

CHAPTER 62-780 CONTAMINATED SITE CLEANUP CRITERIA

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62-780.100 Referenced Guidelines.

Specific references to the guidelines listed below are made within this chapter. The guidelines are not standards as defined in Section 403.803, F.S. Use of these guidelines is not mandatory; the guidelines are included for informational purposes only.

(1) Approach to the Assessment of Sediment Quality in Florida Coastal Water, Volumes 1-4, dated November 1994.

(2) Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C., Final Report, dated February 2005.

(3) Chapter 62-780, F.A.C., Contaminated Site Risk-Based Corrective Action (RBCA) Flow Process Flow Charts, dated December 23, 2004.

(4) American Society for Testing and Materials (ASTM) RBCA Fate and Transport Models: Compendium and Selection Guidance, dated 1999.

(5) Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits, dated October 12, 2004.

(6) Management of Contaminated Media for RCRA, dated August 21, 2002.

(7) Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters, dated January 2003.

(8) Institutional Controls Procedures Guidance, Division of Waste Management, Florida Department of Environmental Protection, dated November 2004.

(9) Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration, Environmental Protection Agency, draft Interim Guidance, dated September 1993. (Note: USEPA terminology used in this publication may be inconsistent with Department language used in this rule chapter.)

(10) Toxicity Test Methods, Florida Department of Environmental Protection Interoffice Memorandum, dated June 24, 2004.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.110 Purpose, Intent, and General Principles.

(1) The purpose of this chapter is to prevent adverse effects on human health, public safety, and the environment that may be caused by contaminants that have been released or discharged into the environment. This chapter implements the risk-based corrective action provisions of Section 376.30701(2), F.S., to accomplish this purpose.

(2) This chapter may not be used to establish whether a person is legally responsible for conducting site rehabilitation. Legal responsibility shall be determined by application of relevant provisions of Chapters 376 and 403, F.S.

(3) This chapter provides a phased risk-based corrective action process that is iterative and that tailors the site rehabilitation tasks to the site-specific conditions and risks. To facilitate such a phased risk-based corrective action process, the Department and the person responsible for site rehabilitation (PRSR) are encouraged to have discussions to establish decision points at which risk management decisions will be made. These various decision points include the scope and methodology of the site assessment, applicable exposure factors, the remedial strategy for

the site, and risk management options based on the current and reasonable, ascertainable future land uses at the site. When requested by the PRSR, the Department shall use all reasonable efforts to provide early decisions regarding these decision points based on the current and future land uses at the site, and the site information provided by the PRSR.

(4) When applicable, this chapter shall be applied in conjunction with Chapter 62-777, F.A.C., to determine the appropriate cleanup target levels (CTLs) for a contaminated site. Chapter 62-777, F.A.C., provides default groundwater, surface water, and soil CTLs, as well as natural attenuation default concentrations for groundwater, a listing of soil properties and test methods, a listing of site-specific conditions and geochemical parameters, and default parameters and equations that may be used to establish CTLs for contaminants not listed in Chapter 62-777, F.A.C., or alternative groundwater and soil CTLs for listed contaminants.

(5) For contaminants found at the site about which information regarding the actual circumstances of exposure has been provided to the PRSR by the Department, a local government, or the public, the CTLs for the affected medium or media, except where a state water quality standard is applicable, shall be adjusted to take into account the site-specific exposure conditions including multiple pathways of exposure that affect the same individual or sub-population, and site-specific CTLs shall be calculated taking into account, through apportionment, potential additive toxic effects of contaminants.

(6) Nothing in this chapter shall be construed to prohibit or delay actions to respond to a discharge of pollutants or hazardous substances prior to contact with the Department. The phased risk-based corrective action process contemplates appropriate emergency response action or initial remedial action prior to any formal application of the risk-based corrective action process involving site assessment and, if required, subsequent remedial action. Any emergency response actions or initial remedial actions shall be conducted in accordance with all applicable federal, state, and local laws and regulations.

(7) The Department's approval of any task or report pursuant to this chapter does not relieve the PRSR from the obligation to comply with other Department rules [for example, Chapters 62-701, 62-713, 62-730 (refer to the contaminated media guidance referenced in subsection 62-780.100(6), F.A.C.), 62-770, 62-782, and 62-785, F.A.C.] regarding off-site disposal, relocation, or treatment of contaminated media. PRSRs are advised that other federal and local laws and regulations may apply to these activities.

(8) The cleanup criteria contained in this chapter shall not affect the cleanup criteria, priority ranking, and other rights and obligations inherent in petroleum contamination site rehabilitation pursuant to the Petroleum Contamination Site Cleanup Criteria rule, Chapter 62-770, F.A.C., drycleaning solvent contamination site rehabilitation pursuant to the Drycleaning Solvent Cleanup Criteria rule, Chapter 62-782, F.A.C., and brownfields sites governed by the terms of a brownfield site rehabilitation agreement pursuant to the Brownfields Cleanup Criteria rule, Chapter 62-785, F.A.C.

(9) The intent of this chapter is not to affect any activity or discharge permitted or exempted pursuant to Chapter 376 or 403, F.S., or rules promulgated pursuant to Chapter 376 or 403, F.S. However, violations of relevant provisions of Chapter 376 or 403, F.S., that result in legal responsibility for site rehabilitation pursuant to those chapters are subject to this chapter.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.150 Applicability.

(1) Every person who has legal responsibility for site rehabilitation pursuant to Chapter 376 or 403, F.S., except those specifically excluded herein, shall comply with the provisions of this chapter and are subject to enforcement to compel compliance with the provisions of this chapter.

(2) Any person who has no legal responsibility for site rehabilitation but who voluntarily rehabilitates a site shall comply with the provisions of this chapter if that person wishes the Department to review any documents concerning site rehabilitation or issue any order with respect to completion of the rehabilitation tasks.

(3) This chapter applies to site rehabilitation conducted as a state-managed cleanup by the Department.

(4) This chapter and the CTLs developed pursuant to this chapter apply to cleanups conducted by persons legally responsible for site rehabilitation of contaminated sites, whether the release or discharge causing or contributing to the contamination occurred prior to, on, or after the effective date of this chapter, unless:

(a) The Department has accepted CTLs for a site in an approved technical document (for example, Risk Assessment Report, Natural Attenuation with Monitoring Plan, Remedial Action Plan), current permit, Superfund Record of Decision with which the Department has concurred,

or other written agreement with the Department, and the PRSR continues the activities necessary to achieve those CTLs in accordance with the approved technical document, permit, Superfund Record of Decision, or other written agreement until those CTLs are achieved; or

(b) The site has received a “No Further Action” order or a “Site Rehabilitation Completion” order from the Department prior to the effective date of this rule chapter. However, the PRSR may elect to have the criteria of this chapter, including CTLs established pursuant thereto, apply in lieu of those in an approved technical document, current permit, or other written agreement.

(5) CTLs for each contaminant found in groundwater, surface water, or soil, as specified in Chapter 62-777, F.A.C., Tables I and II, or derived pursuant to Chapter 62-777, F.A.C., or alternative CTLs that may be established pursuant to Rule 62-780.650 or 62-780.680, F.A.C., are applicable in implementing the provisions of this chapter.

(6) If a Consent Order or permit that requires assessment and rehabilitation of a site has been entered into with the Department prior to the effective date of this chapter, compliance with the terms of the Consent Order or permit shall constitute compliance with the provisions of this chapter.

(7) This chapter does not apply to site rehabilitation being performed pursuant to Chapter 62-770, 62-782, or 62-785, F.A.C.

(8) This chapter does not apply to site rehabilitation being performed pursuant to Chapter 62-730, F.A.C., except to the extent that rules promulgated under Section 376.30701, F.S., are referred to or incorporated by reference in Chapter 62-730, F.A.C.

(9) This chapter does not apply to the rehabilitation of sites contaminated with radiological substances to the extent that such rehabilitation is governed by Chapter 404, F.S., or the Federal Atomic Energy Act of 1954, Chapter 1073, Statute 923, as amended.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.200 Acronyms and Definitions.

All words and phrases defined in Section 376.301, F.S., shall have the same meaning when used in this chapter unless specifically stated otherwise in this chapter. The following words and phrases used in this chapter shall, unless the context clearly indicates otherwise, have the following meanings:

(1) “Action level” means a specified concentration of a contaminant that, if exceeded during

natural attenuation with monitoring or post active remediation monitoring, may require additional site assessment or active remediation. Action levels are established during the approval process for Natural Attenuation with Monitoring Plans pursuant to Rule 62-780.690, F.A.C., and Post Active Remediation Monitoring Plans pursuant to Rule 62-780.750, F.A.C. "Action levels" are not equivalent to "cleanup target levels".

(2) "Additive effect" means 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 an individual is exposed.

(3) "Antagonistic effect" means 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 an individual is exposed.

(4) "Apportioned" means CTLs adjusted such that for non-carcinogenic contaminants with the same target organ(s)/systems or effects, the hazard index (sum of the hazard quotients) is 1 or less, and for carcinogens, the cumulative lifetime excess cancer risk level is 1.0E-6, as applicable.

(5) "Background concentrations" means concentrations of contaminants that are naturally occurring in the groundwater, surface water, soil, or sediment in the vicinity of the site.

(6) "Best achievable detection limit" means the practical quantitation limit. [Refer to the PQL guidelines referenced in subsection 62-780.100(5), F.A.C., for guidance.]

(7) "CAD" means cleanup agreement document.

(8) "Cleanup agreement document" (CAD) means any order or agreement issued to or entered into by the Department with a Person Responsible for Site Rehabilitation, including a voluntary cleanup agreement, permit, consent order, final order, or final judgment. The CAD shall at a minimum establish the time frames, schedules, and milestones for completion of site rehabilitation tasks and submission of technical documents, and other commitments or provisions pursuant to this chapter.

(9) "Cleanup target level" (CTL) means 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.

(10) "Contaminant" means any physical, chemical, biological, or radiological substance present in any medium that may result in adverse effects to human health or the environment, or

that creates an adverse nuisance, organoleptic, or aesthetic condition in groundwater.

(11) "Contaminated" or "contamination" means the presence of free product or any contaminant in surface water, groundwater, soil, sediment, or upon the land, in concentrations that exceed the applicable CTLs specified in Chapter 62-777, F.A.C., or water quality standards in Chapter 62-302 or 62-520, F.A.C., or in concentrations that may result in contaminated sediment. This definition is solely for use within Chapter 62-780, F.A.C., and pursuant to subsection 62-780.110(2), F.A.C., shall not be used to establish legal responsibility for conducting site rehabilitation.

(12) "Contaminated sediment" means sediment that is contaminated as determined by the concentrations of the contaminants, actual circumstances of exposure, biological diversity studies, toxicity testing, or other evidence of harmful effects, as applicable. [Refer to the sediment guidelines referenced in subsection 62-780.100(1), F.A.C., for guidance on the evaluation of contaminant concentrations, sediment quality conditions, and testing methods.]

(13) "Contaminated site" means any contiguous land, sediment, surface water, or groundwater area that contains contaminants that may be harmful to human health or the environment.

(14) "CTL" means cleanup target level.

(15) "De minimis discharge" means a discharge that is removed from the soil, sediment, surface water, and groundwater to CTLs or background concentrations pursuant to subsection 62-780.680(1), F.A.C., within a period of 30 days from the discovery of the discharge.

(16) "Discharge" includes, but is not limited to, any spilling, leaking, seeping, misapplying, pouring, emitting, emptying, releasing, or dumping of any pollutant or hazardous substance which occurs and which affects lands and the surface waters and groundwaters of the state not regulated by Sections 376.011-.21, F.S.

(17) "Domestic purposes" means that the water is used for human consumption such as bathing, cooking, or drinking, and is provided through pipes or other constructed conveyances.

(18) "Emergency response action" means an interim source removal conducted pursuant to Rule 62-780.500, F.A.C., initiated prior to contact with the Department and within 24 hours of discovery of an unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action to alleviate a threat to human health, public safety, or the environment.

(19) "Engineering control" means use of existing features (such as buildings) or modifications to a site to reduce or eliminate the potential for migration of, or exposure to, contaminants. Examples of modifications include physical or hydraulic control measures, capping, point-of-use treatments, or slurry walls.

(20) "Exposure unit" means an area over which receptors are expected to have equal and random exposure.

(21) "Free product" means the presence of a non-aqueous phase liquid in the environment in excess of 0.01 foot in thickness, measured at its thickest point.

(22) "Groundwater" means water beneath the surface of the ground within a zone of saturation, whether or not flowing through known or definite channels.

(23) "Initial remedial action" means the same as "emergency response action".

(24) "Innovative technology" means a process that has been tested and used as a treatment for contamination, but lacks an established history of full-scale use and information about its cost and how well it works sufficient to support prediction of its performance under a variety of operating conditions. An innovative technology is one that is undergoing pilot-scale treatability studies, that usually are performed in the field or the laboratory and require installation of the technology, and that provide performance, cost, and design objectives for the technology prior to full-scale use.

(25) "Institutional control" means the restriction on use of, or access to, a site to eliminate or minimize exposure to contaminants. Examples of restrictions include deed restrictions, restrictive covenants, and conservation easements.

(26) "Interim source removal" means the removal of free product, contaminated groundwater, contaminated sediment, or contaminated soil, or the removal of contaminants from soil or sediment that has been contaminated to the extent that leaching to groundwater or surface water has occurred or is occurring, prior to approval of a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C.

(27) "Low yield" means groundwater that is contained in an aquifer that has an average hydraulic conductivity of less than one foot per day, determined by performing slug tests or an equivalent method for determining hydraulic conductivity on a minimum of three monitoring wells in each affected monitoring zone; and a maximum yield of 80 gallons per day, determined by pumping a four-inch well screened across the cross-section of the plume, for a minimum of two

hours.

(28) "Monitoring well" means a well constructed with a surface seal and a sand filter pack in order to provide for the collection of representative groundwater samples for laboratory analyses. Such wells may also be used to detect the presence of free product or collect water-level elevation data to aid in determining the direction of groundwater flow.

(29) "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. Natural attenuation processes may include sorption, biodegradation, diffusion, dispersion, volatilization, and chemical reactions with subsurface materials.

(30) "Newspaper of general circulation" means a newspaper published at least on a weekly basis and printed in the language most commonly spoken in the area within which it circulates, but does not include a newspaper intended primarily for members of a particular professional or occupational group, a newspaper whose primary function is to carry legal notices, or a newspaper that is given away primarily to distribute advertising.

(31) "Organoleptic" means pertaining to, or perceived by, a sensory organ (i.e., color, taste, or odor).

(32) "Person Responsible for Site Rehabilitation" (PRSR) means the Department when conducting site rehabilitation, any person who has legal responsibility for site rehabilitation pursuant to Chapter 376 or 403, F.S., or any person who voluntarily rehabilitates a site pursuant to the requirements of this chapter and seeks an acknowledgement from the Department for approval of site rehabilitation program tasks.

(33) "Piezometer" means a permanent or temporary well that may be designed and constructed without the surface sealing or sand filter pack requirements of a monitoring well. This type of well is primarily used to detect the presence of free product or collect water-level elevation data to aid in determining the direction of groundwater flow.

(34) "Plume" means the portion of an aquifer or aquifers in which groundwater contamination above applicable CTLs, and background concentrations as defined in subsection 62-780.200(5), F.A.C., has been detected.

(35) "Poor quality" means groundwater within the affected monitoring zone with background concentrations, as defined in subsection 62-780.200(5), F.A.C., that exceed any of Florida's

Primary or Secondary Drinking Water Standards referenced in Chapter 62-550, F.A.C.

(36) "Practical quantitation limit" (PQL) means the lowest level that can be reliably measured during routine laboratory operating conditions within specified limits of precision and accuracy. [Refer to the PQL guidelines referenced in subsection 62-780.100(5), F.A.C., for guidance.]

(37) "Product recovery" means the removal of free product.

(38) "Real property owner" means the person or entity that is vested with ownership, dominion, or legal or rightful title to the real property.

(39) "Response Action Contractor" means a person who is carrying out any emergency response action activities pursuant to Rule 62-780.500, F.A.C., including a person retained or hired by such person to provide services relating to an emergency response action.

(40) "Risk reduction" means the lowering or elimination of the level of risk posed to human health or the environment through interim remedial action (interim source removal), remedial action, or institutional and, if appropriate, engineering controls.

(41) "Sediment" means the unconsolidated solid matrix occurring immediately beneath any surface water body. The surface water body may be present part or all of the time and may support a wetland environment or vegetation.

(42) "Site" refers to the definition for "contaminated site".

(43) "Site assessment" means the performance of any of the tasks or activities as described in Rules 62-780.500 and 62-780.600, F.A.C.

(44) "Site rehabilitation" means the assessment of site contamination and the remediation activities that reduce the levels of contaminants at a site through accepted treatment methods to meet the CTLs established for that site.

(45) "Source removal" means the removal of free product, contaminated groundwater, contaminated sediment, or contaminated soil, or the removal of contaminants from soil or sediment that has been contaminated to the extent that leaching to groundwater or surface water has occurred or is occurring, after approval of a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C.

(46) "Surface water" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

(47) "Synergistic effect" means 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 an individual is exposed.

(48) “Temporary point of compliance” (TPOC) is the boundary represented by one or more designated monitoring wells at which groundwater CTLs may not be exceeded while site rehabilitation is proceeding.

(49) “TPOC” means temporary point of compliance.

(50) “TRPHs” means Total Recoverable Petroleum Hydrocarbons.

(51) “UCL” means upper confidence limit estimate of the arithmetic mean.

(52) “Waters” or “waters of the state” means waters as defined in Section 403.031, F.S.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.220 Notices.

(1) Notice of Field Activities. Within the time frames specified in Table A or the CAD, the PRSR, its agent, or authorized representative shall provide written notice to the Department prior to performing field activities such as interim source removal activities, installing monitoring or recovery well(s), performing sampling, installing remediation equipment, or installing an engineering control. Personnel from the Department shall be allowed the opportunity to observe these field activities and to take sub-samples. If the Department chooses to be present when field activities are being performed, the Department shall be responsible for confirming that the field activities are being performed in accordance with the schedule provided in the written notification.

(2) Initial Notice of Contamination Beyond Property Boundaries. At any time during site rehabilitation conducted pursuant to this chapter, if the PRSR, its authorized agent, or other representative discovers from laboratory analytical results that comply with appropriate quality assurance protocols pursuant to Chapter 62-160, F.A.C., that contamination [as defined in subsection 62-780.200(11), F.A.C.] exists in any medium beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter, the PRSR shall give actual notice as soon as possible, but no later than 10 days from such discovery, to the Division of Waste Management at the Department’s Tallahassee Office. The actual notice shall be provided on Form 62-780.900(1) titled “Initial Notice of Contamination Beyond Property Boundaries” and mailed by “Certified Mail, Return Receipt Requested”. A copy of such notice shall be mailed to

the appropriate Department District Office and the County Health Department. The notice shall include the following information:

(a) The location of the property at which site rehabilitation was initiated pursuant to this chapter and contact information for the PRSR, its authorized agent, or other representative;

(b) A listing of all record owners of any real property, other than the property at which site rehabilitation was initiated pursuant to this chapter, at which contamination has been discovered; the parcel identification number for any such real property; the owner's address listed in the current county property tax office records; and the owner's telephone number;

(c) Separate table(s) by medium (groundwater, soil, surface water, or sediment) that list sampling locations; sampling date(s); names of contaminants detected above CTLs; their corresponding CTLs; the contaminant concentration(s); and whether the CTL is based on health or nuisance, organoleptic, or aesthetic concerns; and

(d) A vicinity map that shows the sampling locations with corresponding laboratory analytical results and the date(s) on which the sample(s) was (were) collected, and identifies the property boundaries of the property at which site rehabilitation was initiated pursuant to this chapter and the other property(ies) at which contamination has been discovered during such site rehabilitation.

(3) Subsequent Notice of Contamination Beyond Source Property Boundaries for Establishment of a Temporary Point of Compliance (TPOC). Prior to the Department authorizing a temporary extension of the point of compliance beyond the boundary of the source property (i.e., the location from which the contamination originates) in conjunction with Natural Attenuation with Monitoring pursuant to Rule 62-780.690, F.A.C., or Active Remediation pursuant to Rule 62-780.700, F.A.C., the PRSR shall provide the following notices:

(a) Actual notice in written form mailed by "Certified Mail, Return Receipt Requested" to the appropriate County Health Department and all record owners of any real property into which the point of compliance is allowed to extend (mailed to the owner's address listed in the current county property tax office records). The notice shall include the following information:

1. The type of proposed agency action (i.e., temporary extension of the point of compliance);
2. A description of the location of the subject site and the name and address of the PRSR;
3. The location where complete copies of any relevant documents concerning the site and the proposed remedial strategy, including temporary extension of the point of compliance, are

available for public inspection;

4. The name and address of a contact person at the Department who is the project manager for the site rehabilitation, to whom comments should be directed, and from whom copies of the Department's actions regarding the site may be requested; and

5. A paragraph including the statement: "Persons receiving this notice shall have the opportunity to comment on the Department's proposed action within 30 days of receipt of the notice." For purposes of actual notice, the 30-day comment period shall commence on the delivery date stamped on the return receipt; and

(b) Constructive notice to residents [if different from the real property owner(s) notified pursuant to paragraph 62-780.220(3)(a), F.A.C.] and business tenants of any real property into which the point of compliance is allowed to extend. Such constructive notice, which shall include the same information as required in the actual notice, shall be provided by complying with the following:

1. Publishing the notice one time, at least two columns wide by 10 inches long with a headline in a type no smaller than 18-point font and the body of the notice in a type no smaller than 10-point font, in a standard-size newspaper of general circulation;

2. Including a statement in the notice indicating the 30-day deadline by which comments must be received. For purposes of constructive notice, the 30-day comment period shall commence on the date the notice is published in the newspaper.

(c) Copies of notices, both actual and constructive, must be provided to the Department as proof of compliance with this section. For purposes of the constructive notice, the PRSR shall provide a copy of the version printed in the newspaper or submit the actual newspaper page itself.

(4) Status Update 5-Year Notice. When utilizing a TPOC beyond the boundary of the source property to facilitate natural attenuation with monitoring or active remediation, an additional notice concerning the status of the site rehabilitation shall be similarly provided every five years to the classes of persons who received notice pursuant to subsection 62-780.220(3), F.A.C., unless in the intervening time, such persons have been informed that the contamination no longer affects the property into which the point of compliance was allowed to extend.

(5) Warning Signs at Hazardous Waste Sites. At sites where a risk of exposure to the public exists due to contamination of the soil, sediment, or surface water with hazardous waste as

defined in Section 403.703(21), F.S., the PRSR shall place warning signs pursuant to Chapter 62-730, F.A.C.

Specific Authority 376.30701, 403.7255 FS. Law Implemented 376.30701, 403.7255 FS. History–New 4-17-05.

62-780.300 Quality Assurance Requirements.

(1) Persons performing sampling and analyses pursuant to this chapter shall comply with the applicable requirements of Chapter 62-160, F.A.C., Quality Assurance.

(2) Unless otherwise specified in this chapter, reports that are submitted to the Department and that contain analytical data shall include the following forms and information, as applicable:

(a) Laboratory reports that include all information specified in subsection 62-160.340(2), F.A.C., and are in the format specified in Chapter 62-160, F.A.C. (Soil analytical results shall be reported on a dry-weight basis.);

(b) Copies of the completed chain of custody record form(s) [Form 62-780.900(3) or an equivalent chain of custody form that includes all the items required by Form 62-780.900(3)];

(c) Copies of the completed water sampling log form(s) pursuant to Chapter 62-160, F.A.C.; and

(d) Results from screening tests or on-site analyses performed pursuant to this chapter.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History–New 4-17-05.

62-780.400 Professional Certifications.

(1) Applicable portions of technical documents submitted by the PRSR to the Department shall be signed and sealed by a professional engineer registered pursuant to Chapter 471, F.S., or a professional geologist registered pursuant to Chapter 492, F.S., certifying that the applicable portions of the technical document and associated work comply with standard professional practices, this chapter and other rules of the Department, and any other applicable laws and rules governing the profession. If a laboratory report is submitted separately from any other technical document submittal, this requirement shall not apply to that laboratory report.

(2) Upon completion of the approved remedial action, the Department shall require a professional engineer registered pursuant to Chapter 471, F.S., or a professional geologist registered pursuant to Chapter 492, F.S., to certify that the applicable portions of the remedial action were, to the best of his or her knowledge and ability, completed in accordance with this

chapter and in conformance with the plans and specifications approved by the Department.

Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History—New 4-17-05.

62-780.450 Combined Document.

(1) The Interim Source Removal Report, the Site Assessment Report, the Risk Assessment Report, and the Remedial Action Plan, as applicable, may be submitted by the PRSR to the Department for review either separately as each program task is completed, or as a combined document. Other individual program task documents may be included in a combined document if agreed to in writing by the Department.

(2) The combined document may incorporate, as applicable, the required content for the Interim Source Removal Report, Site Assessment Report, Risk Assessment Report, and Remedial Action Plan program tasks pursuant to Rules 62-780.500, 62-780.600, 62-780.650, and 62-780.700, F.A.C., including an Interim Source Removal Proposal, a No Further Action Proposal, or a Natural Attenuation with Monitoring Plan associated with the Site Assessment Report or the Risk Assessment Report.

(3) If the PRSR elects to prepare a combined document in lieu of individual program task documents, the decision shall be documented in the CAD or the PRSR shall notify the Department in writing once the decision is made. The time for filing any combined document shall be governed by the earliest submission deadline for any component, unless the Department agrees to a different schedule in advance, and in writing.

(4) Within the time frames of Table A or the CAD, the PRSR shall submit two copies of the combined document to the Department for review, including all applicable professional certifications as required pursuant to Rule 62-780.400, F.A.C.

(5) The Department shall:

(a) Provide the PRSR with written approval of the individual program task or the combined document; or

(b) Notify the PRSR in writing, stating:

1. The reason(s) why one or more individual program tasks or the combined document does not conform with the requirements of the applicable criteria of Rule 62-780.500, 62-780.600, 62-780.650, or 62-780.700, F.A.C.; or

2. The reason(s) why a No Further Action Proposal or a Natural Attenuation with Monitoring Plan does not meet the applicable criteria of Rule 62-780.680 or 62-780.690, F.A.C.

(6) If the individual program task or combined document is incomplete in any respect, or is insufficient to satisfy the requirements of the applicable criteria of Rule 62-780.500, 62-780.600, 62-780.650, or 62-780.700, F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.450(5)(b), F.A.C., and the PRSR shall submit to the Department two copies of a Combined Document Addendum that addresses the deficiencies within 60 days after receipt of the notice.

Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History—New 4-17-05.

62-780.500 Emergency Response Action or Interim Source Removal.

(1) Within 24 hours of discovery of an unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action to alleviate a threat to human health, public safety, or the environment, or within 24 hours after being notified by the Department of such a condition, the PRSR shall commence an emergency response action. For purposes of an emergency response action, “commence” means that the PRSR has employed or contracted with a response action contractor to evaluate, design, plan, engineer, construct, implement, and complete the requirements of the emergency response action, and has given the contractor the authority to proceed with the required work. The emergency response action shall include performing all tasks described in this section that are necessary to eliminate the immediate and serious threat posed by the site conditions. In addition, any PRSR may conduct an interim source removal in accordance with this section. The objectives of the emergency response action or interim source removal are to remove specific known contaminant source(s) and provide temporary control to prevent or minimize contaminant migration, and to protect human health and the environment prior to the approval of a Remedial Action Plan prepared and submitted pursuant to Rule 62-780.700, F.A.C.

(2) Free Product Removal and Disposal.

(a) The PRSR may, and for emergency response actions shall, if necessary to alleviate a threat to human health, public safety, or the environment, perform free product recovery consistent with the following requirements:

1. The PRSR shall provide to the Department a written notification in accordance with the time schedule in Table A (Notices for Field Activities) or the CAD that includes a description of the type and estimated volume of free product to be removed, and proposed free product recovery and disposal methods to be utilized;

2. The free product recovery shall not spread contamination into previously uncontaminated or less contaminated areas through untreated discharges, improper treatment, improper disposal, or improper storage;

3. Flammable products shall be handled in a safe manner; and

4. The recovered product shall be characterized and properly disposed or recycled; and all sampling and analyses shall be performed pursuant to Rule 62-780.300, F.A.C.

(b) The following passive and active methods of free product recovery may be implemented without requesting approval from the Department:

1. Absorbent pads;

2. Skimmer pumps that include pumps with mechanical, electrical, or hand-bailed purging operations;

3. Hand or mechanical bailing; and

4. Fluid vacuum techniques (for example, vacuum pump trucks) or total fluid displacement pumps, as long as the technique used shall not smear or spread free product, or contaminate previously uncontaminated or less contaminated media.

(c) In addition to the free product recovery methods specified in paragraph 62-780.500(2)(b), F.A.C., the PRSR may evaluate, propose, and submit other product recovery methods to the Department for approval prior to implementation. The submittal, as an Interim Source Removal Proposal, shall include the results of the evaluation performed to determine the potential for product smearing or spreading and the potential for air emissions. The free product recovery methods proposed may include:

1. Dewatering or groundwater extractions that may influence the depth to the water table;

2. Air/fluid extraction; or

3. Excavation of soil saturated with non-aqueous phase liquid into, or below, the water table.

(d) The Department shall:

1. Provide the PRSR with written approval of the Interim Source Removal Proposal; or

2. Notify the PRSR in writing, stating the reason(s) why the Interim Source Removal

Proposal does not contain information adequate to support a free product recovery method pursuant to paragraph 62-780.500(2)(c), F.A.C.

(e) Free product recovery as an Interim Source Removal task shall be deemed complete when the objectives of subsection 62-780.500(1), F.A.C., have been met.

(f) Within the time frames specified in Table A or the CAD, written notification of initiation of free product recovery shall be provided by the PRSR to the Department on Form 62-780.900(2).

(g) Within the time frames and frequencies specified in Table A or the CAD, an Interim Source Removal Status Report documenting the recovery progress and summarizing all recovery activities for a specified period shall be submitted by the PRSR to the Department for review.

(3) Short-term Groundwater Recovery.

(a) The PRSR may, and for emergency response actions shall, if necessary to alleviate a threat to human health, public safety, or the environment, perform a short-term groundwater recovery event as an interim source removal activity. Groundwater recovery from well(s) within the plume with screened intervals that intercept the water table, with the intent of achieving cleanup progress, may be performed prior to Department approval of a Remedial Action Plan submitted pursuant to Rule 62-780.700, F.A.C., provided the following criteria are met:

1. Prior to initiation, the PRSR shall provide to the Department a written notification in accordance with the time frames in Table A (Notices for Field Activities) or the CAD that includes a description of the type of contamination, estimated volume of groundwater to be removed, and proposed disposal methods to be utilized;

2. The groundwater contamination has been established to be less than 1/4 acre and confined to shallow aquifer well(s) with screened intervals that intercept the water table, such that the pumping of a shallow aquifer well(s) within the plume may result in the site meeting the No Further Action criteria of Rule 62-780.680, F.A.C., or the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C.;

3. Free product is not present;

4. The duration of the groundwater recovery does not exceed 30 days, unless the PRSR demonstrates to the Department that extended groundwater recovery will not result in the spread of contamination;

5. The recovered groundwater is not treated on-site and is properly disposed at a permitted

industrial water treatment facility, at a publicly-owned treatment works with the approval of the sanitary sewer authority, or at a permitted Hazardous Waste Treatment, Storage, or Disposal facility if the recovered groundwater is a hazardous waste; and

6. Sampling of representative monitoring wells to determine the effectiveness of the Short-term Groundwater Recovery event shall be performed at least 30 days after completion of the groundwater recovery.

(b) Within the time frames and frequencies specified in Table A or the CAD, the PRSR shall submit to the Department for review two copies of an Interim Source Removal Status Report that documents the recovery progress and summarizes all recovery activities for a specified period.

(4) Groundwater Recovery, Treatment, and Disposal.

(a) The PRSR may perform groundwater recovery prior to the approval of a Remedial Action Plan prepared and submitted pursuant to Rule 62-780.700, F.A.C., provided the PRSR submits an Interim Source Removal Proposal that includes the same level of engineering detail as a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C. Applicable sections shall be signed and sealed pursuant to Rule 62-780.400, F.A.C.

(b) The Department shall:

1. Provide the PRSR with written approval of the proposal; or
2. Notify the PRSR in writing, stating the reason(s) why the proposal does not contain information adequate to perform groundwater recovery pursuant to paragraph 62-780.500(4)(a), F.A.C.

(c) Within the time frames and frequencies specified in Table A or the CAD, the PRSR shall submit to the Department for review two copies of an Interim Source Removal Status Report documenting the recovery progress and summarizing all recovery activities for a specified period.

(5) Soil and Sediment Removal, Treatment, and Disposal.

(a) The PRSR may, and for emergency response actions shall, excavate contaminated soil or contaminated sediment for proper treatment or proper disposal as an interim source removal activity provided the following criteria are met:

1. Prior to initiation, the PRSR shall provide to the Department a written notification in accordance with the time frames in Table A or the CAD, that includes a description of the type of

contamination, estimated volume of soil or sediment to be removed, and proposed disposal methods to be utilized;

2. Contamination shall not be spread into previously uncontaminated areas or less contaminated areas through untreated discharges, improper treatment, improper disposal, or improper storage;

3. Flammable products shall be handled in a safe manner;

4. When a soil vacuum extraction system is necessary to abate an imminent threat to human life, health, or safety within a structure or utility conduit, then the vacuum extraction system shall be designed and operated only to abate the imminent threat. The Department shall be notified, within 24 hours, of the imminent threat and the intent to use a soil vacuum extraction system. The air emissions monitoring and frequency of monitoring shall be performed pursuant to paragraphs 62-780.700(4)(a) and (12)(i), F.A.C.;

5. If one of the objectives of the interim source removal is to excavate all the contaminated soil or sediment, confirmatory soil or sediment samples shall be collected. Soil samples shall be collected at the bottom of the excavation (unless the bottom is below the water table) and walls or perimeter of the excavation. Sediment samples shall be collected at the bottom and perimeter of the excavation, if applicable;

6. A determination shall be made as to whether or not the contaminated soil or sediment contains hazardous waste. If the soil or sediment is known to be contaminated by hazardous waste, listed in 40 CFR Part 261 Subpart D, testing is not required to make the determination. If the soil or sediment is not known to be contaminated with listed hazardous waste, but is contaminated with any of the toxic constituents identified in 40 CFR 261.24(b) (and the contamination does not result solely from manufactured gas plant waste), then USEPA Test Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) and subsequent analysis of the leachate, shall be performed on a number of samples sufficient to determine whether or not the contaminated soil or sediment exceeds maximum concentrations for the toxicity characteristics. [Refer to the contaminated media guidelines referenced in subsection 62-780.100(6), F.A.C., for guidance in managing soil or sediment that contains hazardous waste.]; and

7. When excavated soil or sediment is temporarily stored or stockpiled on-site, the soil or sediment shall be placed on an impermeable surface to prevent leachate infiltration and secured

in a manner that prevents human exposure to contaminated soil or sediment and prevents soil or sediment exposure to precipitation that may cause surface runoff. Any excavation shall be secured to prevent entry by the public. The temporary storage or stockpiling of excavated contaminated soil or sediment shall not exceed 60 days, unless the excavated contaminated soil or sediment contains hazardous waste and a different time frame is authorized pursuant to Chapter 62-730, F.A.C. The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(b) Consistent with the goals set forth in Section 403.061(33), F.S., the Department encourages treatment over disposal options to address contaminated soil.

(c) Soil or sediment treatment, storage, or disposal techniques not authorized by applicable rules of the Department require approval in an Interim Source Removal Proposal submitted pursuant to paragraph 62-780.500(5)(d), F.A.C., or in a Remedial Action Plan submitted pursuant to Rule 62-780.700, F.A.C.

(d) The Interim Source Removal Proposal shall include the information outlined in subsections 62-780.700(3) and (4), F.A.C., as applicable.

(e) The Department shall:

1. Provide the PRSR with written approval of the Interim Source Removal Proposal submitted pursuant to paragraph 62-780.500(5)(d), F.A.C.; or

2. Notify the PRSR in writing, stating the reason(s) why the Interim Source Removal Proposal does not contain information adequate to support the selection of an alternative soil or sediment treatment or disposal technique.

(6) Authorization or receipt of approval pursuant to Rule 62-780.500, F.A.C., does not relieve the PRSR from the obligation to comply with other Department rules (for example, Chapters 62-701 and 62-730, F.A.C.) for product recovery, product disposal, groundwater recovery, or the handling, storage, disposal, or treatment of contaminated media. [Refer to the contaminated media guidelines referenced in subsection 62-780.100(6), F.A.C., for guidance on management of environmental media that contain hazardous waste.] The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(7) Interim Source Removal Report.

(a) Within the time frames specified in Table A or the CAD, two copies of an Interim Source Removal Report shall be submitted by the PRSR to the Department for review. If analytical

results obtained pursuant to subparagraphs 62-780.500(3)(a)6., 62-780.500(5)(a)5., and 62-780.600(5)(l)3., F.A.C., as applicable, after completion of the interim source removal, demonstrate that the No Further Action criteria of subsection 62-780.680(1), F.A.C., are met, a Site Assessment Report pursuant to subsection 62-780.600(7), F.A.C., may be submitted in lieu of an Interim Source Removal Report. The Interim Source Removal Report shall contain the following information in detail, as applicable:

1. The type and an estimated volume of non-aqueous phase liquids that were discharged to the environment, if known;
2. The volume of non-aqueous phase liquids and the volume of groundwater recovered;
3. The volume of contaminated soil or sediment excavated and treated or properly disposed;
4. The disposal or recycling methods for non-aqueous phase liquids and contaminated soil or sediment;
5. The disposal methods for other contaminated media and any investigation-derived waste;
6. A scaled site map (including a graphical representation of the scale used) that shows the location(s) of all known on-site structures (including any buildings, underground storage tanks, storm drain systems, and septic tanks), locations where free product was recovered and the area of soil removal or treatment, and the approximate locations where all samples were collected;
7. A table that summarizes free product thickness in each monitoring well or piezometer, the total depth and screened interval of each monitoring well or piezometer, and the dates the measurements were made;
8. The type of field screening instrument, analytical methods, or other methods used;
9. The dimensions of the excavation(s) and location(s), integrity, capacities and last known contents of storage tanks, integral piping, dispensers, or appurtenances removed;
10. A table that indicates the identification, depth, and field soil screening results of each sample collected;
11. Separate tables by media that summarize all available soil, sediment, groundwater, and surface water analytical results, detection limits achieved for non-detected analytes, and analyses performed (listing all contaminants analyzed and their corresponding CTLs);
12. Depth to groundwater at the time of each excavation, measurement locations, and method used to obtain that information;

13. A scaled site map (including a graphical representation of the scale used) that shows the locations and results of confirmatory soil or sediment samples in relation to the area of the soil or sediment removal; and

14. Documentation or certification that confirms the proper treatment or proper disposal of the non-aqueous phase liquids, contaminated groundwater, contaminated soil, or contaminated sediment, including disposal manifests for non-aqueous phase liquids or hazardous waste, and a copy of the documentation or certification of treatment or acceptance of the contaminated soil or contaminated sediment.

(b) The Department shall:

1. Provide the PRSR with written approval of the Interim Source Removal Report submitted pursuant to the criteria of paragraph 62-780.500(7)(a), F.A.C.; or

2. Notify the PRSR in writing, stating the reason(s) why the Interim Source Removal Report does not conform with the applicable Interim Source Removal criteria of paragraph 62-780.500(7)(a), F.A.C.

(8) If the Interim Source Removal Report is incomplete in any respect, or is insufficient to satisfy the criteria of paragraph 62-780.500(7)(a), F.A.C., the Department shall inform the PRSR pursuant to subparagraph 62-780.500(7)(b)2., F.A.C., and the PRSR shall submit to the Department two copies of an Interim Source Removal Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(9) If the interim source removal is performed after submittal of the Site Assessment Report, the PRSR shall submit to the Department two copies of a Site Assessment Report Addendum that updates the Site Assessment Report by summarizing the interim source removal activities and all sampling results obtained after submittal of the Site Assessment Report, and that includes a recommendation pursuant to paragraph 62-780.600(8)(b), F.A.C.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.550 De Minimis Discharges.

(1) De minimis discharges shall be addressed in an interim source removal and shall be subject to the requirements of Rule 62-780.500, F.A.C., except for the notification and reporting requirements of that section. De minimis discharges also shall be exempt from the notification requirements of subsection 62-780.220(1), F.A.C.

(2) The PRSR shall maintain records of the actions that were taken in response to the discharge including the information required pursuant to paragraph 62-780.500(7)(a), F.A.C., for five years from the date of the discharge. The records shall be made available to the Department upon request.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.600 Site Assessment.

(1) Unless the discharge is a de minimis discharge addressed pursuant to the requirements of Rule 62-780.550, F.A.C., the PRSR shall commence a site assessment within 60 days after a discharge is discovered. For purposes of a site assessment, “commence” means that the PRSR has employed or contracted with a professional engineer or geologist to design, implement, and complete the requirements of this section, and has given the professional the authority to proceed with the required work. The PRSR shall conduct the site assessment in accordance with the requirements of this rule and the time frames of Table A or the CAD, if applicable.

(2) To facilitate the site assessment process, the PRSR may have discussions with the Department at various decision points to establish the scope and methodology of the site assessment, applicable exposure factors and the remedial strategy for the site, and risk management options based on the current and projected land use(s) at the site.

(3) The objectives of the site assessment shall be the following, as applicable:

(a) To evaluate the current exposure and potential risk of exposure to humans and the environment, including multiple pathways of exposure. The physical, chemical, and biological characteristics of each contaminant and the individual site characteristics shall be considered. The individual site characteristics include:

1. The current and projected use of the affected groundwater and surface water in the vicinity of the site;
2. The current and projected land use of the area affected by the contamination;

3. The exposed human population and ecological receptors including the presence of threatened or endangered species (flora and fauna). A general literature review and analysis based on site-specific conditions may be sufficient;

4. The location of the plume;

5. The degree and extent of contamination;

6. The rate and direction of migration of the plume;

7. The apparent or potential rate of degradation of contaminants through natural attenuation;

and

8. The potential for further migration in relation to the source property boundary;

(b) To determine whether contamination is present and the types of contaminants present, and to determine the horizontal and vertical extent of contamination in every medium found to be contaminated (for soil in the unsaturated zone, to the more stringent of the direct exposure residential soil CTLs and the applicable leachability-based soil CTLs provided in Chapter 62-777, F.A.C., Table II; and for groundwater, to the groundwater CTLs or to the surface water CTLs provided in Chapter 62-777, F.A.C., Table I, as applicable);

(c) To determine or confirm the origin(s) of the source(s) of contamination, if technologically feasible;

(d) To establish the background concentrations;

(e) To establish the horizontal extent and thickness of free product, if technologically feasible. If the soil concentration of a contaminant is above its soil saturation concentration (C_{sat}), free product may be present. [Refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for development of soil CTLs based on C_{sat} .];

(f) To determine whether source removal, in addition to any interim source removal already performed pursuant to Rule 62-780.500, F.A.C., is warranted;

(g) To describe relevant geologic and hydrogeologic characteristics that influence migration and transport of contaminants at the site, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C.:

1. To describe the lithology and horizontal and vertical continuity of units, such as the presence of karst features, bedrock, native soil, and fill material, in the areas affected and expected to be affected by the discharge(s);

2. To identify the aquifer or aquifers and confining units affected and expected to be affected

by the discharge(s) and to determine the groundwater classification, hydraulic conductivity, transmissivity, and storativity of the aquifer or aquifers;

3. To identify and characterize any perched zone, if present;

4. To determine the horizontal and vertical rate and direction of groundwater flow (at all affected depths, as appropriate), to determine the extent of water table fluctuation, to evaluate the potential effect of seasonal variations and vertical groundwater flow components on the rate and direction of groundwater flow, to determine the hydraulic interaction between groundwater and any surface water within the vicinity of the site, and to determine whether there are any tidal effects for sites located near marine surface water; and

5. To determine other mechanisms of transport of contaminants in the immediate vicinity of the site, including rate and direction of movement of contaminants in sewer lines, subsurface utility conduits or vaults, soil, sediments, and surface water, as applicable;

(h) To determine by means of a well survey whether any public water supply wells, as defined in Chapter 62-550, F.A.C., are present within a 1/2 mile radius of the site, whether the site is located within the regulated wellhead protection zone of a public water supply well or well field, and whether any private water supply wells (including potable, irrigation, and industrial wells) are present within a 1/4 mile radius of the site, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C. If contamination beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter is discovered at any time, within 60 days of such discovery the PRSR shall conduct the well survey pursuant to paragraph 62-780.600(5)(n), F.A.C., and submit a report to the Department and to the County Health Department that provides the results of the well survey in accordance with the requirements of subparagraphs 62-780.600(8)(a)10. and 62-780.600(8)(a)11., F.A.C., and that provides the results of any required sampling pursuant to paragraph 62-780.600(5)(o), F.A.C., based on the results of the well survey. These results shall include a listing of the sampled wells, the rationale for their selection, the contaminants analyzed, and the analytical results;

(i) To determine whether any surface water will be exposed to contamination that migrates beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter;

(j) To report any off-site activities (for example, dewatering, active remediation, or flood control pumping) in the immediate vicinity of the site that may have an effect on the groundwater

flow at the site, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C.; and

(k) To facilitate the selection of a remediation strategy for the site that is protective of human health and the environment, and considers the proposed property use, identifies risks posed by the contamination based on the proposed use, and describes how those risks will be managed, unless No Further Action is deemed appropriate pursuant to the provisions of subsection 62-780.680(1), F.A.C.

(4) The analyses for contaminants in surface water, groundwater, soil, and sediment samples, as applicable, shall be performed using the appropriate analytical procedures referenced or listed in Chapter 62-160, F.A.C. The initial analyses of contaminants, including their reaction and degradation products, shall be based on the site history.

(5) The site assessment shall include tasks that are necessary to achieve objectives described in subsection 62-780.600(3), F.A.C., and include the following, as applicable:

(a) Use of geophysical equipment such as magnetometers, ground penetrating radar, or metal detectors to detect storage tank system(s);

(b) Use of borehole geophysical equipment and methods to determine geologic and hydrogeologic characteristics of affected and potentially affected hydrogeologic zones;

(c) Sampling of soil from the unsaturated zone for the following criteria, as applicable:

1. Appropriate laboratory analyses to determine the degree and extent of soil contamination and, as applicable, the background concentrations. Soil samples shall be collected from a sufficient number of locations in the unsaturated zone based on the horizontal and vertical extent of contamination. Samples shall be collected at two-foot intervals unless the sampling intervals are adjusted, as necessary, to account for factors such as discrete variations in the lithology, depth to the water table, the point of discharge, and the chemical and physical properties of the contaminants. If a surficial discharge of metals or semi-volatile organic compounds is known or suspected, the sampling intervals shall be as follows: land surface to six inches, six inches to two feet, and two-foot intervals thereafter. If the 95% Upper Confidence Limit (UCL) approach pursuant to subparagraphs 62-780.680(1)(b)1., 62-780.680(2)(b)1., and 62-780.680(3)(b)1., F.A.C., is utilized, the soil sampling shall be sufficient to identify the area(s) of highest contaminant concentrations and to allow the calculation of an exposure unit average concentration. [Refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for

guidance.];

2. Measurement of appropriate soil properties such as texture, pH, moisture content, dry bulk density, organic carbon content, and infiltration rate using the test methods specified in Chapter 62-777, F.A.C., Table III, for the development of alternative soil CTLs in accordance with the technical report referenced in subsection 62-780.100(2), F.A.C. Measurements shall be made on soil from within the contaminated area when feasible. Otherwise, measurements may be made on soil from an alternative location that has equivalent soil properties;

3. Fractionation laboratory analyses of TRPHs to determine if the site-specific concentrations of the TRPH fractions exceed the soil CTLs of the TRPH fractions developed using one of the sub-classification methodologies described in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C. Fractionation and FL-PRO analyses of TRPHs shall be performed on sub-samples from at least one grab soil sample collected from each source area that exceeds the applicable default soil CTLs for TRPHs specified in Chapter 62-777, F.A.C., Table II, or alternative soil CTLs for TRPHs established pursuant to Rule 62-780.680, F.A.C., with the actual number of samples based on the horizontal and vertical extent of contamination and the site-specific stratigraphy;

4. Direct leachability testing by USEPA Test Method 1312, Synthetic Precipitation Leaching Procedure (SPLP) extraction, or USEPA Test Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) extraction if the contamination is derived from used oil or similar petroleum products, followed by the appropriate analyses of the leachate. Leachability and total soil concentration analysis for the appropriate laboratory analyses shall be performed on sub-samples from at least one grab soil sample collected from each source area that exceeds the applicable leachability-based soil CTLs specified in subparagraph 62-780.680(1)(b)2., F.A.C., or established pursuant to subparagraph 62-780.680(2)(b)2. or (3)(b)2., F.A.C., with the actual number of samples based on the horizontal and vertical extent of contamination and the site-specific stratigraphy; or

5. Hazardous waste characterization by USEPA Test Method 1311 TCLP extraction followed by the appropriate analysis of the leachate, if the information indicates that the soil has the potential to be a hazardous waste (and the contamination does not result solely from manufactured gas plant waste);

(d) Sampling of undisturbed soil above and below the water table using hand augers, hollow

stem augers with split spoons or Shelby tubes, direct push technology, or other available technologies to obtain information on site stratigraphy and non-aqueous phase liquids entrapped below the water table, to determine geotechnical parameters and vertical hydraulic conductivity of confining or semi-confining zones, and to assess the appropriateness of natural attenuation with monitoring;

(e) Use of fracture trace analysis to discover linear zones in which discrete flow could take place;

(f) Use of field soil screening techniques, which shall be demonstrated to be appropriate for the site conditions and the physical and chemical characteristics of the contaminants, to determine the optimal locations for collection of samples for laboratory analyses. These analyses shall be performed on a minimum of three grab samples with high, medium, and low screening results for the site. These analyses shall be performed per source area and per sampling event, except that only one representative sample collected from the area most likely to be contaminated shall be sufficient if the field screening results indicate that contaminated soil is not present. The actual number of laboratory samples shall be based on the horizontal and vertical extent of contamination and the degree of correlation between field soil screening and laboratory results;

(g) Use of piezometers or monitoring wells to determine the frequency of occurrence, horizontal and vertical extent, and thickness of free product;

(h) Use of monitoring wells, piezometers, or other sampling and measurement techniques to obtain a three-dimensional evaluation of the source of contamination, of the migration of contaminants below the water table, of groundwater flow, and of relevant hydrologic parameters;

(i) Use of piezometers or monitoring wells to determine horizontal direction(s) of groundwater flow and horizontal and vertical hydraulic gradients, as applicable (groundwater level measurements shall be made within a 24-hour period);

(j) Survey of every top-of-casing to the National Geodetic Vertical Datum (NGVD) of 1929 or to the North American Vertical Datum (NAVD) of 1988;

(k) Use of field screening techniques (for example, use of temporary wells, piezometers, or direct push technology to obtain groundwater samples for on-site analyses using gas chromatography) to optimize monitoring well placement;

(l) Sampling of monitoring wells for the appropriate laboratory analyses, with the most recent

sampling of representative monitoring wells having occurred no more than 270 days prior to Site Assessment Report submittal, to determine the degree and extent of groundwater contamination and the background concentrations, if applicable, such that:

1. Drill cuttings and drilling mud generated during monitoring well installation shall be handled and disposed of in such a manner that contamination is not spread into previously uncontaminated or less contaminated media. Authorization pursuant to this rule does not relieve the PRSR from the obligation to comply with other Department rules (for example, Chapters 62-701, 62-730, 62-770, 62-782, and 62-785, F.A.C.) for handling and disposal of contaminated media. [Refer to the contaminated media guidelines referenced in subsection 62-780.100(6), F.A.C., for guidance.] The PRSR is advised that other federal or local laws and regulations may apply; and

2. Development water and purge water shall be handled and disposed of in such a manner that contamination is not spread into previously uncontaminated or less contaminated media. Authorization pursuant to this rule does not relieve the PRSR from the obligation to comply with other Department rules (for example, Chapters 62-701, 62-730, 62-770, 62-782, and 62-785, F.A.C.) for handling and disposal of contaminated media. [Refer to the contaminated media guidelines referenced in subsection 62-780.100(6), F.A.C., for guidance.] The PRSR is advised that other federal or local laws and regulations may apply; and

3. If an interim source removal was performed and No Further Action pursuant to subsection 62-780.680(1), F.A.C., will be recommended, one of the following criteria shall be met pursuant to Rule 62-780.690, F.A.C.:

a. If groundwater contamination was present prior to the interim source removal, groundwater concentrations shall meet the No Further Action criteria of subsection 62-780.680(1), F.A.C., for at least two consecutive sampling events of representative monitoring wells, performed a minimum of three months apart; or

b. If soil contamination was only present in the unsaturated zone prior to the interim source removal, groundwater concentrations shall meet the No Further Action criteria of subsection 62-780.680(1), F.A.C., during only one sampling event of representative monitoring wells;

(m) Sampling of surface water and sediment for the appropriate laboratory analyses to determine the degree and extent of surface water and sediment contamination and the background concentrations, if applicable;

(n) Inspection of public records (such as those at the local Department of Health office, at the appropriate Water Management District office, and at local municipalities) and performance of a field reconnaissance, as appropriate, to locate all water supply wells (including potable, irrigation, and industrial wells) pursuant to paragraph 62-780.600(3)(h), F.A.C., and injection wells or drainage wells as defined in Chapter 62-528, F.A.C.;

(o) If the possibility exists that the contamination may have affected public or private water supply wells, sampling of the well or wells for the appropriate laboratory analyses, with the consent of the owner(s), to determine whether any contamination is present;

(p) Use of available and appropriate literature in conjunction with site-specific lithologic logs to identify aquifers present beneath the site. An analysis for Total Dissolved Solids shall be used if the PRSR chooses to demonstrate to the Department that the background quality of the groundwater on-site would allow it to be classified as an area of G-III groundwater;

(q) Performance of tests to determine aquifer characteristics, if appropriate, on different strata of the surficial aquifer or of different aquifers, if applicable, using water-table monitoring wells, intermediate depth monitoring wells, and vertical extent monitoring wells. Performance of a pumping test may be deferred until the Remedial Action Plan phase if groundwater extraction is proposed pursuant to the provisions of Rule 62-780.700, F.A.C. If a pumping test is performed within the plume, at least two samples of the groundwater withdrawn during the test shall be collected and analyzed for the appropriate contaminants and physical properties (for example, Hardness, Iron, Total Dissolved Solids, and Total Suspended Solids) that may affect the treatment system and disposal options. At a minimum, one sample shall be collected at the mid-point of the pumping test and one at the end of the pumping test;

(r) Review of historical land use records and existing aerial photographs to determine past uses of the property(ies) and location(s) of previous storage systems; and

(s) Establishment of the parameters or exposure assumptions that will be used to develop the alternative CTLs pursuant to Rule 62-780.650, F.A.C., if the PRSR chooses this option.

(6) If there is no historical evidence of certain contaminants being used within the site and if initial testing of representative monitoring well(s), performed pursuant to subsections 62-780.600(4) and (5), F.A.C., does not indicate the presence of any contaminants within a specific analytical procedure, or indicates that the presence of a contaminant is due to a background concentration, subsequent testing at the site need not include that analytical

procedure.

(7) Within the time frames specified in Table A or the CAD, the PRSR shall submit to the Department two copies of a Site Assessment Report (that may reference previously submitted documents) for review.

(8) The Site Assessment Report shall:

(a) Summarize all tasks that were completed pursuant to subsections 62-780.600(3), (4), and (5), F.A.C., and summarize the results obtained. All maps shall indicate the North direction, be drawn to scale, and include a graphical representation of the scale used. The following shall be included, when applicable, to the discharge(s) being assessed:

1. A detailed summary of site history and operations, including:

a. An identification of present real property and facility owners;

b. A description of past and present operations, including those that involve the storage, treatment, use, disposal, processing, or manufacture of materials that may be potential contaminant sources;

c. A description of all known products used or manufactured and of all known by-products and wastes (including waste constituents) generated during the life of the facility;

d. A summary of current and past environmental permits and enforcement actions; and

e. A summary of known spills or releases of materials, including permitted releases, that may be potential contaminant sources;

2. A copy of the portion of the most recent USGS topographic map(s), including quadrangle name and scale with contour interval(s) labeled, that clearly identifies the site in relation to the surrounding area;

3. A vicinity map that shows pertinent features, such as local drainage features, land cover, property boundaries, supply wells and, particularly, any potential off-site sources of contamination identified during the assessment. If the subject site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C., a vicinity map is not required;

4. One or more scaled site maps that show pertinent surface and subsurface features such as buildings, utilities, sewers, floor drains, drain lines, above and underground structures, and storage areas, present in the immediate vicinity of the contamination;

5. A map of individual contaminant discharge locations, including the latitude and longitude coordinates of the known discharge locations;

6. Details of any preliminary assessment or interim source removal activities performed at the site, such as free product recovery, groundwater recovery, contaminated soil removal, and contaminated sediment removal (summarized in graphical and tabular form);

7. Data and calculations used to determine the top-of-casing elevations and the accuracy of the survey performed pursuant to paragraph 62-780.600(5)(j), F.A.C.;

8. Tables that list the top-of-casing elevations, screened intervals, depths to groundwater, water-level elevations obtained at least twice, at least one month apart, and the dates the data were obtained;

9. Scaled site maps that illustrate the water-level elevations calculated at each monitoring well, piezometer, and staff gauge where surface water is a concern, and depicting the estimated elevation contours and an interpretation of groundwater flow direction. If different strata of the same aquifer, or if different aquifers, are affected, separate figures shall be submitted for each date on which measurements were recorded, depicting flow in each stratum or aquifer. If the site's groundwater is tidally-influenced, separate figures shall be submitted depicting flow at high and low tide. If the site is affected by seasonal groundwater variations, separate figures shall be submitted depicting the seasonal changes in the groundwater flow direction;

10. A table that summarizes the use and well construction details, if available, and locational information (i.e., the nearest street address, if available, or latitude and longitude coordinates, if the street address is not available), of all the water supply wells identified during the well survey performed pursuant to paragraph 62-780.600(3)(h), F.A.C.;

11. A map that shows the approximate location(s) of the water supply well(s) identified during the well survey performed pursuant to paragraph 62-780.600(3)(h), F.A.C., in relation to the subject site;

12. The results from slug tests on a minimum of three monitoring wells or from a pumping test, performed in each affected aquifer zone monitored to determine aquifer properties, and including a description of methods used, assumptions made, field data, and calculations, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C.;

13. The result of a calculation of horizontal groundwater flow velocity (v) for the site, using the formula $v=KI/n$, where K is the average horizontal hydraulic conductivity, I is the average horizontal hydraulic gradient, and n is the estimated effective soil porosity, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C.;

14. The result of a calculation of vertical groundwater flow velocity (v) for the site, using the formula $v=Kl/n$, where K is the average vertical hydraulic conductivity of a confining or semi-confining zone, l is the average vertical hydraulic gradient, and n is the estimated effective soil porosity, unless the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C.;

15. A description of any geophysical methods used for the project;

16. A description of the site-specific stratigraphy, based on the lithologic logs prepared during soil assessment and monitoring well installation and on standard penetration test borings (including composition, thickness, and continuity of various lithologic units);

17. At least two cross-sections relative to NGVD of 1929 or NAVD of 1988 that illustrate the site-specific stratigraphy and approximate concentrations of applicable contaminants;

18. Details of any other assessment methodology used at the site, including any field screening techniques and measures of biological activity (for example, dissolved oxygen or nutrient levels);

19. A table that summarizes the field soil screening results obtained at each sampling location and depth, and a listing of the date(s) the work was performed;

20. One or more scaled site maps that show all soil sampling locations for field screening or laboratory analyses and that illustrate the horizontal and vertical extent of unsaturated zone soil contamination when soil contamination is detected;

21. Piezometer, monitoring well, and recovery well construction details and construction diagrams, including methods and materials, field sampling data sheets, lithologic logs, and methods and volumes of groundwater removed during well development;

22. A description of the treatment or disposal methods of any investigation-derived waste generated during the assessment phase and any documentation that confirms the proper treatment or proper disposal of the waste, as applicable;

23. A table that is updated any time additional piezometers, monitoring wells, or recovery wells are installed and that summarizes the well construction details (including the top-of-casing elevation referenced to NGVD of 1929 or NAVD of 1988, depth of the top of the screen below land surface, total depth and screen length, and ground surface elevation referenced to NGVD of 1929 or NAVD of 1988) of all monitoring wells (including storage tank compliance wells or other compliance wells required by permit), piezometers, and recovery wells;

24. A current table that summarizes free product thickness measured, volumes recovered, and date(s) measurements were recorded, if applicable;

25. A scaled site map that shows the estimated horizontal extent of free product;

26. All applicable information required by subsection 62-780.300(2), F.A.C.;

27. Separate tables by medium (soil, sediment, groundwater, and surface water) that list all contaminants detected, their corresponding CTLs and the basis or reason for any alternative CTLs, detection limits achieved for non-detected analytes, and analyses performed, and that summarize all available analytical results; and

28. One or more scaled site maps that show any areas excavated and all groundwater and surface water sampling locations, and that illustrate the degree and extent of groundwater and surface water contamination using sufficient isoconcentration lines to help identify source area(s) as well as the extent of the plume(s).

(b) Summarize conclusions regarding site assessment objectives outlined in subsection 62-780.600(3), F.A.C., and include one of the following:

1. A No Further Action Proposal without institutional controls or without institutional and engineering controls shall be included if the site meets the applicable No Further Action criteria of subsection 62-780.680(1), F.A.C., or a No Further Action Proposal with institutional controls or both institutional and engineering controls may be included if the site meets the applicable No Further Action criteria of subsection 62-780.680(2) or (3), F.A.C.;

2. A Natural Attenuation with Monitoring Plan may be included if the site meets the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C.;

3. A recommendation to prepare a risk assessment or a Risk Assessment work plan shall be included if the PRSR chooses to justify alternative CTLs using risk assessment studies demonstrating that human health, public safety, and the environment are protected to at least the same degree provided by the CTLs referenced in this chapter. The work plan shall include a schedule for completion of a risk assessment and documentation adequate to support the request to do one or more of the task elements of subsection 62-780.650(1), F.A.C., and shall specify the parameters or exposure assumptions that will be used to develop the alternative CTLs pursuant to Rule 62-780.650, F.A.C.; or

4. A recommendation to prepare a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C., shall be included, unless a recommendation pursuant to subparagraph

62-780.600(8)(b)1., 2., or 3., F.A.C., is included.

(9) The Department shall:

(a) Provide the PRSR with written approval of the Site Assessment Report and:

1. If the No Further Action Proposal is approved, with a Site Rehabilitation Completion Order as referenced in subsection 62-780.680(7), F.A.C.;

2. If the Natural Attenuation with Monitoring Plan is approved, with a Natural Attenuation with Monitoring Plan Approval as referenced in paragraph 62-780.690(5)(a), F.A.C.;

3. If the Risk Assessment work plan or the recommendation to prepare a Risk Assessment is approved, with a written notification that the Risk Assessment shall be prepared pursuant to Rule 62-780.650, F.A.C.; or

4. If the recommendation to prepare a Remedial Action Plan is approved, with a written notification that the Remedial Action Plan shall be prepared pursuant to Rule 62-780.700, F.A.C.; or

(b) Notify the PRSR in writing, stating:

1. The reason(s) why the Site Assessment Report does not contain information adequate to support the conclusions regarding the applicable site assessment objectives outlined in subsection 62-780.600(3), F.A.C.; or

2. The reason(s) why the proposal, plan, or recommendation submitted pursuant to paragraph 62-780.600(8)(b), F.A.C., is not supported by the applicable criteria.

(10) If the Site Assessment Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.600(3), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.600(9)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a Site Assessment Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History—New 4-17-05.

62-780.610 Fate and Transport Model and Statistical Method Requirements.

(1) Fate and Transport Models.

(a) Any fate and transport model used to support an evaluation pursuant to the provisions of Rules 62-780.650, 62-780.680, and 62-780.690, F.A.C., shall be a fate and transport model with

the ability to adequately simulate movement and degradation of contaminants in the aquifer over time and distance, taking into account attenuation mechanisms including biological, physical, and chemical processes. The model shall be appropriate for the site conditions and shall be selected from the ASTM document referenced in subsection 62-780.100(4), F.A.C., or from the list of approved fate and transport models maintained by the Department, a copy of which is available upon request.

(b) Fate and transport models not listed in the ASTM document referenced in subsection 62-780.100(4), F.A.C., or on the list of approved fate and transport models maintained by the Department, may be submitted to the Department for approval and for inclusion on the list of approved fate and transport models maintained by the Department. To be considered for approval by the Department, documentation that adequately demonstrates that the above criteria have been met shall be submitted to the Bureau of Waste Cleanup, 2600 Blair Stone Road, MS 4505, Tallahassee, Florida 32399-2400. Any such request for Department approval shall set forth at a minimum the following information:

1. The fate and transport model type;
2. The name and address of the developer;
3. The fate and transport model description;
4. A list of input parameters;
5. The applicable boundary conditions and limitations on the appropriate use of the fate and transport model;
6. A description of the methods available for fate and transport model calibration and examples of calibration of the model with measured site data;
7. Documentation of code testing that has been done (for example, hand calculations to demonstrate that the model formulas were programmed correctly);
8. At least one independent reference knowledgeable of the theory, or experienced in the use, of fate and transport models, who must be a Professional Engineer registered pursuant to Chapter 471, F.S., or a Professional Geologist registered pursuant to Chapter 492, F.S.; and
9. Any approvals or denials of the fate and transport model received from other states or from a federal agency.

(2) Statistical Methods.

- (a) Any statistical method used to support an evaluation pursuant to the provisions of

subparagraph 62-780.680(1)(b)1., 62-780.680(2)(b)1., or 62-780.680(3)(b)1., F.A.C., shall be a statistical method appropriately based on statistical properties of the site-specific data set such as the number of samples, distribution of the data set, and the percent of non-detect sample results. The statistical method shall be appropriate for the site conditions and shall be selected from the list of approved statistical methods maintained by the Department, a copy of which is available upon request.

(b) Statistical methods not on the list of approved statistical methods maintained by the Department may be submitted to the Department for approval and for inclusion on the list of approved statistical methods maintained by the Department. To be considered for approval by the Department, documentation that adequately demonstrates that the above criteria have been met shall be submitted to the Bureau of Waste Cleanup, 2600 Blair Stone Road, MS 4505, Tallahassee, Florida 32399-2400. Any such request for Department approval shall set forth at a minimum the following information:

1. The statistical method type;
2. The name and address of the developer;
3. The statistical method description;
4. A list of input parameters;
5. The limitations on the appropriate use of the statistical method;
6. A list of assumptions underlying the construction of the statistical method and the methodology used to validate the assumptions;
7. Documentation of code testing that has been done (for example, hand calculations to demonstrate that the statistical method formulas were programmed correctly);
8. At least one independent reference knowledgeable of the theory of the proposed statistical method, and trained in the theory, or experienced in the use, of statistical methods, who must have an advanced degree in statistics or mathematics; or documentation that the proposed statistical methods are readily available, in wide use, and have been published in professional journals or reviewed in a statistical textbook; and
9. Any approvals or denials of the statistical method received from other states or from a federal agency.

(3) Within 60 days of the receipt of a request for approval of a fate and transport model, or within 180 days of a request for approval of a new statistical method, the Department shall issue

an Order:

(a) Providing the requester with approval of the fate and transport model or statistical method, or

(b) Notifying the requester of the reason(s) why the request does not adequately demonstrate that the requirements of subsection 62-780.610(1) or 62-780.610(2), F.A.C., as applicable, have been met.

(4) If the Fate and Transport Model or Statistical Method submittal is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.610(1) or 62-780.610(2), F.A.C., as applicable, the Department shall inform the requester pursuant to paragraph 62-780.610(3)(b), F.A.C., and the requester shall submit to the Department a revised request that addresses the deficiencies within 60 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the fate and transport model or statistical method submitted for approval by the Department shall not be used.

(5) The Department's Order shall be agency action, reviewable pursuant to Sections 120.569 and 120.57, F.S.

Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History—New 4-17-05.

62-780.650 Risk Assessment.

(1) During the risk assessment process, the PRSR is encouraged to have discussions with the Department at various decision points to establish applicable exposure factors, relevant receptors, and risk management options based on the current and projected land use(s) at the site. If a risk assessment is performed, the following risk assessment task elements shall be performed, as appropriate:

(a) An exposure assessment that identifies pathways and routes by which human and environmental receptors may be exposed to contaminants and determines levels of contaminants to which human and environmental receptors may be exposed. The exposure assessment shall:

1. Identify actual and potential exposure pathways and routes;
2. Identify actual and potential human and environmental receptors for each exposure pathway, and sensitive sub-populations;

3. Determine expected concentrations of contaminants to which actual and potential human and environmental receptors may be exposed, with the most recent sampling of representative monitoring wells having occurred no more than 270 days prior to Risk Assessment Report submittal;

4. Determine exposure factors (exposure duration and frequency) based on site-specific characteristics, including consideration of current and plausible projected land uses. Institutional and engineering controls may be proposed in order to ensure that exposure factors do not change; and

5. Estimate the contaminant doses received by relevant receptors.

(b) A toxicity assessment that determines human health and environmental criteria for contaminants found at the site. The criteria, taking into consideration acute and chronic health effects associated with short-term and long-term exposure, shall be applicable to exposure pathways and routes identified in the exposure assessment, including, as appropriate:

1. Potable water exposure from ingestion, dermal contact, and inhalation of vapors and mists;

2. Non-potable water exposure from dermal contact, inhalation of vapors and mists, ingestion of food crops irrigated with such water, lawn watering, and other related exposures, and exposures to pets and livestock from ingestion;

3. Soil exposure from ingestion, dermal contact, inhalation, and ingestion by humans or animals of food crops grown in contaminated soil; and

4. Non-potable surface water exposure from ingestion, dermal contact, and inhalation of vapors and mists. Adverse effects on freshwater or marine biota (including any bio-accumulative effects in the food chain) and on humans (for example, through incidental ingestion and dermal contact while using the resource for recreational purposes or fish consumption) shall be considered.

(c) A risk characterization that utilizes the results of the exposure assessment, the toxicity assessment, and any other relevant public health and epidemiological assessments, to characterize cumulative risks to the affected population(s) and the environment from contaminants found at the site. Based on the concentrations of contaminants found at the site, the characterization shall include:

1. Risks to human health and safety from exposure to the contamination;

2. Risks from the contamination to non-human species and ecosystems; and

3. Derivation of apportioned alternative CTLs, as applicable. [Refer to Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on the derivation of alternative CTLs for TRPHs based on a sub-classification methodology; and to Chapter 62-777, F.A.C., Table III for methods to be used in determining soil properties for the derivation of alternative CTLs based on site-specific soil characteristics.] In developing alternative CTLs, when scientific data are available the potential for additive, synergistic, or antagonistic interactions among contaminants and the potential for exposure to contaminants via multiple pathways shall be considered based on target organ(s) affected, mechanism(s) of toxicity, and empirical observations from clinical and laboratory studies. The default assumptions shall be that non-carcinogenic chemicals affecting the same target organ(s)/systems have additive effects and that carcinogenic risk, regardless of target organ, is additive. However, non-default target organ(s)/system(s) or effects may be justified through a detailed toxicological analysis of the contaminants present at a specific site.

(d) A justification for apportioned alternative CTLs, as applicable, for groundwater or soil. The justification for the alternative CTLs shall be based upon the site-specific characteristics affecting the site. In establishing the alternative CTLs for groundwater or soil, the following factors shall be used, as applicable: calculations using a lifetime excess cancer risk level of $1.0E-6$ and a hazard index of 1 or less, and (for groundwater only) nuisance, organoleptic, and aesthetic considerations. However, the Department shall not require site rehabilitation to achieve a CTL for an individual contaminant that is more stringent than the site-specific background concentration for that contaminant or the best achievable detection limit for that contaminant. The justification shall be based on:

1. The site-specific characteristics which affect the site, including:

a. The present and projected uses of the affected aquifer(s) and adjacent surface water, with particular consideration of the probability that the contamination is substantially affecting, or will migrate to and substantially affect, a known public or private source of potable water;

b. The technical feasibility of achieving the soil or water quality criteria based on a review of available technology; and

c. Site soil characteristics; and

2. The results of the exposure assessment, toxicity assessment, and risk characterization

pursuant to paragraphs 62-780.650(1)(a), 62-780.650(1)(b), and 62-780.650(1)(c), F.A.C.

(2) Fate and transport models for contaminants may be employed, pursuant to Rule 62-780.610, F.A.C., to document that human health and environmental risks from the establishment of alternative CTLs are acceptable. If a fate and transport model for contaminants is used, the model shall be validated during subsequent monitoring to justify a No Further Action Proposal, or during natural attenuation with monitoring or active remediation monitoring, and adjusted as appropriate using empirical data as the data are obtained.

(3) Within the time frames specified in Table A or the CAD, the PRSR shall submit to the Department three copies of the Risk Assessment Report for review.

(4) The Risk Assessment Report shall contain a description of the task elements undertaken, summarize the conclusions obtained, include the tables required pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., updated as applicable, include a scaled site map for each contaminated medium, that illustrates the degree and extent of contamination (and, for groundwater, the flow direction), and include one of the following:

(a) A No Further Action Proposal without institutional controls or without institutional and engineering controls shall be included if the site meets the applicable No Further Action criteria of subsection 62-780.680(1), F.A.C., or a No Further Action Proposal with institutional controls or both institutional and engineering controls may be included if the site meets the applicable No Further Action criteria of subsection 62-780.680(2) or (3), F.A.C.;

(b) A Natural Attenuation with Monitoring Plan may be included if the site meets the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C.; or

(c) A recommendation to prepare a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C., shall be included, unless a recommendation pursuant to paragraph 62-780.650(4)(a) or 62-780.650(4)(b), F.A.C., is included.

(5) The Department shall:

(a) Provide the PRSR with written approval of the Risk Assessment Report and:

1. If the No Further Action Proposal is approved, with a Site Rehabilitation Completion Order as referenced in subsection 62-780.680(7), F.A.C.;

2. If the Natural Attenuation with Monitoring Plan is approved, with a Natural Attenuation with Monitoring Plan Approval as referenced in paragraph 62-780.690(5)(a), F.A.C.; or

3. If the recommendation to prepare a Remedial Action Plan is approved, with a written

notification that the Remedial Action Plan shall be prepared pursuant to Rule 62-780.700, F.A.C.; or

(b) Notify the PRSR in writing, stating:

1. The reason(s) why the Risk Assessment Report does not contain information adequate to support the proposed alternative CTLs; or

2. The reason(s) why the proposal, plan, or recommendation submitted pursuant to subsection 62-780.650(3), F.A.C., is not supported by the applicable criteria.

(6) If the Risk Assessment Report is incomplete in any respect, or is insufficient to satisfy the objectives set forth in subsection 62-780.650(4), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.650(5)(b), F.A.C., and the PRSR shall submit to the Department for review three copies of a Risk Assessment Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.680 No Further Action and No Further Action with Controls.

(1) Risk Management Options Level I – A No Further Action without institutional controls or without institutional and engineering controls shall apply if the following conditions are met:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of non-aqueous phase liquids;

(b) Contaminated soil is not present in the unsaturated zone, as demonstrated by the analyses of soil samples collected from representative sampling locations (unless the Department has concurred that soil sampling is unnecessary based on the site-specific conditions), that show that one or more of the criteria for direct exposure and one or more of the criteria for leachability are met, as applicable:

1. Criteria for direct exposure are as follows:

a. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(1)(b)1.d., F.A.C., do not exceed the less stringent of:

(i) The residential soil CTLs specified in Chapter 62-777, F.A.C., Table II, except that if the 95% UCL approach is utilized for any contaminant, then the soil contaminant concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph

62-780.680(1)(b)1.d.(V), F.A.C.;

(II) The background concentrations; or

(III) The best achievable detection limits;

b. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(1)(b)1.d., F.A.C., do not exceed the alternative residential soil CTLs established using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., and the equations and default residential exposure assumptions specified in Chapter 62-777, F.A.C., Figures 4, 5, 6, and 7 and Table VI, except that if the 95% UCL approach is utilized for any contaminant, then the soil concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-780.680(1)(b)1.d.(V), F.A.C.;

c. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., or average soil concentrations of the site-specific fractions of TRPHs calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(1)(b)1.d., F.A.C., utilizing the soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the residential soil CTLs for the TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., except that if the 95% UCL approach is utilized for any contaminant, then the soil contaminant concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-780.680(1)(b)1.d.(V), F.A.C.; and

d. If the 95% UCL approach is utilized to calculate average soil contaminant concentrations pursuant to sub-subparagraph 62-780.680(1)(b)1.a., 62-780.680(1)(b)1.b., or 62-780.680(1)(b)1.c., F.A.C. [refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance], the following criteria shall be met:

(I) The Florida-UCL tool or other approved statistical method pursuant to subsection 62-780.610(2), F.A.C., shall be used to perform the 95% UCL calculations;

(II) The maximum soil contaminant concentrations shall not exceed any CTL based on acute toxicity and shall not exceed three times the applicable direct exposure soil CTLs based on chronic toxicity pursuant to sub-subparagraphs 62-780.680(1)(b)1.a., 62-780.680(1)(b)1.b., and 62-780.680(1)(b)1.c., F.A.C.;

(III) The exposure unit shall not exceed 1/4 acre and shall be located within the source

property boundaries;

(IV) A minimum of 10 representative soil samples is required when the Florida-UCL tool is utilized; and

(V) If more than one contaminant is present in the soil in the unsaturated zone at the site, the soil CTLs for all contaminants detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning soil CTLs];

2. Criteria for leachability are as follows:

a. Soil contaminant concentrations do not exceed the less stringent of:

(I) The groundwater and, if applicable, surface water leachability-based soil CTLs specified in Chapter 62-777, F.A.C., Table II;

(II) The background concentrations; or

(III) The best achievable detection limits;

b. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs based on the site-specific background concentrations [refer to sub-subparagraph 62-780.680(1)(c)1.b., F.A.C.], and, if applicable, the alternative surface water CTLs based on the site-specific background concentrations [refer to subparagraph 62-780.680(1)(d)2., F.A.C.];

c. Direct leachability testing results pursuant to subparagraph 62-780.600(5)(c)4., F.A.C., demonstrate that leachate concentrations do not exceed the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

d. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, and the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C.; and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the leachability-based soil CTLs for the

TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C.; and

f. For soil that is and has been exposed to the elements (i.e., open ground, not covered by impermeable or semi-permeable cover) and subject to infiltration throughout the entire unsaturated zone for a minimum of two years, it has been subsequently demonstrated to the Department by a minimum of one year of groundwater monitoring data that contaminants will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C. This demonstration shall consider site-specific characteristics such as the thickness of the unsaturated zone, depth and mass of soil contaminants, soil lithology, actual precipitation, concentration gradients, and the chemical and physical characteristics of the contaminants;

(c) Contaminated groundwater is not present, as demonstrated by the analyses of groundwater samples collected from representative sampling locations (unless the Department has concurred that groundwater sampling is unnecessary based on the site-specific conditions), that show that criteria 1. and 2. are met:

1. Groundwater contaminant concentrations do not exceed the less stringent of:

a. The groundwater CTLs specified in Chapter 62-777, F.A.C., Table I groundwater criteria column;

b. The background concentrations; or

c. The best achievable detection limits; and

2. Groundwater contaminant concentrations do not exceed the surface water CTLs specified in Chapter 62-777, F.A.C., Table I freshwater surface water criteria column or marine surface water criteria column, as applicable, if the sites groundwater contamination is affecting or may potentially affect a surface water body based on monitoring well data, groundwater flow rate and direction, or fate and transport modeling;

(d) Contaminated surface water is not present, as demonstrated by the analyses of surface water samples collected from representative sampling locations (unless the Department has concurred that surface water sampling is unnecessary based on the site-specific conditions), that show that contaminant concentrations do not exceed the less stringent of:

1. The applicable surface water CTLs specified in Chapter 62-777, F.A.C., Table I freshwater

surface water criteria column or marine surface water criteria column;

2. The background concentrations; or
3. The best achievable detection limits.

(e) Contaminated sediment is not present, as demonstrated by the analyses of sediment samples collected from representative sampling locations (unless the Department has concurred that sediment sampling is unnecessary based on the site-specific conditions), or the concentrations of contaminants in sediment do not exceed the background concentrations.

(2) Risk Management Options Level II - A No Further Action with institutional controls and, if appropriate, engineering controls shall apply if the controls are protective of human health, public safety, and the environment and are agreed to by the current real property owner(s) of the source property subject to the institutional or engineering controls. Fate and transport models, as defined in Rule 62-780.610, F.A.C., supported by a minimum of one year of monitoring data, may be utilized to justify the No Further Action Proposal. It shall be demonstrated to the Department that the following conditions are met for those contaminants that do not meet Risk Management Options Level I criteria of subsection 62-780.680(1), F.A.C.:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of non-aqueous phase liquids, or free product removal is not technologically feasible;

(b) Alternative soil CTLs have been established by the PRSR and one or more of the criteria for direct exposure and one or more of the criteria for leachability are met for soil in the unsaturated zone, as applicable:

1. Criteria for direct exposure are as follows:

a. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(2)(b)1.e., F.A.C., do not exceed the commercial/industrial soil CTLs specified in Chapter 62-777, F.A.C., Table II, except that if the 95% UCL approach is utilized for any contaminant, then the soil contaminant concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-780.680(2)(b)1.e.(V), F.A.C.;

b. An engineering control that prevents human exposure (for example, permanent cover material or a minimum of two feet of soil) is implemented, in which case the contaminant concentrations in the soil below the permanent cover or two or more feet below land surface may exceed the direct exposure soil CTLs. Prior to Department approval of a No Further Action

with engineering controls, the PRSR shall provide certification by a registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented;

c. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(2)(b)1.e., F.A.C., do not exceed the alternative commercial/industrial soil CTLs calculated using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., and the equations and default commercial/industrial exposure assumptions specified in Chapter 62-777, F.A.C., Figures 4, 5, 6, and 7 and Table VI, except that if the 95% UCL approach is utilized for any contaminant, then the soil contaminant concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-780.680(2)(b)1.e.(V), F.A.C.;

d. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., or average soil contaminant concentrations of the site-specific fractions of TRPHs calculated based on the 95% UCL approach pursuant to sub-subparagraph 62-780.680(2)(b)1.e., F.A.C., utilizing the soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the commercial/industrial soil CTLs for the TRPH fractions provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., except that if the 95% UCL approach is utilized for any contaminant, then the soil contaminant concentrations shall not exceed the apportioned soil CTLs calculated pursuant to sub-sub-subparagraph 62-780.680(2)(b)1.e.(V), F.A.C.; and

e. If the 95% UCL approach is utilized to calculate average soil contaminant concentrations pursuant to sub-subparagraph 62-780.680(2)(b)1.a., 62-780.680(2)(b)1.c., or 62-780.680(2)(b)1.d., F.A.C., [refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance], the following criteria shall be met:

(I) The Florida-UCL tool or other approved statistical method pursuant to subsection 62-780.610(2), F.A.C., shall be used to perform the 95% UCL calculations;

(II) The maximum soil contaminant concentrations shall not exceed three times the applicable soil CTLs pursuant to sub-subparagraphs 62-780.680(2)(b)1.a., c., and d., F.A.C.;

(III) The exposure unit shall be located within the source property boundaries and reflect

normal activity patterns for the existing commercial/industrial land use with supporting institutional controls. The institutional controls shall require recalculation of the 95% UCL if the property is subdivided or land use changes such that the exposure unit utilized in the original calculation is no longer appropriate;

(IV) A minimum of 10 representative soil samples is required when the Florida-UCL tool is utilized; and

(V) If more than one contaminant is present in the soil in the unsaturated zone at the site, the soil CTLs for all contaminants detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning soil CTLs].

2. Criteria for leachability are as follows:

a. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using the equations and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs derived pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

b. Direct leachability testing results pursuant to subparagraph 62-780.600(5)(c)4., F.A.C., demonstrate that leachate concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

c. An engineering control that prevents infiltration (for example, permanent impermeable cover material) is implemented, in which case the contaminant concentrations in the soil below the impermeable cover may exceed the leachability-based soil CTLs. Prior to Department approval of a No Further Action with engineering controls, the PRSR shall provide certification by a registered Professional Engineer that, to the best of his or her knowledge, the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented. It shall be demonstrated to the Department by a minimum of one year of groundwater monitoring data that contaminants will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established

pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.

d. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs established pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the alternative leachability-based soil CTLs for the TRPH fractions established using the equation and assumptions specified in Chapter 62-777, F.A.C., Figure 8, the chemical/physical parameters provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., the alternative groundwater CTL for TRPHs established pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTL for TRPHs pursuant to paragraph 62-780.680(1)(d), F.A.C.; and

f. It has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results that, based upon the site-specific conditions, contaminants will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs established pursuant to paragraph 62-780.680(1)(c), F.A.C., or if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(2)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.

(c) Alternative groundwater CTLs have been established by the PRSR depending on the current and projected use of groundwater in the vicinity of the site and one or more of the following criteria are met, as applicable:

1. For contamination of groundwater of low yield or poor quality, the CTLs specified in Chapter 62-777, F.A.C., Table I groundwater of low yield/poor quality criteria column shall apply to groundwater within the property boundaries, provided that it has been demonstrated to the Department by a minimum of one year of groundwater monitoring data that groundwater

contaminant concentrations at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs specified in subparagraph 62-780.680(1)(c)1., F.A.C., and that the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C.;

2. An engineering control that prevents migration of the plume (for example, a permanent containment such as a barrier wall) is implemented, and it has been demonstrated to the Department by a minimum of one year of groundwater monitoring data that groundwater contaminant concentrations at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs specified in subparagraph 62-780.680(1)(c)1., F.A.C., and that the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C. Periodic monitoring of the engineering control by the PRSR shall be required to verify the effectiveness of the engineering control in preventing migration of the plume. The PRSR shall report to the Department any failures of the engineering control to prevent migration of the plume within 30 days of discovery of a failure. Prior to Department approval of a No Further Action with engineering controls, the PRSR shall provide certification by a registered Professional Engineer that to the best of his or her knowledge the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented;

3. For groundwater contamination that is affecting or may potentially affect only a marine surface water body with no other properties or freshwater surface water bodies located between the source property boundary and the marine surface water body, the CTLs specified in Chapter 62-777, F.A.C., Table I marine surface water criteria column shall apply to groundwater; and

4. For groundwater contamination that is contained within the property boundaries and limited to the immediate vicinity of the source area, and the area of groundwater contamination is less than 1/4 acre, where it has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results, that the groundwater contamination is not migrating away from such localized source area (the plume is stable or shrinking) and has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C., alternative groundwater CTLs shall be established using the monitoring data and, if applicable, modeling results.

(3) Risk Management Options Level III - A No Further Action with institutional controls and, if appropriate, engineering controls shall apply if the controls are protective of human health, public safety, and the environment and are agreed to by the current real property owner(s) of all properties subject to the institutional or engineering controls. Fate and transport models, as defined in Rule 62-780.610, F.A.C., supported by a minimum of one year of monitoring data, may be utilized to justify the No Further Action Proposal. It shall be demonstrated to the Department that the following conditions are met for those contaminants that do not meet Risk Management Options Level I or Level II criteria of subsection 62-780.680(1) or 62-780.680(2), F.A.C.:

(a) Free product is not present and no fire or explosive hazard exists as a result of a release of non-aqueous phase liquids, or free product removal is not technologically feasible;

(b) Alternative soil CTLs have been established by the PRSR and the following criteria are met for soil in the unsaturated zone:

1. Soil contaminant concentrations, or average soil contaminant concentrations calculated based on the 95% UCL approach pursuant to this subparagraph, do not exceed the alternative direct exposure soil CTLs established pursuant to paragraph 62-780.650(1)(d), F.A.C. If more than one contaminant is present in the soil in the unsaturated zone at the site, the soil CTLs for all contaminants detected in soil samples at the site shall be apportioned, as applicable [refer to Appendix D of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning soil CTLs]. If the 95% UCL approach is utilized to calculate average soil contaminant concentrations pursuant to this subparagraph [refer to the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance], the following criteria shall be met:

a. The Florida-UCL tool or other approved statistical method pursuant to subsection 62-780.610(2), F.A.C., shall be used to perform the 95% UCL calculations;

b. The maximum soil contaminant concentrations shall not exceed three times the applicable soil CTLs (apportioned pursuant to subparagraph 62-780.680(3)(b)1., F.A.C., if applicable); higher maximum soil contaminant concentrations may be utilized provided the maximum concentrations address the potential risk based on exposure to contaminants which may cause acute toxicity, and the potential for direct contact within the exposure unit that is not equal and random; and

c. The exposure unit shall reflect normal activity patterns for the existing land use, with

supporting institutional controls if the exposure unit exceeds 1/4 acre. The institutional controls shall require recalculation of the 95% UCL if the property is subdivided or land use changes such that the exposure unit utilized in the original calculation is no longer appropriate.

2. One or more of the following criteria for leachability are met, as applicable:

a. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using the alternative groundwater CTLs derived pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

b. Direct leachability testing results pursuant to subparagraph 62-780.600(5)(c)4., F.A.C., demonstrate that leachate concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(b), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

c. An engineering control that prevents infiltration (for example, permanent impermeable cover material) is implemented, in which case the contaminant concentrations in the soil below the impermeable cover may exceed the leachability-based soil CTLs. Prior to Department approval of a No Further Action with engineering controls, the PRSR shall provide certification by a registered Professional Engineer that, to the best of his or her knowledge, the engineering control is consistent with commonly accepted engineering practices, is appropriately designed and constructed for its intended purpose, and has been implemented. It shall be demonstrated to the Department by a minimum of one year of groundwater monitoring data that contaminants will not leach into the groundwater at concentrations that exceed the appropriate groundwater CTLs established pursuant to paragraph 62-780.680(1)(c), F.A.C., or, if the groundwater is already contaminated, at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

d. Soil contaminant concentrations do not exceed the alternative leachability-based soil CTLs established using site-specific soil properties pursuant to subparagraph 62-780.600(5)(c)2., F.A.C., the equation and appropriate default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

e. Soil concentrations of the site-specific fractions of TRPHs established pursuant to subparagraph 62-780.600(5)(c)3., F.A.C., do not exceed the alternative leachability-based soil CTLs for the TRPH fractions established using the equation and default assumptions specified in Chapter 62-777, F.A.C., Figure 8, the chemical/physical parameters provided in Appendix C of the technical report referenced in subsection 62-780.100(2), F.A.C., the alternative groundwater CTL for TRPHs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTL for TRPHs pursuant to paragraph 62-780.680(1)(d), F.A.C.; and

f. It has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results that, based upon the site-specific conditions, contaminants will not leach into the groundwater at concentrations that exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.680(3)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.

(c) Alternative groundwater CTLs have been established by the PRSR depending on the current and projected use of groundwater in the vicinity of the site, and the following criteria are met:

1. Groundwater contaminant concentrations do not exceed the alternative groundwater CTLs established pursuant to paragraph 62-780.650(1)(d), F.A.C. [apportioned, if applicable; refer to Appendix E of the technical report referenced in subsection 62-780.100(2), F.A.C., for guidance on apportioning groundwater CTLs], and the plume has not affected, and will not affect, a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C.; and

2. It has been demonstrated to the Department by a minimum of one year of groundwater monitoring data and, if applicable, fate and transport modeling results, that the plume is stable or shrinking, and groundwater contaminant concentrations at the institutional control boundary do not, and will not, exceed the appropriate groundwater CTLs pursuant to paragraph 62-780.680(1)(c), F.A.C., and, if applicable, the appropriate surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.

(4) Unless the No Further Action Proposal is included in a Site Assessment Report pursuant to subparagraph 62-780.600(8)(b)1., F.A.C., or a Risk Assessment Report pursuant to

paragraph 62-780.650(4)(a), F.A.C., or a Site Rehabilitation Completion Report pursuant to subsection 62-780.690(10) or 62-780.750(6), F.A.C., the PRSR shall submit to the Department two copies of the No Further Action Proposal for review when the criteria for No Further Action have been met. The No Further Action Proposal shall include the tables required pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., updated as applicable. Prior to approval of a No Further Action Proposal with an institutional control or an engineering control accompanied by an institutional control, documentation of the agreement with the real property owner(s) of all properties subject to the institutional or engineering controls shall be submitted to the Department.

(5) The Department shall:

(a) Provide the PRSR with a Site Rehabilitation Completion Order that approves the No Further Action Proposal; or

(b) Notify the PRSR in writing, stating the reason(s) why the No Further Action Proposal does not contain information adequate to support the conclusion that the applicable No Further Action criteria of Rule 62-780.680, F.A.C., have been met. Site rehabilitation activities shall not be deemed complete until such time as a No Further Action Proposal is approved.

(6) If the No Further Action Proposal is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.680(5)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised No Further Action Proposal that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall submit to the Department for review, as appropriate, two copies of a Natural Attenuation with Monitoring Plan pursuant to Rule 62-780.690, F.A.C., or two copies of a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C., within 60 days after receipt of the notice.

(7) When a No Further Action Proposal is approved pursuant to subparagraph 62-780.600(9)(a)1., or 62-780.650(5)(a)1., F.A.C., or paragraph 62-780.680(5)(a), 62-780.690(11)(a), or 62-780.750(7)(a), F.A.C., the Site Rehabilitation Completion Order shall contain, at a minimum, the following information:

(a) The facility identification number or other FDEP or USEPA tracking number, as applicable, that identifies the property where the source(s) of the contaminated site is(are) or

was(were) located;

(b) The street address of the property where the source(s) of the contaminated site is(are) or was(were) located;

(c) The date(s) of the discharge(s), if known, that resulted in the contaminated site;

(d) A reference to an attached map or legal description that depicts or describes the contaminated site for which the Site Rehabilitation Completion Order is being issued;

(e) The most recent tables generated by the PRSR pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., or subsection 62-780.650(4), 62-780.680(4), 62-780.690(10), or 62-780.750(6), F.A.C.;

(f) If applicable, a reference to all engineering and institutional controls that were implemented at the contaminated site. For engineering controls, a brief description of the physical control and any maintenance or monitoring requirements shall be included; for institutional controls, a copy of the restrictive covenant including a reference to the book and page numbers where recorded shall be attached;

(g) If applicable, a statement that the Site Rehabilitation Completion Order is conditioned upon such engineering and institutional controls being effective, properly maintained, and remaining in place. If applicable, the following statement shall be included: "If the real property owner proposes to remove the institutional controls or engineering controls, the real property owner shall obtain prior written approval from the Department. The removal of the controls shall be accompanied by the immediate resumption of site rehabilitation, or implementation of other approved controls, unless it is demonstrated to the Department that the criteria of subsection 62-780.680(1), F.A.C., are met"; and

(h) A statement that the Site Rehabilitation Completion Order is subject to specific statutory re-openers and a listing of those re-openers found in Section 376.30701(4), F.S.

(8) Prior to the Department's approval of a No Further Action Proposal with institutional controls or with institutional and engineering controls, the PRSR shall provide constructive notice of the Department's intent for such approval to the local government(s) with jurisdiction over the property(ies) subject to the institutional control, to real property owner(s) of any property subject to the institutional control, and to residents of any property subject to the institutional control. The PRSR shall provide the Department with proof of such notice that meets the requirements of subsections 62-110.106(5), (8), and (9), F.A.C., except that the

notice shall be prepared and published by the PRSR within 30 days after the Department's conditional approval of the No Further Action Proposal with institutional controls. The notice shall provide the local government(s) with jurisdiction over the property(ies) subject to the institutional control, real property owners of any property subject to the institutional control, and residents of any property subject to the institutional control, the opportunity to comment to the Department within 30 days after receipt of the notice of the Department's intent of approval. Where subsection 62-110.106(8), F.A.C., requires a description of the agency action proposed, the notice shall contain "to issue a Site Rehabilitation Completion Order with institutional controls for a contaminated site". Additionally, the notice of rights language shall be replaced with "Local governments, real property owner(s) of any property subject to the institutional control, and residents of any property subject to the institutional control have 30 days from publication of this notice to provide comments to the Department." The notice also shall provide the appropriate mailing address to which comments should be sent.

(9) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

Specific Authority 376.30701, 403.0877 FS. Law Implemented 376.30701, 403.0877 FS. History—New 4-17-05.

62-780.690 Natural Attenuation with Monitoring.

(1) Natural Attenuation with Monitoring is an allowable strategy for site rehabilitation depending on the individual site characteristics, provided human health, public safety, and the environment are protected. The individual site characteristics may include the current and projected use of the affected groundwater and surface water in the vicinity of the site, the current and projected land use of the area affected by the contamination, the exposed population, the location of the plume, the degree and extent of contamination, the rate of migration of the plume, the apparent or potential rate of degradation of contaminants through natural attenuation, and the potential for further migration in relation to the sites property boundary. Fate and transport models as defined in Rule 62-780.610, F.A.C., may be utilized to support the appropriateness of natural attenuation with monitoring. Natural attenuation with monitoring is allowable provided the following criteria are met:

(a) Free product is not present or free product removal is not technologically feasible and no

fire or explosive hazard exists as a result of a release of non-aqueous phase liquids;

(b) Contaminated soil is not present in the unsaturated zone, except that applicable leachability-based soil CTLs may be exceeded if it is demonstrated to the Department that the soil does not constitute a continuing source of contamination to the groundwater at concentrations that pose a threat to human health, public safety, and the environment, and it is demonstrated that the rate of natural attenuation of contaminants in the groundwater exceeds the rate at which contaminants are leaching from the soil. The determination shall be based upon individual site characteristics and demonstrated by USEPA Test Method 1312 (SPLP), or USEPA Test Method 1311 (TCLP) if the contamination is derived from used oil or similar petroleum products, followed by the appropriate analyses of the leachate, and based upon groundwater modeling, site stratigraphy, or site assessment results;

(c) Contaminants present in the groundwater above background concentrations or applicable CTLs are not migrating beyond the temporary point of compliance or migrating vertically, which may contaminate other aquifers or surface water resources or result in increased site rehabilitation time;

(d) The physical, chemical, and biological characteristics of each contaminant and its transformation product(s) are conducive to natural attenuation;

(e) The available data show an overall decrease in the contamination; and

(f) One of the following is met:

1. The site is anticipated to achieve the applicable No Further Action criteria of Rule 62-780.680, F.A.C., as a result of natural attenuation in five years or less, the background concentrations or the applicable CTLs are not exceeded at the temporary point of compliance as established pursuant to subsection 62-780.690(2) or 62-780.690(3), F.A.C., and contaminant concentrations do not exceed the criteria specified in Chapter 62-777, F.A.C., Table V; or

2. If the criteria of subparagraph 62-780.690(1)(f)1., F.A.C., are not met, the appropriateness of natural attenuation with monitoring may be demonstrated by the following:

a. A technical evaluation of groundwater and soil characteristics, chemistry, and biological activity that verifies that the contaminants have the capacity to degrade under the site-specific conditions. A listing of the site-specific conditions and geochemical parameters, as applicable, is provided in Chapter 62-777, F.A.C., Table IV;

b. A scientific evaluation (historical data or modeling results, as appropriate; the model used

shall be demonstrated to be appropriate for the site conditions) of the plume migration in relation to the temporary point of compliance as established pursuant to subsection 62-780.690(2) or 62-780.690(3), F.A.C., an estimation of expected annual reductions in contaminant concentrations in monitoring wells, and an estimation of the time required to meet the applicable No Further Action criteria of Rule 62-780.680, F.A.C. Available technical information (including historical water quality data) shall be used for model calibration; and

c. A life-cycle cost analysis of remedial alternatives.

(2) Provided human health, public safety, and the environment are protected, the point of compliance may be temporarily moved from the source of the contamination.

(a) The location of the temporary point of compliance shall be based on the individual site characteristics listed in subsection 62-780.690(1), F.A.C.

(b) The point of compliance may be temporarily moved to the property boundary, or to the edge of the plume when the plume is within the property boundary, while cleanup, including cleanup through natural attenuation processes in conjunction with appropriate monitoring, is proceeding.

(c) The temporary point of compliance may extend beyond the property boundary when accompanied by monitoring, if such extension is needed to facilitate monitoring of natural attenuation or to address the current conditions of the plume, provided human health, public safety, and the environment are protected. If the point of compliance is proposed to be temporarily extended beyond the property boundary, it cannot be extended further than the lateral extent of the plume at the time of execution of a cleanup agreement, if known, or the lateral extent of the plume as defined at the time of the approved site assessment. Prior to the Department authorizing a temporary extension of the point of compliance beyond the property boundary, the PRSR shall provide notice and an opportunity to comment pursuant to subsection 62-780.220(3), F.A.C.

(d) Additional notice concerning the status of the natural attenuation processes shall be similarly provided every five years to persons receiving notice pursuant to paragraph 62-780.690(2)(c), F.A.C.

(3) Where surface water is or may be exposed to contaminated groundwater (based on monitoring well data, groundwater flow rate and direction, or fate and transport modeling), the point of measuring compliance with the surface water standards shall be in the groundwater

from the landward side immediately adjacent to the surface water body.

(4) If the criteria of subsection 62-780.690(1), F.A.C., are met, a Natural Attenuation with Monitoring Plan, prepared pursuant to subsection 62-780.690(8), F.A.C., may be submitted. Unless the Natural Attenuation with Monitoring Plan is included in a Site Assessment Report pursuant to subparagraph 62-780.600(8)(b)2., F.A.C., or in a Risk Assessment Report pursuant to paragraph 62-780.650(3)(b), F.A.C., the PRSR shall submit to the Department two copies of the Natural Attenuation with Monitoring Plan for review.

(5) The Department shall:

(a) Provide the PRSR with written approval of the Natural Attenuation with Monitoring Plan;

or

(b) Notify the PRSR in writing, stating the reason(s) why the Natural Attenuation with Monitoring Plan does not contain information adequate to support the conclusion that the applicable Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C., have been met.

(6) If the Natural Attenuation with Monitoring Plan is incomplete in any respect, or is insufficient to satisfy the criteria of subsection 62-780.690(1), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.690(5)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised Natural Attenuation with Monitoring Plan that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall, as appropriate, continue the implementation of the approved Remedial Action Plan or submit to the Department for review two copies of a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C., within 60 days after receipt of the notice.

(7) If the Natural Attenuation with Monitoring Plan meets the criteria of subsection 62-780.690(1), F.A.C., a Natural Attenuation with Monitoring Plan approval shall be issued. The objective of the monitoring program shall be to meet the applicable No Further Action criteria of Rule 62-780.680, F.A.C.

(8) The monitoring program shall be performed as specified in the Natural Attenuation Monitoring Plan approval, as follows:

(a) A minimum of two monitoring wells is required:

1. At least one well shall be located at the downgradient edge of the plume; and

2. At least one well shall be located in the area(s) of highest groundwater contamination or directly adjacent to it if the area of highest groundwater contamination is inaccessible (for example, under a structure);

(b) The designated monitoring wells shall be sampled for analyses of applicable contaminants no more frequent than quarterly, as specified in the Natural Attenuation with Monitoring Plan approval;

(c) Water-level measurements in all designated wells and piezometers shall be made within 24 hours of initiating each sampling event;

(d) Within the time frames specified in Table A or the CAD, the PRSR shall submit to the Department for review two copies of a Natural Attenuation with Monitoring Report. The report shall include the analytical results (laboratory report), chain of custody record form [Form 62-780.900(3) or an equivalent chain of custody form that includes all the items required by Form 62-780.900(3)], the tables required pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., updated as applicable, site maps that illustrate the analytical results, and the water-level elevation information (summary table and flow map);

(e) If analyses of groundwater samples indicate that concentrations of applicable contaminants exceed any action levels specified in the Natural Attenuation with Monitoring Plan approval, the well or wells shall be resampled no later than 30 days after the initial positive result is known. If the results of the resampling confirm that the applicable action levels are exceeded, then the monitoring report referenced in paragraph 62-780.690(8)(d), F.A.C., shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-780.400, F.A.C., and shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-780.600, F.A.C.;

2. Continue the implementation of the approved Natural Attenuation with Monitoring Plan; or

3. Prepare and submit a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C.

(f) On an annual basis, the analytical data shall be evaluated in reference to the expected reductions in contaminant concentrations in monitoring wells pursuant to subparagraph 62-780.690(1)(f)1., F.A.C., or sub-subparagraph 62-780.690(1)(f)2.b., F.A.C., as applicable, to verify progress of site rehabilitation by natural attenuation. If the annual rate of expected cleanup progress is not achieved, then the monitoring report referenced in paragraph

62-780.690(8)(d), F.A.C., shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-780.400, F.A.C., and shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-780.600, F.A.C.;

2. Continue the implementation of the approved Natural Attenuation with Monitoring Plan; or

3. Prepare and submit a Remedial Action Plan pursuant to Rule 62-780.700, F.A.C.; and

(g) If natural attenuation with monitoring follows site assessment, a minimum of two sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., have been met for two consecutive sampling events. If natural attenuation with monitoring follows active remediation, a minimum of four sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., have been met for at least the last two sampling events. If soil contamination was present at the beginning of the monitoring program, prior to submitting the Site Rehabilitation Completion Report soil samples shall be collected at appropriate locations and depths and analyzed for the applicable contaminants to demonstrate to the Department that applicable soil CTLs are met.

(9) If during implementation of the Natural Attenuation with Monitoring Plan the PRSR submits to the Department a Remedial Action Plan pursuant to subsection 62-780.700(6), F.A.C., to enhance natural attenuation processes, and the Remedial Action Plan is approved, natural attenuation with monitoring shall be suspended during the implementation of the enhancement and the PRSR shall perform active remediation monitoring pursuant to the approved Remedial Action Plan.

(10) When Natural Attenuation with Monitoring is considered complete pursuant to paragraph 62-780.690(8)(g), F.A.C., within the time frames specified in Table A or the CAD the PRSR shall submit to the Department for review two copies of a Site Rehabilitation Completion Report with a No Further Action Proposal. The Site Rehabilitation Completion Report shall include the documentation required in paragraph 62-780.690(8)(d), F.A.C., to support the opinion that site cleanup objectives have been achieved.

(11) The Department shall:

(a) Provide the PRSR with a Site Rehabilitation Completion Order as referenced in

subsection 62-780.680(7), F.A.C., that approves the Site Rehabilitation Completion Report with the No Further Action Proposal; or

(b) Notify the PRSR in writing, stating the reason(s) why the Site Rehabilitation Completion Report does not contain information adequate to support the opinion that cleanup objectives have been achieved. Site rehabilitation activities shall not be deemed complete until such time as a Site Rehabilitation Completion Report with a No Further Action Proposal is approved.

(12) If the Site Rehabilitation Completion Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.690(10), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.690(11)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised Site Rehabilitation Completion Report that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall resume the implementation of the approved Natural Attenuation with Monitoring Plan within 30 days after receipt of the notice.

(13) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.700 Active Remediation.

(1) If the conditions at a site do not satisfy the No Further Action criteria of Rule 62-780.680, F.A.C., or the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C., within the time frames specified in Table A or the CAD the PRSR shall prepare and submit to the Department for review two copies of a Remedial Action Plan. The Remedial Action Plan shall be prepared pursuant to this section and shall contain all of the information required herein. The objective of the active remediation shall be to meet the applicable No Further Action criteria of Rule 62-780.680, F.A.C., or the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C. The Remedial Action Plan shall provide a design that addresses cleanup of all contaminated soil, sediment, groundwater, or surface water as a result of the discharge of pollutants or hazardous substances for which the PRSR is conducting site rehabilitation. Additionally, if the Remedial Action Plan addresses contamination that has migrated into any medium beyond the boundary of the source property (i.e., the location from which the contamination is emanating), then the point of compliance may be temporarily extended beyond

the property boundary with appropriate monitoring, if such extension is needed to address the current conditions of the plume, provided human health, public safety, and the environment are protected. If the point of compliance is proposed to be temporarily extended beyond the property boundary, it cannot be extended further than the lateral extent of the plume at the time of execution of a CAD, if known, or the lateral extent of the plume as defined at the time of the approved site assessment. Prior to the Department authorizing a temporary extension of the point of compliance beyond the property boundary, the PRSR shall provide notice and an opportunity to comment pursuant to subsection 62-780.220(3), F.A.C.

(2) Prior to performing any pilot study, within the time frames specified in Table A or the CAD the PRSR shall submit to the Department for review two copies of a Pilot Study Work Plan to determine the need for any applicable Department permits or authorizations (for example, underground injection control, National Pollutant Discharge Elimination System, or air emissions), and to ensure that human health and the environment are adequately protected. The Department shall:

(a) Provide the PRSR with written approval of the Pilot Study Work Plan; or

(b) Notify the PRSR in writing, stating the reason(s) why the Pilot Study Work Plan does not contain information adequate to support the conclusion that the pilot study will comply with all applicable requirements of subsection 62-780.700(2), F.A.C.

(3) The Remedial Action Plan shall:

(a) Include all applicable information required by subsection 62-780.300(2), F.A.C.;

(b) Summarize the Site Assessment Report conclusions and any additional data obtained since its submittal to the Department;

(c) If groundwater contamination is present, include results from a round of groundwater sampling and analyses from a number of monitoring wells adequate to determine the highest concentrations of contaminants, to verify the horizontal and vertical extent of the plume, and to provide design data for the Remedial Action Plan. If the latest analytical data were obtained greater than 270 days prior to submittal of the Remedial Action Plan then a confirmatory round of sampling and analyses is required. If the results from the confirmatory round of sampling contradict earlier results, then the applicable site assessment tasks specified in Rule 62-780.600, F.A.C., shall be performed to evaluate the current site conditions;

(d) Explain the rationale for the active remediation methods selected, which shall include at a

minimum:

1. Results from any pilot studies or bench tests; and
2. Results of an evaluation of remedial alternatives (including source removal), and a discussion of why other remedial alternatives considered were rejected, based on the following criteria:

- a. Long-term and short-term human health and environmental effects;
- b. Implementability, which may include ease of construction, site access, and necessity for permits;

- c. Operation and maintenance requirements;

- d. Reliability;

- e. Feasibility;

- f. Estimated time required to achieve cleanup; and

- g. Cost-effectiveness of installation, operation, and maintenance, when compared to other site remediation alternatives;

(e) Include an evaluation of the known production of breakdown contaminants or by-products resulting from bioremediation, oxidation, or other natural processes, as applicable;

(f) Summarize the operational details of the equipment to be used during active remediation, including, if applicable:

1. The disposition of any effluent;

2. The expected concentrations of contaminants in the effluent;

3. The method of air emissions treatment and the expected quantities in pounds per day of any contaminants discharged into air as a result of all the on-site active remediation systems. A separate air permit will not be required if the total air emissions from all the on-site remediation equipment system(s) do not exceed 5.5 lbs/day for any single Hazardous Air Pollutant (HAP) or 13.7 pounds per day for total HAPs. For on-site remediation equipment system(s) located at a facility that is a Title V source pursuant to Chapter 62-213, F.A.C., a separate permit pursuant to that chapter may be required;

4. The rates of application and concentrations of any in situ chemical or biological enhancement technologies implemented; and

5. The schedule for maintenance and monitoring of the remediation system;

(g) If groundwater contamination is present:

1. For remedial systems that include groundwater recovery, include a list of contaminants to be monitored in the recovery well(s) and in the effluent from the treatment system (based on the type of treatment employed and disposition of the effluent), the designation of recovery well(s) to be sampled, and a proposal for their sampling frequency. Contaminants that do not exceed the background concentrations or the applicable CTLs in samples from the recovery wells for two consecutive sampling events with a sampling frequency not less than quarterly may be excluded from subsequent monitoring events;

2. Include a list of contaminants to be monitored, the designation of a representative number of monitoring wells and, if applicable, surface water bodies to be sampled, and a proposal for their sampling frequency adequate to monitor the cleanup progress during active remediation, and the description of the methodology proposed to evaluate the effectiveness and efficiency of the remediation system. The designated wells shall include at least one well located at the downgradient edge of the plume and one well in the area of maximum groundwater contamination or directly adjacent to it if the area of highest groundwater contamination is inaccessible (for example, under a structure). For cleanups expected to last greater than two years, wells shall be sampled quarterly for the first year and semiannually thereafter. For cleanups expected to last less than two years, wells shall be sampled quarterly or at an alternative frequency as proposed in the approved Remedial Action Plan;

3. Include a list of contaminants to be monitored and the designation of a representative number of currently and previously contaminated monitoring wells that shall be sampled once a year during active remediation in order to redefine the plume and fully evaluate the effectiveness and efficiency of the remediation system; and

4. Include the designation of a representative number of monitoring wells, piezometers, and, if applicable, staff gauge locations to collect water-level data each time groundwater samples are collected; and

(h) Provide the details of any proposed treatment or disposition of contaminated soil or sediment. If contaminated soil exists at the site and active remediation does not include treatment or removal of such soil, the Remedial Action Plan shall include a proposal to implement an institutional control or both an institutional and an engineering control, pursuant to subsection 62-780.680(2) or 62-780.680(3), F.A.C., unless only leachability-based soil CTLs are exceeded and the site is expected to meet the criteria for Natural Attenuation with Monitoring

after active remediation has been implemented.

(4) Other requirements to be included in the Remedial Action Plan, if applicable, include the following:

(a) Vacuum extraction systems shall be equipped with a means of air emissions treatment for at least the first 30 days of system operation. Air emissions treatment may be discontinued after the first 30 days of system operation if the total air emissions from all the on-site remediation equipment system(s) do not exceed 5.5 lbs/day for any single HAP or 13.7 pounds per day for total HAPs;

(b) Bioventing systems shall be equipped with a means of air emissions treatment unless the Remedial Action Plan design is based on respiration rates and optimum air flow that result in soil remediation primarily by bioremediation with minimal volatilization of contaminants. This objective shall be confirmed by emissions sampling during startup;

(c) In situ air sparging systems shall be designed and operated in conjunction with air emissions treatment system(s) unless the Remedial Action Plan design is based on sparging rates and optimum air flow with minimal volatilization of contaminants. This objective shall be confirmed by emissions sampling during startup. If a vacuum extraction system is used, the vacuum extraction system shall operate at an air flow rate at least 50% greater than the sparging air flow rate, and the vacuum extraction system shall be provided with air emissions control as described in paragraph 62-780.700(4)(a), F.A.C.;

(d) Biosparging systems shall be equipped with a means of air emissions control unless the Remedial Action Plan design is based on the optimum air sparging rates that promote biological activity with minimal volatilization of contaminants. This objective shall be confirmed by emissions sampling during startup;

(e) Multi-phase extraction systems shall be equipped with a means of air emissions treatment for at least the first 30 days of system operation. Air emissions treatment may be discontinued after the first 30 days of system operation if the total air emissions from all the on-site remediation equipment system(s) do not exceed 5.5 lbs/day for any single HAP or 13.7 pounds per day for total HAPs; and

(f) A sampling schedule shall be specified for monitoring vacuum extraction systems, in situ sparging, bioremediation, or other in situ means of remediation of soil and groundwater.

(5) The Remedial Action Plan may propose active remediation followed by natural

attenuation with monitoring. The active remediation may consist solely of soil remediation, short-term or intermittent groundwater remediation, other remedial enhancements, or combinations of these. The discontinuation of active remediation may be appropriate at any time depending on the site-specific characteristics and conditions. The Remedial Action Plan shall include a discussion of when the active remediation will be discontinued.

(6) The Remedial Action Plan may propose the use of new and innovative technologies or approaches to meet the No Further Action criteria of Rule 62-780.680, F.A.C., or the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C. The Remedial Action Plan shall include a demonstration that the proposed technology or approach meets the criteria of subsections 62-780.700(1)-(5), F.A.C. These technologies or approaches may include low-cost enhancements to natural attenuation. Natural attenuation with monitoring shall be suspended during the implementation of the enhancement, pursuant to subsection 62-780.690(9), F.A.C.

(7) The remedial action plan summary form [Form 62-780.900(4)] shall be completed and submitted as part of the Remedial Action Plan. The information provided in the remedial action plan summary form shall be updated to be consistent with the final approved Remedial Action Plan and any subsequent modifications to the approved Remedial Action Plan, and the updated summary form shall be submitted to the Department.

(8) The Department shall:

(a) Provide the PRSR with a Remedial Action Plan Approval Order approving the Remedial Action Plan; or

(b) Notify the PRSR in writing, stating:

1. The reason(s) why the Remedial Action Plan does not contain information adequate to support the conclusion that the active remediation objectives will comply with all applicable requirements of Rule 62-780.700, F.A.C.; or

2. The reason(s) why the proposal, plan, or recommendation included in the Remedial Action Plan is not supported by the applicable criteria.

(9) If the Remedial Action Plan is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.700(3), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.700(8)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a Remedial Action Plan Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(10) Prior to implementation of the Remedial Action Plan, the PRSR shall obtain all applicable Department permits or authorizations required for site rehabilitation activities (for example, separate permits for underground injection control, National Pollutant Discharge Elimination System, or air emissions), if not included in the Remedial Action Plan approval. The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(11) Within the time frames specified in Table A or the CAD, engineering drawings (As-Built Drawings) shall be submitted by the PRSR to the Department two copies of engineering drawings. The engineering drawings shall include all construction and equipment design specifications of the installed active remediation system(s) and any operational parameters different from those in the approved Remedial Action Plan. A summary of the system(s) startup activities shall be attached to the engineering drawings.

(12) Within the time frames specified in Table A or the CAD, the operation of the active remediation system(s) shall be initiated unless, after the exercise of reasonable diligence, applicable permits required pursuant to subsection 62-780.700(10), F.A.C., have not been obtained. The following shall be obtained or determined during active remediation at the specified frequencies and turnaround times, as applicable, unless otherwise provided in the approved Remedial Action Plan:

(a) Water-level data collected from all designated wells, piezometers, and staff gauge locations each time monitoring wells and recovery wells are sampled (water-level measurements shall be made within a 24-hour period). If water-level data or operational parameters remain unchanged, the PRSR may propose, pursuant to paragraph 62-780.700(15)(b), F.A.C., that the requirement be modified or discontinued;

(b) Total volume of free product recovered and the thickness and horizontal extent of free product during the reporting period until free product recovery is completed;

(c) Total volume of groundwater recovered from each recovery well during each month of the operating period for the first year, and quarterly thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan;

(d) Concentrations of applicable contaminants based on analyses performed on the effluent from the groundwater treatment system, daily for the first three days with a 24-hour turnaround on analytical results of the samples collected the first two days, weekly for the next three weeks, monthly for the next two months, quarterly for the next two years, and semiannually thereafter or

at an alternative frequency as proposed in the approved Remedial Action Plan;

(e) Concentrations of applicable contaminants based on analyses performed on the untreated groundwater from the selected individual recovery well(s), as proposed in the approved Remedial Action Plan, weekly for the first month, monthly for the next two months, quarterly for the next two years, and semiannually thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan. Sampling of groundwater from individual multi-phase extraction wells to evaluate the performance of the recovery and treatment system shall be performed as necessary; as approved in the Remedial Action Plan;

(f) Analytical data from all monitoring wells sampled during the remediation year to monitor rehabilitation progress during active remediation, including all applicable information required by subsection 62-780.300(2), F.A.C.;

(g) Operational parameters for in situ system(s), which include measurements of biological, chemical, or physical indicators that will verify radius of influence at representative monitoring locations, weekly for the first month, monthly for the next two months, quarterly for the first two years, and semiannually thereafter. If a demonstration is provided to the Department that operational parameters remain unchanged, the PRSR may propose, pursuant to paragraph 62-780.700(15)(b), F.A.C., that the monitoring be modified or discontinued;

(h) Operational parameters for bioremediation system(s), including measurements of dissolved oxygen at representative monitoring locations; rates of biological, chemical, or nutrient enhancement additions; and any other indicators of biological activity as proposed in the approved Remedial Action Plan; weekly for the first month, monthly for the next two months, and quarterly thereafter or at an alternative frequency as proposed in the approved Remedial Action Plan. If a demonstration is provided to the Department that operational parameters remain unchanged, the PRSR may propose, pursuant to paragraph 62-780.700(15)(b), F.A.C., that the monitoring be modified or discontinued;

(i) Concentrations of recovered vapors from a vacuum extraction system, and post-treatment air emissions if air emissions treatment is provided, weekly for the first month, monthly for the next two months, and quarterly thereafter (if applicable air quality standards are not exceeded for two consecutive monthly or quarterly sampling events, the PRSR may submit to the Department a proposal for a different sampling frequency; for activated carbon off-gas treatment, additional sampling events may be performed based on the estimated time of

breakthrough), as follows:

1. Concentrations of recovered vapors from individual wells shall be determined using an organic vapor analyzer with a flame ionization detector, or other applicable field detection device, in order to optimize the airflow rate and contaminant recovery;

2. The influent and effluent samples shall be analyzed for contaminants using an appropriate analytical method referenced in the approved Remedial Action Plan and specified in Chapter 62-160, F.A.C.; and

3. The samples shall be collected using appropriate air sampling protocols specified in Chapter 62-160, F.A.C.;

(j) Percentage of system operation time and the treatment efficiency for all operating treatment systems, including the dates when the site was visited and whether the system was operating upon arrival at the site and upon departure from the site; and

(k) Results of analyses of soil samples taken to verify that the applicable No Further Action criteria of Rule 62-780.680, F.A.C., or the applicable Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C., have been met, based on one of the following:

1. When both field screening and laboratory results using the most sensitive method for the constituents being analyzed for vacuum extraction systems indicate no detectable concentrations of contaminants in the recovered vapors;

2. When the screening for bioventing parameters indicates that the bioventing is complete; or

3. If alternative soil CTLs were established pursuant to Rule 62-780.650, F.A.C., when system performance or monitoring using the applicable analytical methods for the appropriate constituents indicate that the alternative soil CTLs have been achieved.

(13) During implementation of the Remedial Action Plan, within the time frames specified in Table A or the CAD the PRSR shall submit to the Department for review two copies of status reports of remedial action. The Remedial Action Status Report shall contain the following, as applicable:

(a) A summary of the data requested in paragraphs 62-780.700(12)(a)-(k), F.A.C.;

(b) All applicable information required by subsection 62-780.300(2), F.A.C.;

(c) A summary of the estimated mass of contaminants recovered in all phases, including free product, dissolved, and vapor phases, by all the on-site remediation equipment, and a comparison to the original estimate of mass of contaminants on-site;

(d) One or more scaled site maps that shows groundwater flow direction(s), and the current degree and extent of the contamination;

(e) Conclusions as to the effectiveness of the active remediation for the specified period covered in the status report;

(f) Recommendations to continue or discontinue the operation of the treatment system(s) or to modify the site rehabilitation; and

(g) Form 62-780.900(5), summarizing the information from the annual remedial action tasks.

(14) If effluent concentrations or air concentrations exceed those in the approved Remedial Action Plan, or plume migration occurs during remediation system startup or during operation of the treatment system(s), corrective actions shall be taken and the Department shall be notified by the PRSR within seven days. If the condition may represent an imminent threat to human health, public safety, or the environment, the Department shall be notified within 24 hours. Details of all such incidents shall be included in the status report described in subsection 62-780.700(13), F.A.C.

(15) During implementation of the Remedial Action Plan, the PRSR may propose and justify:

(a) Supplemental assessment to determine alternative CTLs pursuant to Rule 62-780.650, F.A.C.;

(b) Modifications to existing treatment or recovery system(s), or modifications or discontinuation of monitoring of operational parameters as outlined in the remedial action status report prepared pursuant to subsection 62-780.700(13), F.A.C.;

(c) Innovative technologies pursuant to subsection 62-780.700(6), F.A.C., or other alternative technologies or approaches; or

(d) Discontinuation of active remediation and commencement of Natural Attenuation with Monitoring. The proposal shall include a Natural Attenuation with Monitoring Plan pursuant to subsection 62-780.690(4), F.A.C.

(16) The Department shall:

(a) Provide the PRSR with written approval of the proposal; or

(b) Notify the PRSR in writing, stating the reason(s) why the proposal does not contain information adequate to comply with applicable requirements of subsection 62-780.700(15), F.A.C.

(17) If the proposal is incomplete in any respect, or is insufficient to satisfy the applicable

requirements of subsection 62-780.700(15), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.700(16)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised Natural Attenuation with Monitoring Plan or other proposal pursuant to paragraphs 62-780.700(15)(a)-(c), F.A.C., that addresses the deficiencies, within 60 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall continue the implementation of the approved Remedial Action Plan within 30 days after receipt of the notice.

(18) Active remediation shall be deemed complete when the No Further Action criteria of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., have been met, or may be deemed complete when the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C., have been met.

(19) For sites conducting active groundwater remediation, if the site does not meet the No Further Action criteria of subsection 62-780.680(1), F.A.C., or the Natural Attenuation with Monitoring criteria of Rule 62-780.690, F.A.C., the PRSR may submit to the Department for review two copies of a proposal to discontinue active groundwater remediation, provided the following demonstration and analyses are met:

(a) Contaminated soil has been properly removed and disposed, or treated in situ, so that the applicable soil CTLs are met or addressed by the enactment and implementation of institutional controls or both institutional and engineering controls;

(b) After a minimum of one year of groundwater treatment, concentrations of contaminants in designated monitoring wells and recovery wells have leveled off. This demonstration shall be based on subsequent monthly sampling results obtained for a minimum of 180 days, unless an alternative frequency has been approved in the Remedial Action Plan or pursuant to subsection 62-780.700(15), F.A.C. "Leveling-off" shall mean that the graph of contaminant concentrations versus time generally fits a curve defined by the equation $C=C_f+C_0e^{-kt}$, that the lower limb of the curve is substantially linear, and that the slope of the final portion of the curve approaches zero. Applicable statistical methods shall be applied to demonstrate this conclusion. In the preceding equation, symbols are defined as follows:

1. C: concentration of the applicable contaminant at time t;
2. C_f : coefficient representing final concentration that the curve approaches asymptotically;
3. C_0 : coefficient representing concentration difference between the final concentration and

the concentration at time zero;

4. e: 2.718, the base of natural logarithms;

5. k: coefficient representing the exponential factor that indicates how fast the concentration approaches C_f ;

6. t: time in days from some fixed starting point.

(c) An analysis or demonstration has been made of:

1. The technical feasibility of enhancements to the existing remediation system;

2. The technical feasibility of other proven groundwater or soil treatment techniques to further reduce the concentrations of applicable contaminants at the site;

3. The costs and time frames involved to further reduce the concentrations of applicable contaminants employing the alternative method(s) proposed;

4. The effects on the designated or potential use of the water resource if contaminants remain at existing concentrations;

5. The effect on, and any protection that may be required of, surface water resources;

6. The effect on human health, public safety, and the environment if contaminants remain at existing concentrations;

7. The extent and potential for further migration of contaminated groundwater above background concentrations or applicable CTLs; and

8. Institutional controls or both institutional and engineering controls that may be necessary to ensure protection of the public and the environment from future use of contaminated groundwater.

(20) If a demonstration pursuant to subsection 62-780.700(19), F.A.C., was completed, the PRSR shall compile the results of the demonstration and analyses described in paragraphs 62-780.700(19)(a)-(c), F.A.C., in a report and shall submit two copies of the report to the Department for review within the time frames of Table A or CAD. The Department shall determine, using the criteria specified in paragraph 62-780.700(19)(c), F.A.C., whether modifications to the Remedial Action Plan are required pursuant to subsection 62-780.700(15), F.A.C., to effect further treatment; however, if alternative methods are not required, active remediation shall be deemed complete.

(21) When the No Further Action criteria of subsection 62-780.680(1), F.A.C., or the leveling off criteria of subsection 62-780.700(19), F.A.C., have been met, two copies of a Post Active

Remediation Monitoring Plan prepared pursuant to the Post Active Remediation Monitoring criteria described in Rule 62-780.750, F.A.C., shall be submitted by the PRSR to the Department for review (unless the Department has concurred that Post Active Remediation Monitoring sampling for groundwater is unnecessary based on the site-specific conditions). If the Department agrees that groundwater sampling is unnecessary and the site meets the No Further Action criteria of subsection 62-780.680(1), F.A.C., a Site Rehabilitation Completion Order shall be issued as referenced in subsection 62-780.680(7), F.A.C.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.750 Post Active Remediation Monitoring.

(1) Groundwater monitoring shall be performed following the completion of active groundwater remediation or soil remediation as described in Rule 62-780.700, F.A.C., unless the Department has concurred that groundwater sampling is unnecessary based on the site-specific conditions. When active groundwater remediation has met the No Further Action criteria of subsection 62-780.680(1), F.A.C., or the leveling off criteria of subsection 62-780.700(19), F.A.C., two copies of a Post Active Remediation Monitoring Plan prepared pursuant to the provisions of subsection 62-780.750(4), F.A.C., and including analytical results demonstrating this conclusion, shall be submitted by the PRSR to the Department for review.

(2) The Department shall:

(a) Provide the PRSR with written approval of the Post Active Remediation Monitoring Plan;

or

(b) Notify the PRSR in writing, stating the reason(s) why the Post Active Remediation Monitoring Plan does not contain information adequate to support the conclusion that the applicable Post Active Remediation Monitoring criteria of Rule 62-780.750, F.A.C., have been met.

(3) If the Post Active Remediation Monitoring Plan is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.750(1), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.750(2)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised Post Active Remediation Monitoring Plan that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall resume the implementation of the

approved Remedial Action Plan within 30 days after receipt of the notice.

(4) The monitoring program shall be performed as specified in the Post Active Remediation Monitoring Plan approval, as follows:

(a) A minimum of two monitoring wells is required:

1. At least one well shall be located at the downgradient edge of the plume; and
2. At least one well shall be located in the area(s) of highest groundwater contamination or directly adjacent to it if the area of highest groundwater contamination is inaccessible (for example, under a structure).

(b) The designated monitoring wells shall be sampled quarterly, or at a frequency specified in the Post Active Remediation Monitoring Plan approval, for analyses of contaminants that were present prior to the initiation of active remediation;

(c) Water-level measurements in all designated wells and piezometers shall be made within 24 hours of initiating each sampling event;

(d) Within the time frames specified in Table A or the CAD, the PRSR shall submit to the Department for review two copies of a Post Active Remediation Monitoring Report. The report shall include the analytical results (laboratory report), chain of custody record form [Form 62-780.900(3) or an equivalent chain of custody form that includes all the items required by Form 62-780.900(3)], the tables required pursuant to subparagraph 62-780.600(8)(a)27., F.A.C., updated as applicable, site maps that illustrate the analytical results, and the water-level elevation information (summary table and flow map);

(e) If analyses of groundwater samples indicate that concentrations of applicable contaminants exceed any action levels specified in the Post Active Remediation Monitoring Plan approval, the well or wells shall be resampled no later than 30 days after the initial positive result is known. If the results of the resampling confirm that the applicable action levels are exceeded, then the monitoring report described in paragraph 62-780.750(4)(d), F.A.C., shall be signed and sealed by an appropriate registered professional pursuant to Rule 62-780.400, F.A.C., and shall include a proposal to:

1. Perform a supplemental site assessment and submit a supplemental Site Assessment Report pursuant to Rule 62-780.600, F.A.C.;
2. Continue the implementation of the approved Post Active Remediation Monitoring Plan; or
3. Implement additional active remediation pursuant to Rule 62-780.700, F.A.C.

(f) A minimum of four groundwater sampling events is required and site rehabilitation shall be considered complete when the No Further Action criteria of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., have been met for at least the last two sampling events. However, if contamination was only present in the unsaturated zone during the site assessment and active remediation tasks, site rehabilitation shall be considered complete if the No Further Action criteria of subsection 62-780.680(1), 62-780.680(2), or 62-780.680(3), F.A.C., are met during only one sampling event.

(5) The remediation equipment may be maintained in an inactive but operational status during the duration of post active remediation monitoring to avoid the possibility of having to re-install it when contaminant concentrations rebound.

(6) When post active remediation monitoring is considered complete pursuant to paragraph 62-780.750(4)(f), F.A.C., within the time frames specified in Table A or the CAD the PRSR shall submit to the Department for review two copies of a Site Rehabilitation Completion Report with a No Further Action Proposal. The Site Rehabilitation Completion Report shall include the documentation required in paragraph 62-780.750(4)(d), F.A.C., to support the opinion that site cleanup objectives have been achieved.

(7) The Department shall:

(a) Provide the PRSR with a Site Rehabilitation Completion Order as referenced in subsection 62-780.680(7), F.A.C., that approves the No Further Action Proposal; or

(b) Notify the PRSR in writing, stating the reason(s) why the Site Rehabilitation Completion Report does not contain information adequate to support the opinion that the cleanup objectives have been achieved. Site rehabilitation activities shall not be deemed complete until such time as a Site Rehabilitation Completion Report, which includes a No Further Action Proposal, is approved.

(8) If the Site Rehabilitation Completion Report is incomplete in any respect, or is insufficient to satisfy the objectives of subsection 62-780.750(6), F.A.C., the Department shall inform the PRSR pursuant to subsection 62-780.750(7)(b), F.A.C., and the PRSR shall submit to the Department for review two copies of a revised Site Rehabilitation Completion Report that addresses the deficiencies within 30 days after receipt of the notice. If the deficiencies are not timely corrected, or cannot be corrected, the PRSR shall resume the implementation of the approved Post Active Remediation Monitoring Plan within 30 days after receipt of the notice.

(9) The Site Rehabilitation Completion Order shall constitute final agency action regarding cleanup activities at the site.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History—New 4-17-05.

62-780.790 Time Schedules.

(1) Site rehabilitation performed pursuant to this chapter shall be conducted within the time frames specified in Table A of this chapter.

(2) If the PRSR has entered into a CAD with the Department for site rehabilitation, the time frames specified in the CAD shall take precedence over the time frames specified in Table A of this chapter.

(3) Unless specified otherwise in this chapter, within 60 days of receipt of a written notification from the Department that a plan or report does not contain adequate information or that the information provided is not supported by the applicable criteria, the PRSR shall submit to the Department the requested information for review.

(4) A modification of the time frame may be obtained by the PRSR for any action set forth in this chapter for good cause shown by requesting in writing that the Department make such a modification. The request shall specify which time frame(s) is to be modified, the amount of additional time required, and provide documentation supporting the good cause for the request. The request shall be received by the Department at least 20 days prior to the time the action is to be initiated. If emergency situations at a site do not allow for a full 20 days notice, the request shall detail such emergency situation. Within 20 days of receipt of a request for modification, the Department shall notify the PRSR in writing if additional information regarding the request is needed. The Department shall notify the PRSR in writing within 20 days of receipt of the request or of the additional information as to whether modification of the time frame(s) will be allowed. For purposes of this paragraph, good cause shall mean unanticipated events outside the control of the PRSR. Applicable deadlines referenced pursuant to this chapter shall be tolled while a request for modification of a time frame is pending.

(5) The failure of the PRSR to submit requested information or meet any time frame herein shall be a violation of Chapters 376 and 403, F.S.

(6) In no circumstances shall the Department's failure to meet any time frame be construed as approval of any plan or action by the Department.

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History--New 4-17-05.

62-780.900 Forms.

The forms used by the Department in the Contaminated Site Cleanup Criteria program are adopted and incorporated by reference in this rule. Each form is listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Bureau of Waste Cleanup, MS 4505, 2600 Blair Stone Road, Tallahassee, FL 32399-2400; or to the applicable local district office of the Department.

(1) Form 62-780.900(1), Initial Notice of Contamination Beyond Property Boundaries (effective date 4-17-05).

(2) Form 62-780.900(2), Free Product Removal Notification Form for Contaminated Sites (effective date 4-17-05).

(3) Form 62-780.900(3), Chain of Custody Record (effective date 4-17-05).

(4) Form 62-780.900(4), Remedial Action Plan Summary (effective date 4-17-05).

(5) Form 62-780.900(5), Active Remediation Status Report Summary (effective date 4-17-05).

Specific Authority 376.30701 FS. Law Implemented 376.30701 FS. History--New 4-17-05.

TABLE A.
Submittals and Time Frames for PRSR

Type of Report or Activity	PRSR Action or Submittal Time Frames
Notice of Initiation of Emergency Response Action or Interim Source Removal Action	Within 24 hours of initiation of the action
Interim Source Removal Plan	When seeking approval before implementation of an alternative product recovery method, groundwater recovery, soil treatment or disposal technique (Rule 62780.500, F.A.C.)
Interim Source Removal Status Report	Within 60 days of initiating interim source removal activities and every 60 days thereafter or when the field activity is terminated, whichever occurs first
Interim Source Removal Report	Within 60 days of completion of interim source removal activities
Site Assessment Commenced	Within 60 days after a discharge is discovered
Site Assessment Report (SAR)	SAR submitted within 270 days of discharge or discovery
Risk Assessment Report (RAR)	Optional (within 60 days of SAR approval or within the scheduled approved in the Risk Assessment work plan)
Well Survey and Sampling Results pursuant to paragraph 62780.600(3)(h), F.A.C.	Within 60 days of discovery of contamination beyond the property boundaries
No Further Action (NFA) Proposal	When the site meets the criteria for NFA (Rule 62780.680, F.A.C.)
Natural Attenuation with Monitoring (NAM) Plan	When the site meets the criteria for NAM (Rule 62780.690, F.A.C.)

Natural Attenuation with Monitoring (NAM) Report	Within 60 days of sample collection
Remedial Action Plan (RAP)	Within 90 days of approval of a SAR or RAR
As-Built Drawings	Within 120 days of initiating operation of active remediation system
Initiate Operation of Active Remediation System	Within 120 days of RAP approval
Remedial Action Status Report	Within 60 days of the anniversary date of initiating operation of active remediation system
Proposals submitted pursuant to subsection 62780.700(15), F.A.C.	Optional during active remediation
Post Active Remediation Monitoring (PARM) Plan	When the site meets the criteria for NFA (Rule 62780.680, F.A.C.) or LevelingOff (subsection 62780.700(19), F.A.C.)
Post Active Remediation Monitoring (PARM) Report	Within 60 days of sample collection
Leveling Off Determination	Within 60 days of sample collection
Post Active Remediation Monitoring Plan resampling proposal (paragraph 62780.750(4)(e), F.A.C.)	Within 60 days of sample collection
Site Rehabilitation Completion Report (SRCR)	Within 60 days of the final sampling event. If SRCR is not approved then submit modifications, etc. within 60 days of Department's response
Pilot Study Work Plan	When seeking approval before implementation of a Pilot Study pursuant to subsection 62780.700(2), F.A.C.
Combined Document (optional submittal)	Submitted within 270 days of discharge or discovery

<p>Notices for Field Activities (except for Initiation of Emergency Response Action, De minimis Discharges or Interim Source Removal Action)</p>	<p>Notice to the Department within seven days but not less than 24 hours prior to performing field activity</p>
<p>Submittal to the Department of addenda, responses, or modification to plans or reports, pursuant to Rule 62780.790, F.A.C.</p>	<p>Within 60 days of receipt of the Department's response</p>
<p>Submittal of Form and Actual Notice required in subsection 62780.220(2), F.A.C.</p>	<p>See text of rule for "Initial Notice of Contamination Beyond Property Boundaries" in subsection 62780.220(2), F.A.C.</p>
<p>Submittal of Actual or Constructive Notices required in subsection 62780.220(3), F.A.C.</p>	<p>See text of rule for "Subsequent Notice of Contamination Beyond Source Property Boundaries for Establishment of a Temporary Point of Compliance (TPOC)" in subsection 62780.220(3), F.A.C.</p>