Hazardous Sites Act

4. Criteria for development of site-specific remediation standards

Toxicologists within the DEQ will continue to maintain screening tables and guidelines consistent with data available nationally regarding human health and ecological risk assessments including the evaluation of vapor intrusion into structures from contaminated soil and/or groundwater releases. Due to the variable nature of contaminant releases and site settings, remediation standards will be developed on a site-specific basis considering distance to receptors and ensuring that those developed standards are protective of public health and the environment. DEQ staff are developing standard procedures for sampling and decision making at sites where contaminated groundwater interchanges with surface water. Guidance is projected to be complete in summer 2016. For all these efforts, DEQ aims to work in a consistent manner across all programs to ensure protection of public health, safety and welfare and the environment and natural resources.

5. Recommendations

1. Continued enhancement of DEQ's web-accessible Geographic Information System (GIS) database tools.
2. Consistent legislative terminology used for institutional controls on property to enhance effective communication.
3. Reevaluate current financial assurance requirements for sites undergoing cleanup.

1) The DEQ has placed emphasis on providing information to the public and the regulated community in a web-accessible manner to foster and enhance communications about contaminated properties. Recommendations include displaying map information about properties with land use restrictions, along with links to DEQ file documents about the conditions at those same properties. Developing and maintaining GIS data is resource intensive but essential for government decision-making such as the permitting of new drinking water well construction, and for informed decisions by those entering property transactions, so that they will be able to ensure future land use is consistent with limitations based on any land use restrictions designed to prevent contaminant exposure to human health and/or the environment.

2) Consistent legislative terminology used for institutional controls on property would enhance effective communication. Use of a consistent term such as “Notice of Residual Contamination” or “Notice of Risk-Based Cleanup” could help citizens avoid confusion in the future.

3) Financial assurance requirements for voluntary cleanup can inhibit actual remediation. Financial assurance requirements may be unnecessary as a condition for approval of risk-based remedies that rely solely on institutional controls, and not on engineered measures requiring operation and maintenance. Current financial assurance legislation should be reevaluated.

**Administrative Procedures for Risk-Based
Remediation of Contaminated Sites Pursuant to
N.C.G.S. 130A-310.65 to 310.77**

North Carolina Department of Environmental Quality

1 April 2016

Administrative Procedures for Risk-Based Remediation of Contaminated Sites Pursuant to N.C.G.S. 130A-310.65 to 310.77

**North Carolina Department of Environmental Quality
1 April 2016**

This guidance provides the administrative steps to obtain approval of risk-based remediation of a contaminated site pursuant to Part 8 of Article 9 of Chapter 130A of the North Carolina General Statutes (130A-310.65-310.77). Supplemental technical guidance documents for conducting risk assessments and preparing a comprehensive, site-specific, risk-based remedial action plan are in preparation and will be posted to the DEQ website when they are final. Remediating parties should consult with the appropriate remediation program for any additional requirements.

Risk-based remediation under G.S. 130A-310.65 to 310.77 has its greatest application at sites with groundwater contamination exceeding the 15A NCAC 2L groundwater standards (or analytical detection limits if no 2L standard exists). Unlike for groundwater, there are no promulgated standards for contaminants in soils. Therefore, the DEQ has, and continues to calculate, generic and site-specific direct-contact risk-based remediation standards for soil based on criteria set out in law. In addition, protection of groundwater criteria for soil are provided to protect groundwater from leachable soil contamination. Therefore for sites with only soil contamination, alternate risk-based remediation standards can, as in the past, be determined and used without needing to follow the administrative procedures and paying the fees associated with this legislation for Risk-Based Remediation of Contaminated Sites.

Step 1: Confirm Program Eligibility:

Confirm remediation of the contamination is governed by one of the following programs:

- The Inactive Hazardous Sites Response Act: *Accidental chemical product spills and old unpermitted chemical discharges/disposal prior to the Resource Conservation and Recovery Act, but not Pre-1983 Landfills;*
- The hazardous waste management program administered by the State pursuant to the federal Resource Conservation and Recovery Act;
- The solid waste management program administered pursuant to Article 9 of Chapter 130A of the General Statutes;
- National Priorities List Sites under the federal Superfund program administered in part by the State pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act;
- The groundwater protection corrective action requirements adopted by the Commission pursuant to Article 21 of Chapter 143 of the General Statutes:
 - *Groundwater contamination from non-petroleum accidental spills and historical releases (through the Division of Waste Management – Superfund Section - Inactive Hazardous Sites Branch);*
 - *Groundwater contamination at sites with Division of Water Resources permits and cases where parties should have had a permit for the discharge; and*

- Oil Pollution and Hazardous Substances Control Act (excluding petroleum releases): *Groundwater or surface water contamination at sites with Division of Water Resources permits and cases where parties should have had a permit for the discharge*

Certain sites/programs are specifically excluded because they have existing mechanisms for establishing alternate standards for groundwater. These include:

- The Leaking Petroleum Underground Storage Tank Cleanup program under Part 2A of Article 21A of Chapter 143 of the General Statutes and rules promulgated pursuant to that statute.
- Leaking petroleum above ground storage tanks and other sources of petroleum releases governed under Part 7 of Article 21A of Chapter 143 of the General Statutes and rules promulgated pursuant to this Part.
- The Dry-Cleaning Solvent Cleanup program under Part 6 of Article 21A of Chapter 143 of the General Statutes and rules promulgated pursuant to that statute.
- The pre-1983 landfill assessment and remediation program established under G.S. 130A-310.6(c) through (g).
- The Coal Ash Management Act of 2014 under Part 21 of Article 9 of Chapter 130A of the General Statutes and rules promulgated pursuant to that Part.
- Animal waste management systems permitted under Part 1 or Part 1A of Article 21 of Chapter 143 of the General Statutes.

Step 2: Complete the Remedial Investigation:

- Assess all contaminated areas of the site, including types and levels of contamination, and whether the contamination poses a risk to public health, safety, and welfare and to the environment. Sufficient sampling must delineate the extent of contamination in each environmental medium to unrestricted use levels (residential preliminary soil remedial goals for soil and sediment, 15A NCAC 2L standards, or above detection limits where there is no final or interim standard, for groundwater, and 2B standards for surface water) to be able to plan where and what type of land use controls will be needed. The potential for any contaminated vapors from contaminated soil and/or groundwater to enter current or future structures shall be evaluated.
- Complete an evaluation and associated sampling to determine if contaminants in any environmental media exceed remediation standards or criteria established to prevent migration from one medium to another. Discharge/leaching from one medium to another may include soil to groundwater, sediment to surface water, groundwater to surface water, surface water to groundwater, groundwater to indoor air, soil to indoor air, or buried wastes to any medium. Conduct any testing, evaluation and/or modeling to demonstrate with reasonable assurance that contamination will neither expand in extent nor increase in concentration on “off-site property” as defined in G.S.130A-310.65(3a). It may be sufficient to present maps and trend plots of spatial and temporal data to support that the plume is stable in lieu of computer modeling.
- Identify sensitive environments and receptors and conduct any ecological assessment required for receptors identified.
- Prepare a Remedial Investigation report which discusses all the items listed in G.S. 130A-310.69(a), addresses items listed above and includes any additional requirements unique to the remediation program, such as those required by permits.

The remedial investigation report must present a well-understood conceptual site model that demonstrates that the extent of contamination in all media is known and its potential for migration can reasonably be predicted.

Step 3: Obtain Written Consent from Property Owners

For proposed remedies that will leave contaminant concentrations in excess of unrestricted use levels as described in Step 2, the remediating party must obtain written consent for alternate, risk-based cleanup standards from the owner of each property contaminated by the site's source areas. Permission is best obtained prior to expending funds on the development of a remedial action plan.

The owners of "off-site property" must be provided a copy of N.C.G.S. 130A, Article 9, Part 8 "Risk-based Environmental Remediation of Industrial Sites" and DEQ's publication entitled "Contaminated Property: Issues and Liability." Each owner will be expected to sign the appropriate form in Appendix A affirming that they have read the publication and consent to the alternate remediation standards. Note that off-site property also includes any affected publicly owned property, including rights-of-way for public streets, roads and sidewalks. It should also be noted that G.S. 130A-310.73A(a)(2) states that "the site-specific remediation standards shall not allow concentrations of contaminants on the off-site property to increase above the levels present on the date the written consent is obtained."

When the risk-based remedial action plan for the site is finalized, the content of the land use restrictions document and companion survey plat must be approved and signed by the property owner prior to recordation in the chain of title. Prior to the recordation of any land use control instruments in the chain of title, an owner has the opportunity to negotiate or provide final approval of the content of those instruments. If an owner objects to the content of the land use restrictions or of the companion survey plat, they can rescind their approval at that time. If a property owner rescinds their approval, the remediating party must immediately notify the relevant remediation program within the DEQ.

Step 4: Prepare Draft Notice of Intent to Remediate

The remediating party shall prepare a draft Notice of Intent to Remediate (NOIR) using the form in Appendix B and compile a mailing list for the NOIR. The list shall at a minimum include all owners of contaminated property, all owners of property to which the contamination is expected to migrate, all owners of land adjoining contaminated parcels, and jurisdictional local government contacts. Note that the NOIR public notice under G.S. 130A-310.70 is not a substitute for other public notice requirements related to voluntary remediation agreements, permits, the remedial action plan or other regulatory program public notice which must also be issued.

Step 5: Calculate Fees Due

Fees, payable to the Risk-Based Remediation Fund, are established to cover the additional oversight expenses the DEQ incurs from review of risk-based remedy components, including

site-specific human-health and ecological risk assessments, groundwater modeling, financial assurance instruments, public notice and land use restriction documents. Appendix C consists of instructions and a worksheet to determine the two site-specific fees. The Application Fee is due upon submittal of the proposed remedial action plan to the DEQ and the Oversight Fee is due following DEQ approval of the plan. The remediating party may elect to make one payment of both fees at the time the draft remedial action plan is submitted.

Step 6: Provide Documents to the DEQ

If the remediating party has not already done so, they must now provide copies of all remedial investigation reports and ecological assessment reports for the State file. The documents produced in the previous steps can be sent to the appropriate remediation program contact. (Note that the Registered Environmental Consultant Program requires that this submittal be appropriately certified):

- Owner permission form(s)
- Draft Notice of Intent to Remediate
- Mailing list
- Fee estimate worksheet (actual payment will accompany the remedial action plan)
- A site map showing extent of contamination, sample data points, and owners and usage of adjacent and affected properties

If DEQ has no comments on the information provided, the remediating party can issue the NOIR. The remediating party shall provide a certification to the DEQ that the notice was issued to the required parties and provide all comments received to the DEQ.

Step 7: Prepare and Submit Draft Remedial Action Plan and Fee to the DEQ

The remediating party shall develop and submit a proposed remedial action plan to the relevant remediation program in the DEQ. The development of a remedial action plan may require supplemental submissions and revisions based on the DEQ review, remedial action pilot studies, and public comment from local government and citizens. The fee(s) should be made out to the appropriate DEQ Division with “Risk-Based Remediation Fund” printed in the memo line. The check should be mailed with attention to the appropriate remediation program contact.

The remedial action plan must include a proposal of alternate risk-based remediation standards developed for each medium in accordance with all of the requirements of G.S. 130A-310.68. The remedial action plan shall provide for the protection of public health, safety, and welfare and the environment as specified in G.S. 130A-310.69 (b) and shall provide the analyses required in G.S. 130A-310.69 (c). Technical guidance on preparing a comprehensive, site-specific, risk-based remedial action plan are in preparation and will be posted to the DEQ website when they are final.

Step 8: Conduct any Additionally Required Public Notice of the Remedial Action Plan

All the public notice requirements under the respective remediation program must be met. The NOIR mailing list should be verified and updated accordingly. Any additional parties who have expressed interest in the environmental activities at the site should be added to the mailing list.

Step 9: Final Report

When the remedial action plan has been fully implemented and the legal documents are recorded at the local Register of Deeds office, the person conducting the remediation shall submit a final report to the DEQ, with notice to all local governments with taxing and land-use jurisdiction over the site, that demonstrates that the remedial action plan has been fully implemented, that any land-use restrictions have been certified on an annual basis, and that the remediation standards have been attained.

Appendix A

Risk-Based Remediation Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

Property Owner Permission

The forms following these instructions should be used by the remediating party to document consent of owners of “source site” property, and currently and/or potentially contaminated “off-site property,” as defined in G.S. 130A-310.65, to allow remediation to alternate risk-based standards on their property as opposed to remediation to unrestricted use standards. This consent is subject to later withdrawal if the property owner has objections after reviewing the land use restrictions document.

The owners of “off-site property” must be provided a copy of N.C.G.S. 130A, Article 9, Part 8 “Risk-based Environmental Remediation of Industrial Sites” and DEQ’s publication entitled “Contaminated Property: Issues and Liability.” Each owner will be expected to sign the consent form in Appendix A affirming that they have read the publication and consent to the alternate remediation standards. Note that off-site property also includes any affected publicly owned property, including rights-of-way for public streets, roads and sidewalks.

Property Owner Consent to Risk-Based Remediation
Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

I, _____ as <Owner of> *or* <Representative of <corporation> which owns> the property identified by Parcel/Tax ID # _____, located at <street address>, <city>, <county>, North Carolina, affirm the following:

1. That I am authorized to provide the consent requested herein;
2. That I have been provided a copy of (1) Part 8 of Article 9 of Chapter 130A of the North Carolina General Statutes and (2) a document entitled "Contaminated Property: Issues and Liability" prepared by the North Carolina Department of Environmental Quality and others, have read said documents;
3. That I hereby consent to remediation of the above-identified property to site-specific, risk-based remediation standards pursuant to Part 8 of Article 9 of Chapter 130A of the North Carolina General Statutes provided that the site-specific remediation standards shall not allow concentrations of contaminants on the above-identified property to increase above the levels present on the date of this written consent;
4. That I consent to the use of land-use controls on the above-identified property in lieu of remediation to unrestricted use standards; and
5. I understand that prior to the recordation of any land use control instruments in the chain of title for the above-identified property, I will have the opportunity to negotiate or provide final approval of the content of those instruments.

IN WITNESS WHEREOF, I execute these presents on this ___ day of _____, 20__.

Owner's name typed or printed: _____

Signatory's name typed or printed: _____

Signatory's title typed or printed: _____

Signature: _____

STATE OF NORTH CAROLINA

COUNTY OF _____

I, _____, a Notary Public, do hereby certify that _____ personally appeared before me this day, produced proper identification in the form of _____, and signed this Off-Site Property Owner Consent to Risk-Based Remediation.

WITNESS my hand and official seal this ___ day of _____, 20__.

Notary Public

My Commission expires: _____

[SEAL]

Appendix B

Risk-Based Remediation

Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

Notice of Intent to Remediate

Instructions: In addition to the public participation requirements of the applicable remediation program, the person who proposes to remediate a site under Part 8 of Article 9 of Chapter 130A of the North Carolina General Statutes shall send a Notice of Intent to Remediate to all local governments having taxing or land-use jurisdiction over the site, and to all adjoining landowners. The remediating party shall prepare and submit a draft Notice of Intent to Remediate, using the form on the following page, to the relevant DEQ remediation agency for review. The remediating party shall also compile a mailing list which shall, at a minimum, include all owners of contaminated property, all owners of property to which the contamination is expected to migrate, all owners of land adjoining contaminated parcels and parcels to which contaminants are expected to migrate, and jurisdictional local government contacts. Once approved by the DEQ, the remediating party will issue the notice and then provide the resulting comments and proof of issuance of the notice to the DEQ.

NOTICE OF INTENT TO REMEDIATE

Risk-Based Remediation

Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

(Site Name)

(Street Location)

(City, County), North Carolina

(Site ID Number)

This is a notice to the public of a request by **(Remediating Party Name)** to pursue remediation of the contamination at the above-identified site using site-specific cleanup standards as opposed to remediation to levels acceptable for unrestricted property use. Contaminated media at the site may include groundwater, soils, sediment and surface water. **(Remediating Party Name)** intends to prepare a remedial action plan in accordance with N.C.G.S. 130A-310.65 through 310.77 which allows use of site-specific cleanup levels that are expected to pose no unacceptable risk to human health and the environment. Once the North Carolina Department of Environmental Quality (NC DEQ) receives the proposed remedial action plan, a second Public Notice will be issued providing for a 30-day public comment period.

Information about the nature and extent of the contamination at the site is presented in a remedial investigation report which is available electronically for review at: <http://deq.nc.gov/>

For more information contact:

(Contact Person)
(Remediating Party)
(Address)
(Phone Number)
(Email Address)

(Project Manager)
NC Department of Environmental Quality
(Address)
(Phone Number)
(Email Address)

Appendix C

Risk-Based Remediation Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

Fee Calculation Instructions

The fees required to receive approval of risk-based remedial action are based on the aerial acreage of predicted contamination extent in all media with adjustments for certain scenarios, as described below.

Instructions: Determine the combined total acreage of area covering (1) current extent of contamination and (2) areas to where contamination is predicted to migrate in all media (*for partial acres round up to next whole acre*). Complete the fee worksheet on the following page. Prepare a map showing the extent of contamination with sample data points, and identifying owners and usage of affected property.

Application Fee (*due upon submittal of remedial action plan to the DEQ*)

This fee is used to support staff resources needed to review risk-based remedies, including risk assessments and, as necessary, groundwater modeling, ecological assessments, land use restrictions, and financial assurance documents. Total application fee shall not exceed \$100,000.

Per acre base fee: \$5,000

Adjustments:

- Contamination has not migrated off the source property: Subtract \$500/acre
- No further (active or passive) remediation required outside of land use controls: Subtract \$500/acre
- Remediation is being conducted through the Registered Environmental Consultant (REC) Program: Subtract \$2,500 from final fee

Oversight Fee (*due upon DEQ approval of remedial action plan or with RAP, if preferred*)

This fee is used to support staff resources needed to track annual certification of land use controls, to audit adherence to use restrictions, to provide for periodic inspections of engineering controls and to maintain a publically available GIS –based map viewer showing the location of restricted properties statewide with links to electronic site records. Total oversight fee shall not exceed \$25,000.

Per acre fee: \$500

Example Case: 2 acres of contamination which includes the current extent and where it is expected to migrate. All contamination is and will remain on the source property. The remediating party plans to implement an engineered remedy. Work is conducted in the REC Program.

Total Fee = 2 acres x (\$5,000 - \$500 deduction for on-property contamination + \$500 oversight fee) - \$2,500 REC Program participation = \$7,500.

Risk-Based Remediation
Pursuant to Part 8 of Article 9 of Chapter 130A of the General Statutes

Fee Calculation Worksheet

Site Name:

City/County:

Regulatory ID #:

Remediating Party:

Date:

Combined total acreage of area covering (1) current extent of contamination and (2) areas to where contamination is predicted to migrate in all media (*for partial acres round up to next whole acre*):

Application Fee	
Base Per Acre Fee:	\$5,000
Contamination will not migrate off Contaminated Source Site: [Enter \$500 deduction if no remediation required; enter \$0 otherwise]	-
No remediation planned: [Enter \$500 deduction if no remediation required; enter \$0 otherwise]	-
Total Fee Per Acre: [Subtract allowed deductions]	=
Acreage: [Rounded up to the nearest whole acre]	x
Total Fee: [Multiply Total Fee Per Acre by Acreage]	=
Executed REC Program Remedial Action Agreement with the DEQ: [Subtract \$2,500 if applicable; enter \$0 otherwise]	-
Final Application Fee (not to exceed \$100,000):	=

Oversight Fee	
Base Per Acre Fee:	\$500
Acreage: [rounded up to the nearest whole acre]	x
Final Oversight Fee (not to exceed \$25,000):	

Contaminated Property: Issues and Liabilities

March 2016

The North Carolina Department of Environmental Quality (NC DEQ) is authorized to approve risk-based cleanup remedies for contaminated properties as long as those remedies adequately protect human health and the environment. This brochure is intended to provide current and future owners and users of contaminated properties with information about risk-based cleanups, potential risks from residual contamination, and possible real estate issues regarding contaminated property.

Why am I receiving this brochure?

In 2015, the North Carolina General Assembly passed Session Law 2015-286 that requires certain parties responsible for cleaning up environmental pollution to provide this brochure to owners of property where that contamination has spread. The new law allows groundwater contamination to be cleaned up to risk-based standards only if owners of all affected properties agree to limit uses of their property. As a property owner you are not required to consent to the use of risk-based standards for your property. However, if you do agree to limit the use of your property and allow risk-based standards you will be asked to sign a consent form granting such permission. The intent of this brochure is to help you and future property owners be aware of, and understand environmental contamination and provide resources to assist you in making informed decisions. This rest of this brochure provides answers to commonly asked questions and

provides contact information if you have additional questions.

How does contamination occur?

Environmental contamination is a common condition in many urban and industrial areas. The potential for releases to the environment exists wherever hazardous materials are stored or managed. While most releases occur in industrial or commercial settings, products used in a residential setting such as pesticides, gasoline, paints, and cleaning agents can also contribute to contamination if not handled properly. Releases to the environment can occur in many ways, including spillage, leakage, dumping, burying, pumping or abandoning of hazardous materials. While some releases are intentional, most occur because people do not have the proper training or knowledge to safely manage potentially harmful chemicals. If releases are not addressed promptly, contaminants can migrate through the ground and impair the quality of soil, groundwater, surface water, sediments, and even air. The environment where the release occurs, the nature of the release, and the chemical characteristics will affect how much risk the contaminants pose to human health and the environment.

What is risk-based remediation?

Remediation is action taken to clean up, reduce, remove or prevent the migration of contaminants in order to protect human health and the environment. *Remediation standards* are the target concentrations for each contaminant that must be met in order for a site to be considered “clean”. Traditional remediation standards require reducing contaminant levels so that the affected media (e.g., soil or groundwater) have no limits on their use – these are known as *unrestricted use standards*. While unrestricted use standards are an important target, meeting these

standards can be technically and financially impractical, unnecessary, and overly burdensome at many contaminated sites and affected properties. *Risk-based remediation standards* are target cleanup levels that consider the current and future property use and that protect people and the environment from real risks posed by residual contamination. Risk-based remediation is designed to control risks by reducing contaminant concentrations as needed by performing *active remediation*, using *engineered controls* to prevent contact with contamination, and using *land-use controls* to prevent future activities that may expose residual contamination.

Active remediation is the work performed to reduce contaminant concentrations in order to eliminate a current risk, or to minimize a potential future risk.

Engineering controls are barriers or systems that prevent contact with contamination, such as a concrete pad to prevent contact with contaminated soil, or a vapor barrier system to control the intrusion of vapors from the subsurface into a building.

Land-use controls are a way of documenting in the chain-of-title the permissible uses of property where land-use controls are being relied on to eliminate potential future risks from residual contamination.

A simple and hypothetical example of risk-based remediation would be an urban site where a leaky drum has caused low levels of groundwater contamination. If public water is provided and groundwater is not a drinking water source, a risk-based remedy may include removing the drum and the most highly impacted soil (i.e., active remediation), and filing restrictions in the chain of title of affected properties to prevent installation

of future drinking water wells (i.e., land-use controls).

What goes into making risk-based cleanup decisions?

Investigating and cleaning up contamination starts with an environmental assessment of the site. A *site assessment* involves collecting and analyzing environmental samples and other information to understand the existing conditions at a site. A typical assessment includes evaluating the characteristics of contaminated media (soil, groundwater, etc.), determining the type and concentration of chemicals present, defining the extent of contamination and how it’s moving, evaluating the stability of the contamination, and determining who is (or may become) exposed to site contaminants. A complete site assessment provides a thorough picture of the conditions at a site, and gives decision-makers the information necessary to evaluate site risks. *Risk-evaluation* involves using standard U.S. Environmental Protection Agency risk calculation methods to determine if unacceptable risks are present at a contaminated site. Examples of unacceptable risk at a site might include a contaminated drinking water supply well that exceeds a safe drinking water standard; surface soil with contaminant levels above an acceptable residential concentration in a homeowner’s back yard; or indoor air that has unacceptable levels of a contaminant that originated from the site.

All unacceptable risks must be made safe.

Once the immediate unacceptable risks are made safe, a site is evaluated to determine which measures are appropriate to control future risks. Parties responsible for cleanup will consider the site conditions and risk information to develop a *remedial strategy* designed to ensure long-term

protection from future risks posed by residual contamination.

Risk-based cleanups allow remediating parties to (i) use site specific information to evaluate the risks from residual contamination; (ii) set cleanup goals for the amount of residual contamination that can safely remain in place; and (iii) use land-use controls to prevent future activities that could result in exposure to residual contamination. If a remediating party proposes to use the risk-based approach set out under state law to clean up their site, they must have permission of affected parties and the remedy must be reviewed and approved by NC DEQ prior to implementation. If the approved risk-based remedy is completed and adequately protects current and future users of the property, NC DEQ may issue a No Further Action decision to document that no additional remediation work is necessary. Long-term maintenance of land-use controls is required when a No Further Action decision is made for a site where the remedy relies on land-use controls. Such maintenance may include the property owner certifying annually that the controls are being complied with, and remain recorded at the Register of Deeds office. No Further Action decisions can also be rescinded with further remediation required if new information reveals that a site poses an unacceptable risk or if land-use controls have been compromised.

What are land-use controls and how do they work?

Land-use controls, which are also called “land-use restrictions”, “institutional controls”, or “notices”, are a necessary part of risk-based cleanups. Land-use controls are typically made up of a document listing the restricted uses, and a survey plat depicting the property where the restrictions apply. These documents are filed in the property chain of title at the Register of Deeds

office, and serve to inform current and future property owners that residual contamination exists at the property and to specify how the property can safely be used. As an example, a property with residual contamination in groundwater may not pose a health concern if public water is provided and groundwater is not used as a drinking water source. However, to help ensure that no one drinks contaminated well water in the future, a notice or restriction may be filed in the chain of title prohibiting the installation of water supply wells. Land-use controls that are part of a risk-based remedy allowed by Session Law 2015-286, can only be filed with the permission of the property owner.

Contamination from a neighboring property has migrated to my property, should I allow land-use controls to be recorded in my chain of title?

If a party responsible for cleanup is asking you to agree to place land-use controls on your property as part of their environmental cleanup, it is recommended that you carefully review the proposed land-use controls and seek the advice of an environmental attorney as appropriate. If the remediating party cleaning up the contamination intends to use a risk-based remedial strategy under Session Law 2015-286, and that remedy proposes to use land-use controls on your property, **they will need your permission.** You should be aware that land-use controls are legally binding and are recorded in the chain of title for your property to help ensure that you and future owners are aware of the residual contamination and how the property can be safely used. If you agree to land-use controls, once the controls are recorded in the chain of title, they can only be removed when approved by NC DEQ.

Are properties with residual contamination safe?

Risk-based cleanups, like traditional cleanups, are designed to protect human health and the environment. Risk-based cleanups involve using a combination of active remediation, engineering controls and/or land-use controls to ensure that properties with residual contamination are safe. Proposals for risk-based cleanups conducted under Session Law 2015-286 must document consent from property owners affected by the contamination, and must also be approved by NC DEQ before they can be implemented. If the proposed cleanup actions will not eliminate or control unacceptable risks, the remedy will not be approved. It is also important to remember that properties cleaned up to risk-based standards are safe as long as users comply with the restrictions that apply to the property.

Do I have any legal obligations for residual contamination on my property?

If your property has residual contamination, even if you did not cause it to occur, you are responsible for ensuring safe use of your property by complying with the controls or restrictions that apply to your property. In certain situations, you may be held liable if you are found to be responsible for knowingly contributing to the further migration of contamination. Legal questions related to property rights and owner liability are best answered by a qualified attorney.

Does residual contamination affect property value and marketability?

Property values are influenced by many factors including, but not limited to location, property characteristics and condition, and the overall health of the real estate market. Environmental contamination may also be a factor

considering the extent and nature of contaminants, the effectiveness of the cleanup, and the real (or perceived) risks associated with the contamination. Due to the wide variety of market factors and property-specific factors that influence value, it’s not possible to give a definitive answer about whether environmental contamination affects property values.

While environmental contamination may carry a stigma that affects the perceived value of a property, the potential for exposure to residual contamination can be safely managed using the cleanup strategies described in this brochure. In the long-term, residual contamination may have little to no impact on property value if other factors are favorable to the buyer or seller.

Does residual contamination affect real estate financing?

Lending institutions follow standard policies and procedures in order to help minimize the financial risks that they assume when lending money for real estate transactions. Lenders will require that an appropriate level of due diligence be conducted to evaluate the subject property. The condition of the property, including the presence of residual contamination, must be considered when evaluating the terms of a loan. Most lending institutions will request details about residual contamination, any potential unknown risk, regulatory status and the manner in which potential human health or environmental risks are managed.

Lending institutions vary with regard to their comfort level to lend money for contaminated property. Some institutions routinely work with borrowers seeking to buy or refinance loans on property with residual contamination. The more information that you provide to address the above considerations, the higher chance the lender will be comfortable with the financial risk. It is

recommended that borrowers inquire with multiple lenders in order to obtain the best terms for their borrowing situation.

As a property owner, am I required to disclose the presence of residual contamination?

Most purchases of residential property are subject to the Residential Property Disclosure Act which requires the seller to provide a Residential Property and Owners Association Disclosure Statement (“disclosure statement”). This disclosure statement asks questions about the property conditions, including one regarding the presence of contamination, and allows the seller to answer, “Yes”, “No” or “No Representation” to any of the questions. Sellers must sign the disclosure statement attesting that the information is true and correct. While sellers may choose to answer “No Representation” to any question in the disclosure statement, if you are a seller working with a licensed real estate broker, the broker has a duty to disclose material facts that the broker knows or reasonably should know, regardless of the seller’s representations. You are encouraged to consult a North Carolina real estate attorney if you have any questions regarding matters of real estate law.

How do I find out more?

You can learn more about contaminated properties in North Carolina by going to the **North Carolina Department of Environmental Quality’s** (NC DEQ) website: <http://deq.nc.gov/>

(add instructions for contaminated property locator tool when website is online)

In addition to locating contaminated properties, the website provides access to contact information and online records. NC DEQ’s environmental

cleanup programs are overseen by the **Division of Waste Management (919) 707-8200**, and the **Division of Water Resources (919) 707-9000**.

Questions about North Carolina’s real estate disclosure laws may be directed to the **North Carolina Real Estate Commission (NC REC)** at **(919) 875-3700**. In addition, The NC REC’s website, <https://www.ncrec.gov/> provides a wide variety of additional real estate resources. The overview of disclosure law provided in this publication is not a substitute for receiving situation-specific professional advice. Sellers and buyers of real estate are urged to seek advice from a licensed real estate professional and/or an attorney if they have questions.

This publication is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative code are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of North Carolina’s Department of Environmental Quality. Any decisions made by the Department of Environmental Quality in any matter addressed by this guidance will be made by applying the governing statutes and administrative codes to the relevant facts.

Prepared by the North Carolina Department of Environmental Quality, in consultation with the North Carolina Real Estate Commission, and the North Carolina Department of Justice’s Consumer Protection Division.