**Workshop Draft for April 5, 2016**

***Note 03-28-16: This version incorporates comments and suggestions from 11-04-15 workshop. Edits highlighted in green and double-strikethrough or double-underline.***

***Note on 11-04-15 Workshop Draft: This draft is a markup of the prior workshop drafts. Changes made in this draft are highlighted in yellow. All comments and suggested changes received have been placed in their respective locations throughout the document. All comments have been included as submitted.***

**CHAPTER 62-780**

**CONTAMINATED SITE CLEANUP CRITERIA**

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**62-780.100 Referenced Guidelines and Information Sources.**

Specific references to the guidelines and information sources listed below are made within this chapter. The guidelines and information sources are not standards as defined in Section 403.803, F.S. Use of these guidelines and information sources is not mandatory and not enforceable; the guidelines and information sources 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 charts, dated March 21, 2013.

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

(7) Institutional Controls Procedures Guidance, Division of Waste Management, Florida Department of Environmental Protection, dated November 2013.

(8) 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.)

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

(10) USEPA Integrated Risk Information System (IRIS) database.

(11) Provisional Peer Reviewed Toxicity Values (PPRTV) derived by the USEPA’s Superfund Technical Support Center for the USEPA Superfund program.

(12) Agency for Toxic Substances and Disease Registry Minimal Risk Levels (MRLs).

(13) Tolerable Upper Intake Levels issued by the Institute of Medicine, National Academy of Sciences.

(14) USEPA Health Effects Assessment Summary Tables (HEAST).

(15) Human Health Benchmarks for Pesticides and other toxicity values in technical documents available from the USEPA Office of Pesticide Programs.

(16) USEPA Office of Water, Drinking Water Regulations and Health Advisory Levels.

(17) California Environmental Protection Agency Office of Environmental Health Hazard Assessment’s Chronic Reference Exposure Levels and Cancer Potency Values.

(18) World Health Organization Tolerable Daily Intake values.

(19) International Toxicity Estimates for Risk.

(20) Values listed as “Withdrawn” in the IRIS database.

(21) ITRC (Interstate Technology & Regulatory Council). 2012. *Incremental Sampling Methodology*. ISM-1. Washington, D.C.: Interstate Technology & Regulatory Council, Incremental Sampling Methodology Team. [www.itrcweb.org](http://www.itrcweb.org).

(22) Mineral Oil Dielectric Fluid Emergency Response Action Protocol, dated April 11, 2007

(23) Heavy Fuel Oil Discharge Response Actions, dated April 11, 2007

(24) Guidance for the use of Dose Additivity in Evaluating the Additive and Synergistic Effects of Contaminants, dated MMMM DD, YYYY

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 6-12-13, 2-4-14, .*

*Editorial Note: Portions of this rule were copied from 62-770.140; 62-782.100; and 62-785.100.*

**62-780.110 Purpose, Intent, and General Principles.**

*Rulemaking Authority 376.30701 FS. Law Implemented 376.30701 FS. History–New 4-17-05, Repealed 2-16-12.*

**62-780.150 Applicability.**

(1) This chapter applies to site rehabilitation conducted at sites contaminated with pollutants, hazardous substances, drycleaning solvents, petroleum and petroleum products, and supersedes Chapters 62-770, 62-782, and 62-785, F.A.C., subject to the grandfathering provisions of subsection 62-780.150(5), F.A.C. Any correspondence, reports, cleanup agreement documents, contracts or similar documents that reference superseded rules are not required to be amended to remain valid and in force.

(2) 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.

(3) Any person 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. The cleanup criteria contained in this chapter shall apply to voluntary cleanups conducted at all sites contaminated with drycleaning solvents including site rehabilitation at drycleaning facilities or wholesale supply facilities governed by the terms of a Voluntary Cleanup Agreement (VCA) executed by the Person Responsible for Site Rehabilitation (PRSR) and the Department pursuant to Section 376.3078(11), F.S. The cleanup criteria contained in this chapter also shall apply to any voluntary brownfield site rehabilitation that is governed by the terms of a Brownfield Site Rehabilitation Agreement (BSRA), within a designated brownfield area. The BSRA shall be executed by the person responsible for brownfield site rehabilitation (i.e., the PRSR) and the Department pursuant to Section 376.80(5), F.S.

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

(5) This chapter and the CTLs developed pursuant to this chapter apply to site rehabilitation 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, a Risk Assessment Report, a Natural Attenuation Monitoring Plan, or a Remedial Action Plan), Brownfields Site Rehabilitation Agreement, current permit, Superfund Record of Decision with which the Department has concurred, or other cleanup agreement document (CAD) 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 CAD until those CTLs are achieved; or

(b) The site has received a “No Further Action” determination or a Site Rehabilitation Completion Order from the Department prior to April 17, 2005. 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 CAD.

(6) This chapter shall be applied in conjunction with Chapter 62-777, F.A.C., to determine the appropriate 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., Chapter 62-777, F.A.C. also includes 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 discharged pollutants, chemicals or other substances that are contaminants not listed in Chapter 62-777, F.A.C., or to develop alternative groundwater and soil CTLs for listed contaminants.

(7) 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 and are enforceable by the Department pursuant to this chapter at contaminated sites at which legal responsibility for site rehabilitation exists..

(8) For contaminants found at the site about which information regarding the actual circumstances of exposure has been provided to the PRSR, the CTLs for the affected medium or media, except where a state water quality standard is applicable, shall be adjusted (if appropriate) to take into account the site-specific exposure conditions including multiple pathways of exposure that affect the same individual or subpopulation, and site‑specific CTLs shall be calculated taking into account, through apportionment, potential dose additivity additive effects of contaminants.

(9) If a Consent Order, or permit or CAD that requires assessment and rehabilitation of a site has been entered into with the Department prior April 17, 2005, compliance with the terms of the Consent Order or permit shall constitute compliance with the provisions of this chapter.

(10) 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.

(11) Receipt of approval 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, and 62-730, F.A.C.) regarding disposal, relocation, or treatment of contaminated media. The PRSR is advised that other federal, state, or local laws and regulations may apply to these activities.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.160, Formerly 17-70.004 and Formerly 17-770.160; 62-782.150; and 62-785.150.*

**62-780.200 Acronyms and Definitions.**

All words and phrases defined in Sections 376.301 and 376.79, F.S., shall have the same meaning when used in this chapter unless specifically stated otherwise in this chapter. See Sections 376.301 and 376.79, F.S., for definitions of the following terms: “Additive effects,” “Antagonistic effects,” “Brownfield area,” “Brownfield site,” “Cleanup target level,” “Contaminant,” “Contaminated site,” “Discharge,” “Drycleaning facility,” “Drycleaning solvents,” “Hazardous substances,” “Institutional control,” “Long-term natural attenuation”, “Natural attenuation,” “Person responsible for brownfield site rehabilitation,” “Petroleum,” “Petroleum product,” “Pollutants,” “Risk reduction,” “Site rehabilitation,” “Synergistic effects,” “Temporary point of compliance,” and “Wholesale supply facility.” 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 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) Dose Additivity “Dose additive effects” is the calculated additive effect of chemicals that share the same mechanism of toxicity. Guidance on the chemicals encompassed and methods for assessing dose additivity is provided in the “Dose Additivity” document referenced in subsection 62-780.100(XX), F.A.C.

 “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, and for carcinogens, the cumulative lifetime excess cancer risk level is 1.0E-6, as applicable.

(3) “Background concentrations” means concentrations of contaminants that are naturally occurring or resulting from anthropogenic impacts unrelated to the discharge of pollutants or hazardous substances at a contaminated site undergoing site rehabilitation, in the groundwater, surface water, soil, or sediment in the vicinity of the site.

(4) “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.]

(5) “Brownfield Site Rehabilitation Agreement” (BSRA) means an agreement entered into between the person responsible for brownfield site rehabilitation and the Department. The BSRA shall at a minimum establish the time frames, schedules, and milestones for completion of site rehabilitation tasks and submission of technical reports, and other commitments or provisions pursuant to Section 376.80(5), F.S., and this chapter.

(6) “BSRA” means Brownfield Site Rehabilitation Agreement.

(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. For brownfield sites subject to a BSRA, CAD shall mean the BSRA. 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.

(XX) “Conceptual Site Model” (CSM) means a written and/or graphic representation of the physical, chemical and biological processes that affect the transport, migration and actual or potential exposure to impacts of contamination in all affected media to human and ecological receptors. The CSMThe Conceptual Site Model is used to develop and refine the extent of site assessment, support remedial alternative and cleanup technology evaluations, and support risk management decisions.

(9) “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 Section 376.30701(1)(a), F.S., shall not be used to establish legal responsibility for conducting site rehabilitation.

(10) “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 subsections 62-780.100(1) and (6), F.A.C., for guidance on the evaluation of contaminant concentrations, sediment quality conditions, and testing methods.]

(XX) “CSM” means conceptual site model.

(11) “CTL” means cleanup target level as defined in Section 376.301, F.S.

(12) “Department” means the FDEP, or a county or Department of Health local program established under a contract pursuant to Section 376.3073, F.S., to assist the FDEP in the administration of the petroleum contamination site cleanup program, or a local pollution control program that has received delegated authority from the FDEP pursuant to Sections 376.80(9) and 403.182, F.S., to administer all or part of the brownfields program. For more information, visit the FDEP website.

(13) “Emergency response action” means activities initiatedan ~~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.

(14) “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.

(15) “Excessively contaminated soil” for the purposes of Section 376.3071(12)(b)~~376.3071(11)(b)2~~., F.S., ~~that only applies to sites scored 29 or less (unless laboratory results verify that the organic vapor analysis data are not relevant)~~, means soil saturated with petroleum or petroleum products or soil that causes a total corrected hydrocarbon measurement of 500 parts per million (ppm) or higher for Gasoline Analytical Group or 50 ppm or higher for Kerosene Analytical Group. Readings shall be obtained at the site on an organic vapor analysis instrument with a flame ionization detector in the survey mode upon sampling the headspace in half-filled, 8-ounce or 16-ounce jars. Each soil sample shall be split into two jars, the two subsamples shall be brought to a temperature of between 20° C. (68° F.) and 32° C. (90° F.), and the readings shall be obtained 5 to 30 minutes thereafter. One of the readings shall be obtained with the use of an activated charcoal filter unless the unfiltered reading is nondetect. The total corrected hydrocarbon measurement shall be determined by subtracting the filtered reading from the unfiltered reading. Instruments with a photo ionization detector may be used, but shall not be used in situations where humidity will interfere with the instruments’ sensitivity (including periods of rain, measuring wet or moist soil). If an instrument with a photo ionization detector is used, a filtered reading is not warranted and therefore sample splitting is not necessary. Analytical instruments shall be calibrated in accordance with the manufacturer’s instructions.

(16) “Exposure unit” means an area over which receptors are expected to have equal and random exposure.

(17) “FDEP” means the Florida Department of Environmental Protection.

(18) “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 ~~or a hazardous substance that is present as a solid or liquid in its original form as a product or waste material~~.

(19) “Gasoline Analytical Group” means aviation gasoline, gasohol, and motor gasoline or equivalent petroleum products.

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

(XX) “Incremental Sampling Methodology” means a structured composite sampling and processing protocol that reduces data variability and provides a reasonably unbiased estimate of mean contaminant concentrations in a volume of soil. [Refer to “Incremental Sampling Methodology” referenced in subsection 62-780.100(21), F.A.C., for guidance.]

(21) “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..

(22) “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.

(XX) “ISM” means Incremental Sampling Methodology

(23) “Kerosene Analytical Group” means diesel, Jet-A, Jet-B, JP-4, JP-5, and kerosene or equivalent petroleum products.

(24) “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.

(25) “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.

(26) “MTBE” means Methyl tert-butyl ether.

(27) “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.

(28) “Organoleptic” means pertaining to, or perceived by, a sensory organ (i.e., color, taste, or odor).

(29) “PAHs” means Polycyclic Aromatic Hydrocarbons.

(30) “PCBs” means Polychlorinated Biphenyls.

(31) “Person Responsible for Site Rehabilitation” (PRSR) means the Department when conducting site rehabilitation, or any of the following, which may include an agent or authorized representative, unless prohibited by statute or rule:

(a) 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;

(b) The individual or entity that is designated by a local government in its resolution establishing a brownfield area to enter into the brownfield site rehabilitation agreement with the Department, and that enters into an agreement with the local government for redevelopment of the site pursuant to Section 376.80(5)(i), F.S.;

(c) The real property owner, the facility owner, the facility operator, the discharger, or other person or entity responsible for site rehabilitation, or the Department when the Department is conducting the site rehabilitation at facilities with discharges eligible for state-funded cleanup pursuant to Sections 376.305(6), 376.3071(9), 376.3071(13), and 376.3072, F.S.; or

(d) A responsible party, a real property owner, or any individual or entity that has entered into a Voluntary Cleanup Agreement with the Department pursuant to Section 376.3078(11)(b), F.S., that is conducting site rehabilitation at a drycleaning solvent contaminated site pursuant to this chapter.

(32) “Petroleum products’ contaminants of concern” means the contaminants listed in Table B of this chapter (tables are located at the end of Rule 62-780.900, F.A.C.), and similar chemicals found in additives, provided the contaminants are present as a result of a discharge of petroleum or petroleum products as defined in Section 376.301, F.S.

(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(3), 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(3), F.A.C., that exceed any of Florida’s Primary or Secondary Drinking Water Standards referenced in Chapter 62-550, F.A.C.

(36) “PQL” means practical quantitation limit.

(37) “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.]

(38) “Product recovery” means the removal of free product.

(39) “PRSR” means person responsible for site rehabilitation.

(40) “Real property owner” means the person or entity that is vested with ownership, dominion, or legal or rightful title to the real property. For a drycleaning facility, this includes an individual or entity that has a ground lease interest in the real property, on which a drycleaning facility or wholesale supply facility is or has ever been located.

(41) “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.

(42) “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.

(43) “Site” means “contaminated site” as defined in Section 376.301, F.S.

(44) “Site assessment” means the performance of any of the tasks or activities as described in Rules 62-780.52562-780.500 and 62-780.600, F.A.C.

(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) “TPOC” means temporary point of compliance.

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

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

(50) “Used oil” means any lubricants for use in internal combustion engines that have been refined from crude oil and, as a result of use, storage, or handling, have become unsuitable for their original purpose due to the presence of impurities or loss of properties, but that may be suitable for further use as a fuel or are economically recyclable for use as a fuel. “Used oil” shall not include any used oil that has been mixed with any material that is a hazardous waste, unless the material is a hazardous waste solely due to the characteristic of ignitability as defined in 40 CFR Part 261, Subpart C (7-1-12 Edition), hereby adopted and incorporated by reference (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02417>).

(51) “VCA” means Voluntary Cleanup Agreement.

(52) “VOHs” means Volatile Organic Halocarbons.

(53) “Voluntary Cleanup Agreement” (VCA) means an agreement entered into between a PRSR and the Department for the purpose of rehabilitating a site contaminated with drycleaning solvents. The VCA shall at a minimum establish the time frames, schedules, and milestones for completion of site rehabilitation tasks and submission of technical reports, and other commitments or provisions pursuant to Section 376.3078(11), F.S., and this chapter.

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

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.200, Formerly 17-70.003 and Formerly 17-770.200; 62-782.200; and 62-785.200.*

**62-780.210 Contamination Reporting*.***

(1) Upon discovery of petroleum or petroleum products contamination (unless the contamination is the result of a previously reported discharge for which site rehabilitation completion has not been achieved) or upon a discharge of petroleum or petroleum products, notification shall be submitted using the Discharge Report Form incorporated in Rule 62-761.900, F.A.C. [Form Number 62-761.900(1)], unless the discharge was less than 25 gallons onto a pervious surface and will be addressed pursuant to subsection 62-780.560(1), F.A.C.If the discharge will be addressed as an Emergency Response Action (Rule 62-780.500, F.A.C.) or Interim Source Removal (Rule 62-780.525, F.A.C.),~~under the de minimis provisions of subsection 62-780.560(2), F.A.C.,~~ the discharge shall be reported to the State Watch Office and the Discharge Report Form shall be submitted to the FDEP Office of Emergency Response*.*

(a) If the discharge was from a storage tank system regulated pursuant to Chapter 62-761 or 62-762, F.A.C., the discharge shall be reported by the facility owner or operator pursuant to the applicable requirements of Chapters 62-761 and 62-762, F.A.C.; or

(b) All other discharges of petroleum or petroleum products of less than 25 gallons that are not addressed pursuant to subsection 62-780.560(1), F.A.C., shall be reported within one week of discovery. Discharges of petroleum or petroleum products equal to, or exceeding, 25 gallons onto pervious surfaces or any discharge to surface waters shall be reported to the State Watch Office or FDEP Office of Emergency Response as soon as possible, but no later than 24 hours after occurrence. The discharge shall be reported by:

1. The discharger; or

2. The owner or operator if the discharger is unknown or if the discovery was the result of a previously unreported discharge.

(2) A discharge of drycleaning solvents greater than one quart outside of a containment structure shall be reported to the state through the State Watch Office pursuant to Section 376.3078(9)(c), F.S.

(3) Except as provided in subsection (2), discharges of pollutants or hazardous substances, other than petroleum or petroleum products, that are being addressed pursuant to Chapter 62-780, F.A.C., are not subject to the notification and reporting requirements of this rule section. A discharge of petroleum or petroleum products contaminated with significant quantities of other substances is also not subject to the notification and reporting requirements of this rule section.

(4) Notwithstanding the provisions of subsections 62-780.210(1)-(3), F.A.C., nothing in this chapter shall be construed to negate reporting requirements under other local, state or federal laws, such as Chapter 62-150, F.A.C., Hazardous Substance Release Notification, the Emergency Planning and Community Right-To-Know Act, Title III of the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. s. 11001, et seq. (SARA), the Florida Hazardous Materials Emergency Response and Community Right-to-Know Act of 1988, Chapter 252, Part II, F.S., and the reporting requirements for discharges of oil to navigable waters pursuant to 40 C.F.R. Parts 110 and 112.

(5) For the purposes of Rule 62-780.210, F.A.C.:

(a) “Discharger” means the person who has dominion or control over the petroleum or petroleum products at the time of the discharge into the environment.

(b) “Discovery” means:

1. Observance or detection of free product in boreholes, wells, open drainage ditches, open excavations or trenches, or on nearby surface water, or petroleum or petroleum products in excess of 0.01 foot in thickness in sewer lines, subsurface utility conduits or vaults, unless the product has been removed and it was confirmed that a release into the environment did not occur;

2. Observance of visually stained soil or odor of petroleum products resulting from a discharge of used oil equal to, or exceeding, 25 gallons on a pervious surface [see subsection 62-780.560(1), F.A.C., for cleanup requirements applicable to discharges of less than 25 gallons];

3. Discharges of petroleum or petroleum products equal to, or exceeding, 25 gallons on a pervious surface [see subsection 62-780.560(1), F.A.C., for cleanup requirements applicable to discharges of less than 25 gallons];

4. Results of analytical test on a groundwater sample that exceed the CTLs referenced in Chapter 62-777, F.A.C., Table I, groundwater criteria column for the petroleum products’ contaminants of concern listed in Table B of this chapter (located at the end of Rule 62-780.900, F.A.C.); or

5. Results of analytical test on a soil sample that exceed the lower of the direct exposure residential CTLs and leachability based on groundwater criteria CTLs specified in Chapter 62-777, F.A.C., Table II for the petroleum products’ contaminants of concern listed in Table B of this chapter.

*Rulemaking Authority 376.303, 376.3071, 376.3078 FS. Law Implemented 376.305, 376.3071, 376.30701, 376.3078 FS. History–New 6-12-13, Amended .*

*Editorial Note: Portions of this rule were copied from 62-770.250, Formerly 17-770.250.*

**62-780.220 Notices.**

(1) Notice of Field Activities. Within the time frames specified in Table A (located at the end of Rule 62-780.900, F.A.C.) 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. Section 376.30702, F.S., provides specific notice requirements upon a PRSR’s discovery from laboratory analytical results that comply with appropriate quality assurance protocols pursuant to Chapter 62-160, F.A.C., that contamination exists in any medium beyond the boundaries of the property at which site rehabilitation was initiated pursuant to this chapter. Upon such discovery, the PRSR shall notify the FDEP as soon as possible, but not later than 10 days after discovery. The notice shall be provided on Form 62-780.900(1) titled “Initial Notice of Contamination Beyond Property Boundaries” effective date 6-12-13, hereby adopted and incorporated by reference (<http://www.flrules.org/Gateway/reference.asp?No=Ref-01488>). Forms may be obtained from the Division of Waste Management website at www.dep.state.fl.us/waste. The PRSR shall simultaneously mail a copy of such notice to the appropriate FDEP district office, county health department, and all known lessees and tenants of the source property. Refer to Section 376.30702(2), F.S., for additional details about this requirement and the information that must be included in the notice.

(3) Subsequent Notice of Contamination Beyond Source Property Boundaries for Establishment of a Temporary Point of Compliance (TPOC). Pursuant to Section 376.30701(2)(b), F.S., pPrior 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 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 “actual notice” to local governments and the owners of any property into which the point of compliance is allowed to extend and “constructive notice” to residents and business tenants of the property into which the point of compliance is allowed to extend. Persons receiving such notice shall have the opportunity to comment within 30 days after receipt of the notice. For the purposes of this Section 62-780.220, F.A.C., “actual notice” and “constructive notice” shall mean as follows:the following notices:

(a) Actual notice in written form mailed by “Certified Mail, Return Receipt Requested” or other form of delivery that provides confirmation of receipt 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 is not required for site rehabilitation being conducted for petroleum or petroleum products contamination not associated with a brownfield site. 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 subsection. 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 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(13), F.S., the PRSR shall place warning signs pursuant to Section 403.7255, F.S.

(6) Notice Requirements for Schools. If the property at which contamination has been discovered is the site of a school as defined in Section 1003.01, F.S., regardless of whether the school property is the site at which site rehabilitation was initiated, then the school board of the district in which the property is located shall provide actual notice of the contamination to teachers and parents or guardians of students attending the school during the period of site rehabilitation. Such notice must be provided within 30 days of discovery or receipt of notification from the Department, whichever is earlier, and shall conform to the requirements in Section 376.30702(2)(a), (c), and (d), F.S. At least annually during the period of site rehabilitation, the school board of the district in which the property is located shall continue to provide such actual notice of the contamination, updated as appropriate, to teachers and parents or guardians of students attending the school. A representative copy of all notices shall be submitted to the Department at the time the notice is provided to the teachers and parents or guardians.

(7) Notice Requirements for Closure Using Institutional, Engineering Controls or Alternative CTLs. Sections 376.30701(2) (c) and (d), F.S. provide specific notice requirements for conditional closure using institutional controls, engineering controls or alternative CTLs. Prior to the Department’s approval of ~~a No Further Action Proposal with~~ institutional controls, or ~~with~~ institutional and engineering controls, or alternative CTLs~~, whether for a No Further Action Proposal or as an interim measure~~, the PRSR shall mail 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 or engineering control, to real property owner(s) of any property subject to the institutional or engineering control, to any party holding an easement for the area subject to the institutional or engineering control, and to any resident or business tenant.and Where there are multiple residences (e.g., a condominium), businesses or tenants on any property subject to the institutional or engineering control, the PRSR may publish notice in lieu of mailing to such residences, businesse4s or tenants. The notice shall be mailed or published by the PRSR within 30 days after the Department’s provisional approval of the No Further Action Proposal with institutional or engineering controls. The PRSR shall provide the Department with a copy of the mailed notice and a list of names and addresses to whom the notice was sent and the date it was sent. For published notice, proof of such notice that meets the requirements of subsections 62‑110.106(5), (8), and (9), F.A.C., shall be provided except that the notice shall be prepared and published by the PRSR within 30 days after the Department’s provisional 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 controls, real property owner(s) of any property subject to the institutional controls, residents of any property subject to the institutional controls, any party holding an easement for the area subject to the institutional or engineering control, and business tenants of any property subject to the controls, 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 For 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.” or “to manage potential exposure to contaminated media while site rehabilitation is on-going.” as appropriate. Additionally, the notice of rights language shall be replaced with “Local governments, real property owner(s) of any property subject to the institutional or engineering control, and residents of any property subject to the institutional or engineering control have 30 days from receipt (or publication) of this notice to provide comments to the Department.” The notice shall also~~also shall~~ provide the appropriate mailing address and, if warranted, electronic mail address to which comments should be sent. See subsection 62-780.100(7), Institutional Controls Procedures Guidance, for sample notice templates.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.30702, 376.3078(4), 376.81, 403.7255 FS. Law Implemented 376.3071, 376.30701, 376.30702, 376.3078(4), 376.81, 403.7255 FS. History–New 4-17-05, Amended 12-27-07, 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.220; 62-782.220; and 62-785.220.*

**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 applicable information specified in subsections 62-160.340(1) and (2), 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(2), effective date 6-12-13, hereby adopted and incorporated by reference ([http://www.flrules.org/Gateway/reference.asp?No=Ref-01489](https://www.flrules.org/Gateway/reference.asp?No=Ref-01489)), or an equivalent chain of custody form that includes all the items required by Form 62‑780.900(2)]. Forms may be obtained from the Division of Waste Management website at www.dep.state.fl.us/waste;

(c) Copies of the completed groundwater sampling log(s) (Form FD 9000-24) referenced in the Groundwater Sampling SOP, FS 2200; and

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

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 6-12-13.*

*Editorial Note: Portions of this rule were copied from 62-770.400, Formerly 17-70.007 and Formerly 17-770.400; 62-782.300; and 62-785.300.*

**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.

*Rulemaking Authority 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.80, 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13 .*

*Editorial Note: Portions of this rule were copied from 62-770.490; 62-782.400; and 62-785.400.*

**62-780.450 Combined Document.**

(1) The~~Except for petroleum contamination sites, 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. ~~A combined document may be submitted for cleanup of a petroleum contamination site subject to a BSRA.~~

(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., respectively, 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.~~ t~~T~~he 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 ~~(located at the end of Rule 62-780.900, F.A.C.)~~ or the CAD, the PRSR shall submit an electronic or paper copy 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 Monitoring Plan does not meet the applicable criteria of Rule 62-780.680 or 62-780.690, F.A.C., respectively.

(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 for review an electronic or paper copy of a Combined Document Addendum that addresses the deficiencies within 60 days after receipt of the notice.

*Rulemaking Authority 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13.*

*Editorial Note: Portions of this rule were copied from 62-782.450; and 62-785.450.*

**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 objective~~s~~ of the emergency response action ~~or interim source removal are~~ is 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) Discharge~~Free Product and~~ Removal and Disposal.

~~(a) For the purposes of this section “hazardous substance” shall include any material that is present in the environment as a solid or liquid in its original form as a product or waste material that has been released due to an unexpected situation or sudden occurrence of a serious and urgent nature.~~

(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 removal of pollutants or hazardous substances~~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, located at the end of Rule 62-780.900, F.A.C., (Notices for Field Activities) ~~or the CAD~~ that includes a description of the type and estimated volume of pollutants or hazardous substances~~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. Excavation

2. Removal;

3.~~2.~~ Absorbent pads;

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

5.~~3.~~ Hand or mechanical bailing; and

6.~~4.~~ Fluid or solid 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. If this method is used for petroleum ~~or petroleum product contamination sites (except sites subject to a BSRA)~~, the volume of groundwater recovered shall not be greater than two times the volume of free product recovered, except that the first 1,000 gallons of the total fluid recovered per discharge are exempt from meeting the required ratio of groundwater to free product.

(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 proposal~~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 with air emissions treatment; or

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

4. Recovery of petroleum or petroleum products that exceeds the water-to-product ratio indicated in subparagraph 62-780.500(2)(b)4., F.A.C.; or

5. On-site treatment and discharge of contaminated water that results from dewatering to excavate free product from below the water table, or on-site treatment and discharge of contaminated water that is separated from recovered ~~free~~ product.

(d) The Department shall:

1. Provide the PRSR with written approval of the ~~Free Product~~ recovery~~Recovery Interim Source Removal~~ p~~P~~roposal; or

2. Notify the PRSR in writing, stating the reason(s) why the ~~Free Product~~ recovery~~RecoveryInterim Source Removal~~ p~~P~~roposal does not contain information adequate to support a free product recovery method pursuant to paragraph 62-780.500(2)(c), F.A.C.

(e) The ~~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.

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

~~(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 one-fourth (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 an electronic or paper copy of an Interim Source Removal Status Report that documents the recovery progress and summarizes all recovery activities for a specified period.~~

~~(4) Interim Groundwater Remediation.~~

~~(a) Prior to approval of a Remedial Action Plan prepared and submitted pursuant to Rule 62-780.700, F.A.C., when any of the criteria of subparagraphs 62-780.500(3)(a)2. through 4., F.A.C., are not met, the PRSR may perform groundwater recovery and on-site treatment and disposal or any other means of interim in situ groundwater remediation, 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 an electronic or paper copy of an Interim Source Removal Status Report documenting the recovery progress and summarizing all recovery activities for a specified period.~~

(3)~~(5)~~ Soil and Sediment Removal, Treatment, 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, excavate contaminated soil or ~~contaminated~~ sediment for proper treatment or ~~proper~~ disposal as a~~n interim~~ source removal activity provided the following criteria are met:

1. T~~Prior to initiation, t~~he 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 (11)(i), F.A.C.;

5. Contaminated soil~~Source~~ removal shall be completed within 30 days of the discovery of a release or spill of a nonpetroleum product (pollutants or hazardous substances other than petroleum or petroleum products as defined in Section 376.301, F.S.). Excavation of a source to a depth of 1 foot below visually stained soil or sediment, if present, is permissible above the groundwater table and may be conducted without confirmatory soil or sediment sampling and analysis. When required, s~~S~~ When visual staining is not present, soil screening methods may be used for confirming that excavation is complete above the groundwater table provided the soil screening method is applicable to the pollutant or hazardous substance that has been discharged. When soil screening methods are not used, 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. When required, s~~S~~ediment samples shall be collected at the bottom and perimeter of the excavation, if appropriate. If~~Should~~ source removal begins after or extends beyond 30 days of discovery, or if CTLs or background concentrations pursuant to subsection 62-780.680(1), F.A.C. are still exceeded after the contaminated soil removal,~~the source was not removed from the soil and sediment to CTLs or background concentrations pursuant to subsection 62-780.680(1), F.A.C.;~~ soil and sediment removal, treatment, and disposal shall be conducted in accordance with Rule 62-780.525, F.A.C.;

6. Contaminated soil~~Source~~ removal shall be completed within 30~~14~~ days of the discovery of a release or spill of petroleum products as defined in Section 376.301(31), F.S., (i.e. gasoline or kerosene). During excavation activities readings must be obtained on an organic vapor analysis (OVA) instrument, as outlined in subsection 62-780.200(15), F.A.C ~~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 or sediment OVA samples shallmustshall be collected at the bottom of the excavation (unless the bottom is below the water table) and walls or perimeter of the excavation that are characteristic of the area(s) impacted. Representative s~~S~~ediment samples shall be collected at the bottom and perimeter of the excavation, if applicable. If all post-excavation OVA readings are ≤ 10 ppm, confirmatory soil or sediment sampling and analysis are not required. If~~Should~~ source removal begins after or extends beyond 30~~14~~ days of discovery~~, or if groundwater is encountered~~; soil and sediment removal, treatment, and disposal shall be conducted in accordance with Rule 62-780.525, F.A.C.;

7. Contaminated soil~~Source~~ removal shall be completed within 30~~14~~ days of the discovery of a release or spill of petroleum product as defined in Section 376.301(30), F.S., (i.e. oil and used oil). Excavation of a source to a depth of 1 foot below visually stained soil or sediment is permissible above the groundwater table and may be conducted without confirmatory soil or sediment sampling and analysis. If source removal begins after or extends beyond 30~~14~~ days of discovery; soil and sediment removal, treatment, and disposal shall be conducted in accordance with Rule 62-780.525, F.A.C.;

8. When groundwater is encountered during excavation activities, a temporary monitor well(s) shall be installed and sampled for contaminants of concern within the area(s) of excavation. Well placement should be sufficient to characterize the area(s) of impact.

9.~~6.~~ A determination shall be made as to whether or not the contaminated soil or sediment contains hazardous waste and shall be conducted in accordance with subsection 62-780.525(5)(a)6, F.A.C. ~~If the soil or sediment is known to be contaminated by hazardous waste, listed in 40 CFR Part 261 Subpart D (7-1-12 Edition), hereby adopted and incorporated by reference (~~[~~http://www.flrules.org/Gateway/reference.asp?No=Ref-02418~~](https://www.flrules.org/Gateway/reference.asp?No=Ref-02418)~~), 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(7-1-12 Edition), hereby adopted and incorporated by reference (~~[~~http://www.flrules.org/Gateway/reference.asp?No=Ref-02418~~](https://www.flrules.org/Gateway/reference.asp?No=Ref-02418)~~), (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. Pursuant to 40 CFR 261.4(b)(10), Subpart A (7-1-12 Edition), hereby adopted and incorporated by reference (~~[~~http://www.flrules.org/Gateway/reference.asp?No=Ref-02419~~](https://www.flrules.org/Gateway/reference.asp?No=Ref-02419)~~), petroleum contaminated media and debris, associated with an underground storage tank system, that fail the test for the Toxicity Characteristic of 40 CFR 261.24, Subpart C (Hazardous Waste Codes D018 through D043 only) are solid waste, not hazardous waste. Contaminated soil associated with an underground storage tank system, which will be managed as solid waste, is not subject to the requirement that TCLP extraction and subsequent analysis of the leachate be performed~~; and

10.~~7.~~ When excavated contaminated 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. ~~Excavated contaminated soil [including excessively contaminated soil as defined in subsection 62-780.200(15), F.A.C.,] may be returned to the original excavation when petroleum storage tank systems have been removed or replaced, and when contaminated soil is encountered during construction activities at a petroleum storage or dispensing facility, to be addressed later pursuant to Rule 62-780.700, F.A.C.~~ The temporary storage or stockpiling of excavated contaminated soil or sediment shall not exceed 60 days, unless it is stockpiled on a right-of-way, in which case it shall be removed for proper treatment or proper disposal as soon as practical but no later than 30 days after excavation, or 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. Excavated petroleum contaminated soil ~~[including excessively contaminated soil as defined in subsection 62-780.200(15), F.A.C.,]~~ may be containerized in water tight drums and stored on-site for 90 days, after which time proper treatment or proper disposal of the contaminated soil shall occur, or it may be land farmed pursuant to paragraph 62-780.525~~500~~(5)(b), F.A.C. The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(b) ~~Land farming of soil contaminated by petroleum products is allowed, provided the land farming operation is located on the same property as the source of contaminated soil unless it is land farmed at a permitted stationary facility. The following criteria shall be met for contaminated soil land farmed on the source property:~~

~~1. The land farm operation shall be at least 200 feet from any residence, school, or park;~~

~~2. An area large enough to spread the soil to a thickness of 6 to 12 inches shall be available;~~

~~3. The land farming area shall be secured in a manner that prevents entry by the public and prevents human exposure to contaminated soil;~~

~~4. The materials used to construct the land farm treatment area shall withstand the rigors of the land farming and weather;~~

~~5. The land farmed soil shall be placed over an impermeable liner or surface, and surrounded at all times by an impermeable liner supported by berms;~~

~~6. The land farmed soil shall be tilled at least biweekly;~~

~~7. The land farmed soil shall be covered when not being tilled to prevent water from entering or leaving the area;~~

~~8. A monitoring and sampling program shall be established to evaluate the effectiveness of the land farming operation and the effect on the environment, including monitoring of groundwater to confirm leaching is not occurring and of off-gas emissions for air regulatory compliance. Before the land farming operation commences, the PRSR shall submit to the Department for review the monitoring and sampling program, design specifications of the treatment area, and types and amounts of any proposed additives to the soil, to demonstrate that the objectives of this subparagraph will be met. Prior approval is not required for quantities less than 20 cubic yards, but the design specifications and results of the monitoring and sampling program shall be submitted in the Interim Source Removal Report;~~

~~9. Land farming of soil is limited to 180 days, at the end of which time proper disposal is required except if written approval pursuant to the provisions of subsection 62-780.790(3), F.A.C., to exceed this time frame is obtained from the Department; and~~

~~10. Land farmed soil that does not exceed the lower of the direct exposure residential CTLs and leachability based on groundwater criteria CTLs specified in Chapter 62-777, F.A.C., Table II may be disposed on-site or off-site. The PRSR is advised that other federal or local laws and regulations may apply to these activities. Land farmed soil that exceeds the applicable CTLs specified in Chapter 62-777, F.A.C., Table II shall not be disposed or returned to the original excavation without obtaining approval from the Department.~~

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

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

(e)~~(f)~~ The Department shall:

1. Provide the PRSR with ~~written~~ approval of the ~~Interim~~ Source Removal Proposal submitted pursuant to paragraph 62-780.500(5)(e), 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.

(4) 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 a source removal activity provided the following criteria are met:

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

2~~1~~. The groundwater contamination has been established to be less than one-fourth (1/4) acre and confined to the shallow aquifer 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.,

3.~~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;

4.~~2.~~ 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

5.~~3.~~ Sampling of representative monitoring wells to determine the effectiveness of the Short-term Groundwater Recovery event shall be performed no sooner than~~at least~~ 30 days after completion of the groundwater recovery.

 (5)~~(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. The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(6)~~(7)~~ Emergency~~Interim~~ Source Removal Report.

(a) Within the time frames specified in Table A ~~or the CAD,~~ the PRSR shall submit an electronic or paper copy of an Emergency~~Interim~~ Source Removal Report to the Department for review. Applicable portions of the Emergency Source Removal Report shall be professionally sealed in accordance with the provisions of rule 62-780.400, F.A.C.  ~~If analytical results obtained pursuant to subparagraphs 62-780.500(3)(a)6., 62-780.500(5)(a)5., and 62-780.600(5)(m)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 Emergency~~Interim~~ Source Removal Report shall contain the following information in detail, as applicable:

1. The type and an estimated volume of free product~~non-aqueous phase liquids~~ that was~~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 and associated calibration logs;

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. Photographs of the spill area and cleanup (before, during and after). Photographs shall~~should~~ be labeled with the date, direction of view, and the information that is conveyed in the photograph. Whenever possible, the photographs shall~~should~~ include nearby structures or other prominent features in relation to the spill area.

11.~~10.~~ A table that indicates the identification, depth, and field soil screening results of each sample collected;

12.~~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);

13.~~12.~~ If applicable, a benzo(a)pyrene conversion table for each soil sample where at least one of the carcinogenic PAHs [benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3 cd)pyrene] was detected ~~in a sample~~ at a concentration equal to or greater than the Method Detection Limit (MDL).

14. Depth to groundwater at the time of each excavation, measurement locations, and method used to obtain that information;

15. GPS coordinates of the spill area and measurements (measuring wheel or tape, in feet) from structures or other prominent features (road exit or street signs, billboards, mileage markers, large tree, storm drainage inlets, buildings, etc.) that can be used to locate the spill area in the future.

16.~~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

17.~~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; and

~~15. For land farmed soil, a copy of the pre-treatment and post-treatment analytical results.~~

(b) The Department shall:

1. Provide the PRSR with written approval of the Emergency~~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 Emergency~~Interim~~ Source Removal Report does not conform with the applicable Emergency~~Interim~~ Source Removal criteria of paragraph 62-780.500(7)(a), F.A.C.

(7)~~(8)~~ If the Emergency~~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 for review an electronic or paper copy of an Emergency~~Interim~~ Source Removal Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(8) If the information presented in the Emergency Source Removal Report confirms that no contamination remains at the conclusion of the emergency response action, the Department will indicate in writing that information provided on a Discharge Reporting Form, incorporated in Rule 62-761.900, F.A.C. [Form Number 62-761.900(1)], or other discharge record will no longer be tracked by the Division of Waste Management and that no other site rehabilitation requirements of this chapter are required to be followed.

 ~~(9) If the interim source removal is performed after submittal of the Site Assessment Report, the PRSR shall submit to the Department for review an electronic or paper copy 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.~~

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.3078(9), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.30711, 376.3078(4), 376.3078(9), 376.81 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.300, Formerly 17-70.006 and Formerly 17-770.300; 62-782.500; and 62-785.500.*

**62-780.525 Interim Source Removal.**

(1) Any PRSR may conduct an interim source removal in accordance with this section. The objectives of the interim source removal is 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., or in the cleanup of de minimis discharges pursuant to Rules 62-780.550 and 63.780.560,

F.A.C.

(2) Free Product Removal and Disposal.

(a) The PRSR may, 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, located at the end of Rule 62-780.900, F.A.C., (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. Excavation

2. Absorbent pads;

3. Skimmer pumps that include pumps with mechanical, electrical, or hand‑bailed purging operations;

4. Hand or mechanical bailing; and

5. 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. If this method is used for petroleum or petroleum product contamination sites (except sites subject to a BSRA), the volume of groundwater recovered shall not be greater than two times the volume of free product recovered, except that the first 1,000 gallons of the total fluid recovered per discharge are exempt from meeting the required ratio of groundwater to free product.

(c) In addition to the free product recovery methods specified in paragraph 62‑780.525(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 with air emissions treatment; or

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

4. Recovery of petroleum or petroleum products that exceeds the water-to-product ratio indicated in subparagraph 62-780.525(2)(b)5., F.A.C.; or

5. On-site treatment and discharge of contaminated water that results from dewatering to excavate free product from below the water table, or on-site treatment and discharge of contaminated water that is separated from recovered free product.

(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 62‑780.525(2)(c), F.A.C.

(e) Free product recovery as an Interim Source Removal task shall be deemed complete when the objectives of subsection 62‑780.525(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.

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

(3) Short‑term Groundwater Recovery.

(a) The PRSR may, 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 one-fourth (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 no sooner than~~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 an electronic or paper copy of an Interim Source Removal Status Report that documents the recovery progress and summarizes all recovery activities for a specified period.

(4) Interim Groundwater Remediation.

(a) Prior to approval of a Remedial Action Plan prepared and submitted pursuant to Rule 62-780.700, F.A.C., when any of the criteria of subparagraphs 62-780.525(3)(a)2. through 4., F.A.C., are not met, the PRSR may perform groundwater recovery and on-site treatment and disposal or any other means of interim in situ groundwater remediation, 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 62‑780.525(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 an electronic or paper copy 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 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 (11)(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, unless the excavation of the source occurs above the groundwater table to a depth of 1 foot belkow and 1 foot laterally of visually stained soil or sediment, if present. When visual staining is not present, soil screening methods may be used for confirming that excavation is complete above the groundwater table provided the soil screening method is applicable to the pollutant or hazardous substance that has been discharged. When soil screening methods are not used, s 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 (7-1-12 Edition), hereby adopted and incorporated by reference ([http://www.flrules.org/Gateway/reference.asp?No=Ref-02418](https://www.flrules.org/Gateway/reference.asp?No=Ref-02418)), 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(7-1-12 Edition), hereby adopted and incorporated by reference ([http://www.flrules.org/Gateway/reference.asp?No=Ref-02418](https://www.flrules.org/Gateway/reference.asp?No=Ref-02418)), (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. Pursuant to 40 CFR 261.4(b)(10), Subpart A (7-1-12 Edition), hereby adopted and incorporated by reference ([http://www.flrules.org/Gateway/reference.asp?No=Ref-02419](https://www.flrules.org/Gateway/reference.asp?No=Ref-02419)), petroleum contaminated media and debris, associated with an underground storage tank system, that fail the test for the Toxicity Characteristic of 40 CFR 261.24, Subpart C (Hazardous Waste Codes D018 through D043 only) are solid waste, not hazardous waste. Contaminated soil associated with an underground storage tank system, which will be managed as solid waste, is not subject to the requirement that TCLP extraction and subsequent analysis of the leachate be performed; and

7. When excavated contaminated 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. Excavated contaminated soil [including excessively contaminated soil as defined in subsection 62-780.200(15), F.A.C.,] may be returned to the original excavation when petroleum storage tank systems have been removed or replaced, and when contaminated soil is encountered during construction activities at a petroleum storage or dispensing facility, to be addressed later pursuant to Rule 62-780.700, F.A.C. The temporary storage or stockpiling of excavated contaminated soil or sediment shall not exceed 60 days, unless it is stockpiled on a right-of-way, in which case it shall be removed for proper treatment or proper disposal as soon as practical but no later than 30 days after excavation, or 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. Excavated petroleum contaminated soil [including excessively contaminated soil as defined in subsection 62-780.200(15), F.A.C.,] may be containerized in water tight drums and stored on-site for 90 days, after which time proper treatment or proper disposal of the contaminated soil shall occur, or it may be land farmed pursuant to paragraph 62-780.525(5)(b), F.A.C. The PRSR is advised that other federal or local laws and regulations may apply to these activities.

(b) Land farming of soil contaminated by petroleum products is allowed, provided the land farming operation is located on the same property as the source of contaminated soil unless it is land farmed at a permitted stationary facility. The following criteria shall be met for contaminated soil land farmed on the source property:

1. The land farm operation shall be at least 200 feet from any residence, school, or park;

2. An area large enough to spread the soil to a thickness of 6 to 12 inches shall be available;

3. The land farming area shall be secured in a manner that prevents entry by the public and prevents human exposure to contaminated soil;

4. The materials used to construct the land farm treatment area shall withstand the rigors of the land farming and weather;

5. The land farmed soil shall be placed over an impermeable liner or surface, and surrounded at all times by an impermeable liner supported by berms;

6. The land farmed soil shall be tilled at least biweekly;

7. The land farmed soil shall be covered when not being tilled to prevent water from entering or leaving the area;

8. A monitoring and sampling program shall be established to evaluate the effectiveness of the land farming operation and the effect on the environment, including monitoring of groundwater to confirm leaching is not occurring and of off-gas emissions for air regulatory compliance. Before the land farming operation commences, the PRSR shall submit to the Department for review the monitoring and sampling program, design specifications of the treatment area, and types and amounts of any proposed additives to the soil, to demonstrate that the objectives of this subparagraph will be met. Prior approval is not required for quantities less than 20 cubic yards, but the design specifications and results of the monitoring and sampling program shall be submitted in the Interim Source Removal Report;

9. Land farming of soil is limited to 180 days, at the end of which time proper disposal is required except if written approval pursuant to the provisions of subsection 62-780.790(3), F.A.C., to exceed this time frame is obtained from the Department; and

10. Land farmed soil that does not exceed the lower of the direct exposure residential CTLs and leachability based on groundwater criteria CTLs specified in Chapter 62-777, F.A.C., Table II may be disposed on-site or off-site. The PRSR is advised that other federal or local laws and regulations may apply to these activities. Land farmed soil that exceeds the applicable CTLs specified in Chapter 62-777, F.A.C., Table II shall not be disposed or returned to the original excavation without obtaining approval from the Department.

(c) Interim Soil Vapor Extraction may be performed by the PRSR as an interim source removal activity prior to 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.

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

(e)(d) 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 62‑780.525(5)(e), F.A.C., or in a Remedial Action Plan submitted pursuant to Rule 62‑780.700, F.A.C.

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

(g)(f) The Department shall:

1. Provide the PRSR with written approval of the Interim Source Removal Proposal submitted pursuant to paragraph 62‑780.525(5)(e), 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 62‑780.525, 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. 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, the PRSR shall submit an electronic or paper copy of an Interim Source Removal Report to the Department for review. If analytical results obtained pursuant to subparagraphs 62‑780.525(3)(a)6., 62‑780.525(5)(a)5., and 62‑780.600(5)(m)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; and

15. For land farmed soil, a copy of the pre-treatment and post-treatment analytical results.

(b) The Department shall:

1. Provide the PRSR with written approval of the Interim Source Removal Report submitted pursuant to the criteria of paragraph 62‑780.525(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 62‑780.525(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 62‑780.525(7)(a), F.A.C., the Department shall inform the PRSR pursuant to subparagraph 62‑780.525(7)(b)2., F.A.C., and the PRSR shall submit to the Department for review an electronic or paper copy 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 for review an electronic or paper copy 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.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.3078(9), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.30711, 376.3078(4), 376.3078(9), 376.81 FS. History–New 4-17-05, Amended 6-12-13.*

**62-780.550 Nonpetroleum De Minimis Discharges.**

(1) For purposes of this rule section, a “nonpetroleum de minimis discharge” means a discharge of pollutants or hazardous substances other than petroleum or petroleum products as defined in Section 376.301, F.S., 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.

(2) Nonpetroleum de minimis discharges shall be addressed as an interim source removalin an emergency response removal oremergency response removal and shall be subject to the applicable requirements of Rules 62-780.500 or 62.780.52562-780.500, F.A.C., except for the notification and reporting requirements of that Rulesection and the notification requirements of subsection 62-780.220(1), F.A.C. De minimis discharges of drycleaning solvents shall not be exempt from the reporting requirements of subsection 62-780.210(2), F.A.C.

(3) 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(6)(7)(a), F.A.C. or 62-780.525(7)(a), as applicable, for five years from the date of the discharge. The records shall be made available to the Department upon request.

*Rulemaking Authority 376.30701, 376.3078(4), 376.81 FS. Law Implemented 376.30701, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.300, Formerly 17-70.006 and Formerly 17-770.300; 62-782.500; and 62-785.500.*

**62-780.560 Petroleum or Petroleum Product De Minimis Discharges.**

(1) For purposes of this rule section, a “petroleum or petroleum product de minimis discharge” means a discharge of petroleum or petroleum products of less than 25 gallons onto a pervious surface. Such discharge is exempt from the notification requirements of subsection 62-780.220(1), ~~and~~ Rule 62-780.500, and 62-780.525, F.A.C., as long as the discharge is removed and properly treated or properly disposed, or otherwise remediated, pursuant to the applicable provisions of Rule 62-780.500 or 62-780.525, F.A.C., so that CTLs or background concentrations pursuant to subsection 62-780.680(1), F.A.C., are achieved.

(2) For purposes of this rule section, a “petroleum or petroleum product de minimis discharge” also means a discharge of petroleum or petroleum products of 25 to 500 gallons onto a pervious surface that is not associated with a regulated petroleum storage system and has not impacted groundwater, and for which the FDEP Office of Emergency Response oversees the response actions, if at the conclusion of the emergency response action, CTLs or background concentrations pursuant to subsection 62-780.680(1), F.A.C., are achieved. These de minimis discharges shall be addressed as an emergency response removal or interim source removal~~interim source removal~~ and shall be subject to the applicable requirements of Rule 62-780.500 or 62-780.525, F.A.C., including notification and reporting. If the information presented in the Emergency Source Removal Report or Interim Source Removal Report confirms that no contamination remains at the conclusion of the emergency response action, the Department will indicate in writing that information provided on a Discharge Reporting Form, incorporated in Rule 62-761.900, F.A.C. [Form Number 62-761.900(1)], or other discharge record will no longer be tracked by the Division of Waste Management and that no other site rehabilitation requirements of this chapter are required to be followed.

*[Ed. note: Alternate (2) suggested by OER:]*

1. 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.

*Rulemaking Authority 376.303, 376.3071 FS. Law Implemented 376.303, 376.315, 376.3071 FS. History–New 6-12-13, Amended .*

**62-780.600 Site Assessment.**

(1) For all sites except brownfield sites, unless the discharge is a de minimis discharge addressed pursuant to the requirements of Rule 62-780.550 or 62-780.560, 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, located at the end of Rule 62-780.900, F.A.C., or the CAD, if applicable. For brownfield sites, because site assessment or assessment activities may have already been completed at a brownfield site or sites within a designated brownfield area prior to the execution of a BSRA, a PRSR may choose to submit to the Department for review the associated assessment documents as its Site Assessment Report pursuant to subsection 62-780.600(8), F.A.C. If site assessment work is necessary to define the nature and extent of contamination at a brownfield site or sites within a designated brownfield area, the site assessment shall be completed in accordance with the time frames specified in the BSRA.

(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. These discussions may include the development and refinement of the Conceptual Site Model to help inform decisions with regard to site assessment, remedial strategy evaluation, risk management and site closure, including the use of engineering or institutional controls where warranted.

(3) The objectives of the site assessment shall be the following, as applicable based on site-specific circumstances:

(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. For discharges of petroleum or petroleum products, to determine or confirm the source(s) of contamination to the extent practicable and to estimate the volume of petroleum or petroleum products that was released. That confirmation shall include a determination of the structural integrity, in accordance with the testing procedures specified in Chapters 62-761 and 62-762, F.A.C., of any petroleum storage tank system that exists at the property and is likely to be the source of the contamination;

(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 (Csat), 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 Csat.];

(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)(o), 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)(p), 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-property 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, including the use of engineering or institutional controls, as appropriate, unless No Further Action is deemed appropriate pursuant to the provisions of subsection 62-780.680(1), F.A.C. The results of the Site Assessment may be incorporated into the Conceptual Site Model to inform and support the remedial strategy and risk management decisions.

(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.

(a) For discharges of drycleaning solvents, analyses shall be performed for the applicable contaminants of concern listed in Table B of this chapter, located at the end of Rule 62-780.900, F.A.C.

(b) For discharges of petroleum or petroleum products, analyses shall be performed for the applicable contaminants of concern listed in Table B of this chapter, as follows:

1. If petroleum product discharges are from the Gasoline or Kerosene Analytical Groups, analyses shall be performed as described in Table C, located at the end of Rule 62-780.900, F.A.C., except that:

a. If the site is anticipated to meet the No Further Action criteria of Rule 62-780.680, F.A.C., and the site is contaminated by products solely from the Gasoline Analytical Group, analytical screening of the monitoring wells for Benzene, Ethylbenzene, Toluene, total Xylenes, MTBE, and PAHs (using applicable methods in Table C) may be performed; or

b. If the site is anticipated to meet the No Further Action criteria of Rule 62-780.680, F.A.C., and the site is contaminated by products from the Kerosene Analytical Group, analytical screening of the monitoring wells for Benzene, Ethylbenzene, Toluene, total Xylenes, MTBE, PAHs, and TRPHs (using applicable methods in Table C) may be performed.

2. If petroleum product discharges are from used oil, from an identified product not listed in the Gasoline or Kerosene Analytical Groups, or from a product for which the specific identity is unknown, analyses shall be performed as described in Table D, located at the end of Rule 62-780.900, F.A.C.

3. If the contamination is derived from petroleum, analyses shall be performed as described in Table E, located at the end of Rule 62-780.900, F.A.C.

(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 based on site-specific circumstances:

(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. A sufficient number of s~~S~~oil 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 vertical 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 vertical sampling intervals shall be as follows: land surface to six inches, six inches to two feet, and two-foot intervals thereafter to the extent necessary to define the soil contamination. 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 used~~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, if such properties are chosen for the development of alternative soil CTLs in accordance with the technical report referenced in subsection 62-780.100(2), F.A.C. If soil properties are chosen to be used, measurements shall be made on soil from within the contaminated area when feasible. If measurement from within the contaminated area is not feasible, measurements may be made on soil from an alternative location that has the same soil type using the U.S. Department of Agriculture, Natural Resource Conservation Service soil survey maps or the Unified Soil Classification System, or the PRSR may propose the use of other data on 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 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~~. This demonstration~~ese analyses~~ shall be performed on a minimum of three ~~grab~~ samples with high, medium, and low screening results for the site. The demonstration~~se 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 visual observations to determine whether soil contaminated or saturated with used oil is present. If the presence of soil contaminated or saturated with used oil is identified, then at least one ~~grab~~ sample from the most visibly stained area shall be collected for analyses for the used oil parameters as listed in Table D. If no visual signs of used oil contamination are identified, then a soil sample for laboratory analyses is not required unless used oil contamination was previously reported, in which case at least one grab sample shall be collected for laboratory analyses from the location where used oil contamination was identified in the past, and shall be analyzed for VOHs, PAHs, TRPHs, PCBs, arsenic, cadmium, chromium, and lead. If soil visually stained or saturated with used oil is excavated pursuant to paragraph 62-780.500(5)(a), F.A.C., then at least one grab sample from the bottom of the excavation (if the water table was not reached) and at least one grab sample from the wall of the excavation at an equivalent depth to the stained or saturated soil that was removed, shall be collected for analyses. Sample(s) shall be analyzed for the contaminants detected in the sample collected from the most visibly stained area or in the sample(s) collected for disposal purposes, to confirm that all contaminated soil was removed;

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

(i) 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;

(j) 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);

(k) 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 or, for petroleum or petroleum product discharges, to a single benchmark of an arbitrary elevation. If the latter option is used, the survey shall be completed by closing the loop for each pair of adjacent monitoring wells or piezometers or with the first top-of-casing surveyed;

(l) 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;

(m) 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 and 62-730, F.A.C.) for handling and disposal of contaminated media. 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 and 62-730, F.A.C.) for handling and disposal of contaminated media. 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;

(n) 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;

(o) 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.;

(p) 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;

(q) 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;

(r) 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;

(s) 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;

(t) Performance of a professional land survey of a petroleum contamination site in order to develop an accurate base map, if the Department determines that the site map provided in a report is not accurate; and

(u) 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 for review an electronic or paper copy 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-property sources of contamination identified during the assessment (if applicable and available, FDEP identification numbers shall be provided). If the PRSR prefers, aerial photographs may be submitted to complement the vicinity map. 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, former and current tank farms, integral piping, dispensers, utilities, sewers, floor drains, drain lines, above and underground structures, storage areas, monitoring wells, land cover, streets, rights-of-way, locations and elevations (if significantly different) of property boundaries and surrounding properties, 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)(k), 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=KI/n, where K is the average vertical hydraulic conductivity of a confining or semi-confining zone, I 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 or, for petroleum or petroleum product discharges, to a single benchmark of an arbitrary elevation, 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, in relation to the former and current sources of contamination and any excavated areas, 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 or, for petroleum or petroleum product discharges, to a single benchmark of an arbitrary elevation, 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 or, for petroleum or petroleum product discharges, to a single benchmark of an arbitrary elevation) 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 Monitoring Plan may be included if the site meets the Natural Attenuation 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 degree provided by Sections 376.30701, 376.3071, 376.3078, or 376.81, F.S., as applicable. 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 Monitoring Plan is approved, with a Natural Attenuation 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 an electronic or paper copy of a Site Assessment Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

*Rulemaking Authority* *376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13, 2-4-14, .*

*Editorial Note: Portions of this rule were copied from 62-770.600, Formerly 17-70.008 and Formerly 17-770.600; 62-782.600; and 62-785.600.*

**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. 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. 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.

*Rulemaking Authority* *376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13.*

*Editorial Note: Portions of this rule were copied from 62-770.610; 62-782.610; and 62-785.610.*

**62-780.650 Risk Assessment.**

(1) If the PRSR elects to perform a risk assessment, then 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 applicable:

(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 such as children, where applicable;

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 (e.g., exposure duration, exposure frequency, body weight and ingestion rate) based on:

a. 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; or

b. Non-site-specific exposure factors contained in the USEPA Exposure Factors Handbook (2011 Edition), hereby adopted and incorporated by reference, (<http://www.flrules.org/Gateway/reference.asp?No=Ref-03403>), or other information on exposure factors applicable to a Florida exposure scenario.

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.

1. 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 applicable:

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

b. 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;

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

d. 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.

2. Input assumptions different from those used to develop default CTLs may be used to propose alternative CTLs. The appropriate equations from Chapter 62-777, F.A.C., must be used in calculating the alternative CTLs. Toxicity values for quantifying human health risks and for developing alternative CTLs may be taken from the following information sources listed in Rule 62-780.100, F.A.C., in order of preference.

a. Tier 1, in order of preference:

(I) USEPA Integrated Risk Information System (IRIS) database, or

(II) Provisional Peer Reviewed Toxicity Values (PPRTV) derived by EPA's Superfund Technical Support Center for the USEPA Superfund program.

b. Tier 2. If a toxicity value is available from more than one source in this tier, the value based upon the most recent review of the toxicological literature and accompanying dose-response analysis should be selected:

(I) Agency for Toxic Substances and Disease Registry Minimal Risk Levels (MRLs),

(II) Tolerable Upper Intake Levels issued by the Institute of Medicine, National Academy of Sciences,

(III) USEPA Health Effects Assessment Summary Tables (HEAST),

(IV) Human Health Benchmarks for Pesticides and other toxicity values in technical documents available from the USEPA Office of Pesticide Programs, or

(V) USEPA Office of Water, Drinking Water Regulations and Health Advisory Levels.

c. Tier 3. If a toxicity value is available from more than one source in this tier, the value based upon the most recent review of the toxicological literature and accompanying dose-response analysis should be selected:

(I) California Environmental Protection Agency Office of Environmental Health Hazard Assessment’s Chronic Reference Exposure Levels and Cancer Potency Values,

(II) World Health Organization Tolerable Daily Intake values,

(III) International Toxicity Estimates for Risk,

(IV) Values listed as “Withdrawn” in the IRIS database, or

(V) Values from sources that are either selected by FDEP or proposed by a PRSR and accepted by FDEP that meet statutory requirements.

(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 that may be used in determining soil properties for the derivation of alternative CTLs based on site-specific soil characteristics, if soil properties are used to derive alternative CTLs.] In developing alternative CTLs, the dose additivity of chemicals shall be considered [Refer to the “Dose Additivity” document referenced in subsection 62-780.100(24), F.A.C.]. 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 site-specific data, modeling results, risk assessment studies, risk reduction techniques or a combination thereof. 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, 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. State-wide, as applicable, or site-specific characteristics pertinent to 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 are acceptable, and to document that potential risks associated with 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 monitoring or active remediation monitoring, and adjusted as appropriate using empirical data as the data are obtained.

(3) Where a PRSR elects to perform a risk assessment pursuant to subsection 62-780.650(1), F.A.C., Probabilistic Risk Assessments may be employed to document that human health and environmental risks are acceptable, and to document that potential risks associated with the establishment of alternative CTLs are acceptable provided:

(a) The equations in Chapter 62-777 Figures (1)-(10), as applicable, shall be used as the basis for calculation of cumulative risks and for the calculation of the alternative CTL.

(b) The selection of the alternative CTL shall be the value that is protective for the pathways and routes by which human and environmental receptors may be exposed representing the 90th percentile of the final exposure or risk variability distributions produced by the model for the general population, or for any identified sensitive subpopulations, where applicable of special interest such as children and pregnant women (or~~equivalent to~~ the 10th percentile of the CTL distribution if demonstrated to be equivalent); and

(c) The following information regarding the Probabilistic Risk Assessment model is submitted to and approved by the Department pursuant to subsection 62-780.610(2), F.A.C.:

1. All information required by paragraph 62-780.610(2)(b), F.A.C.;

2. The type of simulation used;

3. Whether the simulation used is an open-source model or a proprietary model;

4. The source(s) for the distribution(s), as well as any point values, used in the model;

5. A description of the applicability and scientific basis for each~~Any information describing the applicability or limitations~~ of the distribution(s) and point values used in the model;

6. ~~Any assumptions made regarding t~~The shapes and parameters of distribution(s) used in the model and the basis for these assumptions; ~~and~~

7. The extent of correlation, if any, assumed between specific input distributions and the scientific rationale for that correlation;

8.~~7.~~ Any default model parameter values that were replaced with other values for the purposes of the Probabilistic Risk Assessment and the rationale for such replacement, specifically including any methods used~~change made to the algorithms~~ for sampling or resampling from the input distributions. The PRSR may submit the information listed in paragraph 62-780.650(3)(c), F.A.C., above for review and approval in advance of the submittal of the model results; and

9.~~8.~~ A discussion of the uncertainties associated with the models and inputs used in the probabilistic risk assessment, including contributions from:

a. The nature and sources of exposure and toxicity information;

b. The shape of input distributions and limits, and choice of point value inputs, if any, used in the analysis; and

c. The selection of specific models used in the analysis.

d. If the uncertainty discussion includes quantitative information, it may be presented in the form of a parameter sensitivity analysis, or calculation of risk in two dimensions where uncertainty is expressed as the confidence bounds on the risk variability distribution.

10. A quantitative assessment of uncertainty is not required, but if submitted as part of the risk assessment, should quantify how alternative inputs and models would change the 90th percentile risk (and associated CTL) for the population(s) of interest. ~~This could be presented as alternative 90~~~~th~~ ~~percentile risks associated with different specific inputs or models, or when uncertainties for one or more inputs are expressed as distributions in a second dimension, as 95% confidence bounds on the 90~~~~th~~ ~~percentile risk.~~

 (4) Within the time frames specified in Table A, located at the end of Rule 62-780.900, F.A.C., or the CAD, the PRSR shall submit to the Department for review an electronic or paper copy of the Risk Assessment Report.

(5) 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 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), F.A.C., or a No Further Action Proposal with or without 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(3), F.A.C.

(b) A Natural Attenuation Monitoring Plan may be included if the site meets the Natural Attenuation 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.

(6) 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 Monitoring Plan is approved, with a Natural Attenuation 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.

(7) If a Risk Assessment Report or Risk Assessment Report Addendum is incomplete in any respect, or is insufficient to satisfy the objectives set forth in subsection 62-780.650(5), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.650(6)(b), F.A.C., of the basis for a rejection or determination of insufficiency, including the technical and scientific basis for any such rejection. The PRSR shall submit to the Department for review an electronic or paper copy of a Risk Assessment Report Addendum that addresses the deficiencies within 60 days after receipt of the notice.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.061 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.021, 403.061, 403.062 FS. History–New 4-17-05, Amended 6-12-13, 2-4-14, .*

*Editorial Note: Portions of this rule were copied from 62-770.650; 62-782.650; and 62-785.650.*

**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) An ~~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.;~~

(II)~~(III)~~ The exposure unit shall not exceed ¼ acre unless the approved Conceptual Site Model adequately demonstrates that contaminants are uniformly distributed such that a 95% UCL based on an alternative exposure unit size will be sufficiently protective of human health, public safety and the environmentdictates a more reasonable exposure unit area. The exposure unit(s) shall be located within the source property boundaries;

~~The exposure unit shall not exceed 1/4 acre and shall be located within the source property boundaries~~;

(III)~~(IV)~~ A minimum of 10 representative soil samples is required when discrete sample data are used and three representative soil samples when ISM sample data are used~~the Florida-UCL tool is utilized~~; and

(IV)(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]; and

(IV) The average soil concentration shall not be compared with any CTL based upon acute toxicity. For acute toxicity CTLs comparisons must be made with discrete sampling data.

2. Criteria for leachability are as follows:

a. Soil contaminant concentrations measured with discrete samples, or average soil contaminant concentrations based upon the 95% UCL approach from discrete or ISM sampling data 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 measured with discrete samples, or average soil contaminant concentrations based upon the 95% UCL approach from discrete or ISM sampling data 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; or

(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, except that for brownfields, groundwater contaminant concentrations may exceed the groundwater CTLs derived from nuisance, organoleptic, or aesthetic considerations if the following additional criteria are met:

(I) Concentrations of contaminants meet all applicable health-based groundwater CTLs provided in Chapter 62-777, F.A.C., Table I groundwater criteria column, and Chapter 62-780, F.A.C., Table F, located at the end of Rule 62-780.900, F.A.C., and if applicable, surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

(II) The PRSR has demonstrated by a minimum of one year of groundwater monitoring data that groundwater concentrations at the property boundary do not, and will not, exceed the groundwater CTLs pursuant to subparagraphs 62-780.680(1)(c)1. or 2., F.A.C., and, if applicable, the surface water CTLs pursuant to paragraph 62-780.680(1)(d), F.A.C.;

(III) The property has access to and is connected to an off‑site water supply for domestic purposes and private wells are not used for domestic purposes. For purposes of this rule, “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; and

(IV) The real property owner provides written acceptance of the No Further Action Proposal to the Department;

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 site’s groundwater contaminant concentrations are 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; and

(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 (whether such institutional controls are recorded in the public records of the County in which the site is located, or are non-recorded 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. Notice of the use of institutional or engineering controls shall be provided in accordance with paragraph 62-780.220(7), F.A.C. 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) Criteria for evaluation of free product are as follows:

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

2. F~~f~~ree product removal is not technologically feasible or not cost effective,~~;~~ and;

3. Free product is not migrating and does not pose a risk to human health, public safety or the environment.

(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 measured with discrete samples, or average soil contaminant concentrations calculated based on the 95% UCL approach from discrete or ISM sampling data ~~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) An~~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.;~~

(II)~~(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; and

(III)~~(IV)~~ A minimum of 10 representative soil samples is required when discrete sampling data are used and three representative soil samples when ISM data are used~~the Florida-UCL tool is utilized~~.; and

(IV)(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 measured with discrete samples, or average soil contaminant concentrations based upon the 95% UCL approach from discrete or ISM sampling data 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.; and

(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, (whether such institutional controls are recorded in the public records of the County in which the site is located, or are non-recorded institutional controls), if needed, 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. Notice of the use of institutional or engineering controls shall be provided in accordance with paragraph 62-780.220(7), F.A.C. Alternative CTLs that are based on limitations to land use must be used in conjunction with institutional controls to ensure that the limited land use upon which the exposure duration and frequency assumptions were based remains in effect in perpetuity until the PRSR submits information to the Department that supports removal or modification of the recorded institutional controls (if applicable) or that reliance on a non-recorded institutional control is no longer required. The PRSR may also use scientific studies or reports to support a No Further Action Proposal without institutional controls under this subsection. Proposals may be based on information about a contaminant’s toxicity or carcinogenicity, provided such information is consistent with the requirements of subparagraph 62-780.650(1)(b)2., F.A.C. Proposals for no further action without controls may also be based on information about non-site-specific exposure factors, provided such information is consistent with the requirements of sub-subparagraph 62-780.650(1)(a)4.b., F.A.C. 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) Criteria for evaluation of free product are as follows:

1. Free product is not present and no fire or explosive hazard exists as a result of a release of non-aqueous phase liquids, ~~or~~;

2. F~~f~~ree product removal is not technologically feasible or not cost effective, and; or;

3. Free product is not migrating and does not pose a risk to human health, public safety or the environment and all affected property owners agree to allow the free product to remain.

(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 measured with discrete samples, or average soil contaminant concentrations calculated based on the 95% UCL approach from discrete or ISM sampling datapursuant 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. An~~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 proposed maximum soil concentrations ~~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; and

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)(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 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 measured with discrete samples, or average soil contaminant concentrations based upon the 95% UCL approach from discrete or ISM sampling data 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.; and

(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 for review an electronic or paper copy of the No Further Action Proposal 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 completion of notification pursuant to 62-780.220(7), F.A.C., 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., of the basis for a rejection or determination of insufficiency, including the technical and scientific basis for any such rejection. The PRSR shall submit to the Department for review an electronic or paper copy 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, an electronic or paper copy of a Natural Attenuation Monitoring Plan pursuant to Rule 62-780.690, F.A.C., or an electronic or paper copy 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 or relied upon at the contaminated site. For engineering controls, a brief description of the physical control and any maintenance or monitoring requirements shall be included.~~;~~ F~~f~~or recorded institutional controls, a copy of the restrictive covenant (or other recorded instrument) including a reference to the book and page numbers where recorded shall be attached. ; and For non-recorded institutional controls, a citation to the rule(s), ordinance(s), legal authority or other instruments that comprise the institutional control, shall be included together with a copy of the pertinent sections of the instruments;for non-restrictive covenant types of institutional controls, citation to the rule or ordinance upon which the institutional control is based, and, if using the Memorandum of Understanding between the Florida Department of Environmental Protection and the Florida Department of Transportation that became effective June 16, 2014, the pertinent details shall be included;

(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 or alternative CTLs, the PRSR shall provide constructive notice of the Department’s intent for such approval in accordance with subsection 62-780.220(7), F.A.C.

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

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.061, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13, 2-4-14, .*

*Editorial Note: Portions of this rule were copied from 62-770.680; 62-782.680; and 62-785.680.*

**62-780.690 Natural Attenuation Monitoring.**

(1) Natural Attenuation Monitoring and long-term natural attenuation monitoring are is an allowable strategiesy 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 site’s 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 monitoring. Natural attenuation 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, or~~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 meet 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 ~~current~~ 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 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 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.

(d) Pursuant to subsection 62-780.220(4), F.A.C., 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 unless it has been demonstrated that the contaminants do not cause or contribute to the exceedance of applicable surface water quality criteria.

(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(4)(b), F.A.C., the PRSR shall submit to the Department for review an electronic or paper copy of the Natural Attenuation Monitoring Plan.

(5) The Department shall:

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

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

(6) If the Natural Attenuation 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 an electronic or paper copy of a revised Natural Attenuation 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 an electronic or paper copy 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 Monitoring Plan meets the criteria of subsection 62-780.690(1), F.A.C., a Natural Attenuation 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 as specified in the Natural Attenuation Monitoring Plan approval but no more frequent than quarterly~~, as specified in the Natural Attenuation 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, ~~located at the end of Rule 62-780.900, F.A.C.,~~ or the CAD, the PRSR shall submit to the Department for review an electronic or paper copy of a Natural Attenuation Monitoring Report. The report shall include the analytical results (laboratory report), chain of custody record form [Form 62-780.900(2) or an equivalent chain of custody form that includes all the items required by Form 62-780.900(2)], 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 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 Monitoring Plan; or

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

4. Other action as approved by the department

(f) As specified in the approved Natural Attenuation Monitoring Plan, 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 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 Monitoring Plan; or

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

4. Other action as approved by the department; and

(g) If natural attenuation 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 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 Monitoring Plan the PRSR submits to the Department for review 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 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 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 an electronic or paper copy 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 an electronic or paper copy 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 Monitoring Plan within 30 days after receipt of the notice.

(13) For brownfield sites, the Site Rehabilitation Completion Order shall contain the following statement, as applicable: “Based upon the information provided by (real property owner) concerning property located at (insert address), it is the opinion of the Florida Department of Environmental Protection that (party) has successfully and satisfactorily implemented the approved brownfield site rehabilitation agreement schedule and, accordingly, no further action is required to assure that any land use identified in the brownfield site rehabilitation agreement is consistent with existing and proposed uses. If the real property owner proposes to remove the institutional or engineering controls, the real property owner shall obtain prior 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 the criteria of subsection 62-780.680(1), F.A.C., are met.”

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

*Rulemaking Authority* *376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.061, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.690; 62-782.690; and 62-785.690.*

**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 Monitoring criteria of Rule 62-780.690, F.A.C., within the time frames specified in Table A, located at the end of Rule 62-780.900, F.A.C., or the CAD, the PRSR shall prepare and submit to the Department for review an electronic or paper copy of a Remedial Action Plan. The Remedial Action Plan shall be prepared pursuant to this rule 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 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 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 an electronic or paper copy 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 design, construction details, and 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. For all cleanups, an alternative sampling frequency can be approved based upon site-specific conditions. ~~or at an alternative frequency as proposed in the approved Remedial Action Plan~~ A reporting frequency should be established that is sufficient to evaluate the progress of the cleanup and a single report can be used to summarize multiple sampling events, as approved based upon site-specific conditions;

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 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 and reporting schedule shall be specified for monitoring vacuum extraction systems, in situ sparging, bioremediation, or other in situ means of remediation of soil and groundwater. The reporting schedule should reflect the overall requirements of the Remedial Action Plan and, as appropriate and approved in the Remedial Action Plan, multiple sampling events can be combined in a single report.

(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. If the PRSR chooses to utilize the provisions of this subsection, natural attenuation monitoring shall be performed pursuant to subsection 62-780.690(8), F.A.C., when the Natural Attenuation Monitoring criteria of Rule 62-780.690, F.A.C., have been met.

(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 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.

(8) 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(7)(b), F.A.C., and the PRSR shall submit to the Department for review an electronic or paper copy of a Remedial Action Plan Addendum that addresses the deficiencies within 60 days after receipt of the notice.

(9) 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.

(10) Within the time frames specified in Table A or the CAD, an electronic or paper copy engineering drawings (As-Built Drawings) for installed mechanical remediation systems and associated structures (e.g., slurry wall, permeable reactive barrier) shall be submitted by the PRSR to the Department. 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. For other types of remedial action including episodic treatment with mobile equipment, injection of chemical or biological remediation products, or contaminated soil excavation, revised site figures shall be provided indicating placement of remediation wells, injection wells, or boundaries of excavation.

(11) 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(9), 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(14)(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(14)(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(14)(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 or at an alternative frequency as proposed in the approved Remedial Action Plan (if applicable air quality standards are not exceeded for two consecutive monthly or quarterly sampling events, the PRSR may submit to the Department for review 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. Influent and effluent samples shall be collected using appropriate air sampling protocols and shall be analyzed for contaminants using an appropriate analytical method referenced in the approved Remedial Action Plan.

(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 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.

(12) 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 an electronic or paper copy 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(11)(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.

(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; and

(f) Recommendations to continue or discontinue the operation of the treatment system(s) or to modify the site rehabilitation including switching to Natural Attenuation Monitoring in accordance with 62-780.690, F.A.C.;

(13) 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(12), F.A.C.

(14) At any time d~~D~~uring 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 requirements outlined in the remedial action status report prepared pursuant to subsection 62-780.700(12), 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 Monitoring. The proposal shall include a Natural Attenuation with Monitoring Plan pursuant to subsection 62-780.690(4), F.A.C.

(15) 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(14), F.A.C.

(16) If the proposal is incomplete in any respect, or is insufficient to satisfy the applicable requirements of subsection 62-780.700(14), F.A.C., the Department shall inform the PRSR pursuant to paragraph 62-780.700(15)(b), F.A.C., and the PRSR shall submit to the Department for review an electronic or paper copy of a revised Natural Attenuation Monitoring Plan or other proposal pursuant to paragraphs 62-780.700(14)(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.

(17) 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.

(18) 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 Monitoring criteria of Rule 62-780.690, F.A.C., the PRSR may submit to the Department for review an electronic or paper copy 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(14), F.A.C. “Leveling off” shall mean that the graph of contaminant concentrations versus time generally fits a curve defined by the equation C=Cf+Coe-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. Cf: coefficient representing final concentration that the curve approaches asymptotically;

3. Co: 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 Cf;

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.

(19) If a demonstration pursuant to subsection 62-780.700(18), F.A.C., was completed, the PRSR shall compile the results of the demonstration and analyses described in paragraphs 62-780.700(18)(a)-(c), F.A.C., in a report and shall submit an electronic or paper copy of the report to the Department for review within the time frames of Table A or the CAD. The Department shall determine, using the criteria specified in paragraph 62-780.700(18)(c), F.A.C., whether modifications to the Remedial Action Plan are required pursuant to subsection 62-780.700(14), F.A.C., to effect further treatment; however, if alternative methods are not required, active remediation shall be deemed complete.

(20) When the No Further Action criteria of subsection 62-780.680(1), F.A.C., the site-specific alternative cleanup target levels, or the leveling off criteria of subsection 62-780.700(18), F.A.C., have been met, an electronic or paper copy 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 of 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., 62-780.680(2), F.A.C., or 62-780.680(3), F.A.C., a Site Rehabilitation Completion Order shall be issued as referenced in subsection 62-780.680(7), F.A.C.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.700, Formerly 17-70.010 and Formerly 17-770.700; 62-782.700; and 62-785.700.*

**62-780.750 Post Active Remediation Monitoring.**

(1) Post active remediation g~~G~~roundwater 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 or the site rehabilitation is continuing under Natural Attenuation Monitoring pursuant to Rule 62-780.690, F.A.C. When active groundwater remediation has met the No Further Action criteria of subsection 62-780.680(1), F.A.C., the site-specific alternative cleanup target levels, or the leveling off criteria of subsection 62-780.700(18), F.A.C., an electronic or paper copy 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 an electronic or paper copy 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, located at the end of Rule 62-780.900, F.A.C., or the CAD, the PRSR shall submit to the Department for review an electronic or paper copy 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(2) or an equivalent chain of custody form that includes all the items required by Form 62-780.900(2)], 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;

3. Propose a Natural Attenuation Monitoring plan pursuant to Rule 62-780.690, F.A.C.; or

4.~~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 if 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 an electronic or paper copy 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 paragraph 62-780.750(7)(b), F.A.C., and the PRSR shall submit to the Department for review an electronic or paper copy 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) For brownfields, the Site Rehabilitation Completion Order shall contain the following statement, as applicable: “Based upon the information provided by (real property owner) concerning property located at (insert address), it is the opinion of the Florida Department of Environmental Protection that (party) has successfully and satisfactorily implemented the approved brownfield site rehabilitation agreement schedule and, accordingly, no further action is required to assure that any land use identified in the brownfield site rehabilitation agreement is consistent with existing and proposed uses. If the real property owner proposes to remove the institutional or engineering controls, the real property owner shall obtain prior 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 the criteria of subsection 62-780.680(1), F.A.C., are met.”

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

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4), 376.81, 403.061, 403.0877 FS. Law Implemented 376.3071, 376.30701, 376.3078(4), 376.81, 403.0877 FS. History–New 4-17-05, Amended 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.750; 62-782.750; and 62-785.750.*

**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, except that.

(a) 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; or

(b) If the Department is the PRSR, the time frames specified in this chapter do not apply.

(2) 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.

(3) 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.

(4) 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., and shall be enforceable by the Department pursuant to Sections 376.303 and 403.121, F.S., unless otherwise addressed by a CAD.

(5) 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.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.3078(4) FS. Law Implemented 376.303, 376.3071, 376.30701, 376.30711, 376.3078(4) FS. History–New 4-17-05, Amended 6-12-13.*

*Editorial Note: Portions of this rule were copied from 62-770.800, Formerly 17-70.013 and Formerly 17-770.800; and 62-782.790.*

**62-780.900** **Forms.**

The forms used by the Department in its Contaminated Site Cleanup Criteria program are adopted and incorporated by reference in Rules 62-780.220 and .300, F.A.C. Each form is listed by subsection number, which is also the form number, and with the subject, title, and effective date. Forms may be obtained from the Division of Waste Management website at www.dep.state.fl.us/waste.

(1) Form 62-780.900(1), Initial Notice of Contamination Beyond Property Boundaries (effective date 6-12-13).

(2) Form 62-780.900(2), Chain of Custody Record (effective date 6-12-13).

# TABLE A.

Submittals and Time Frames for PRSR

(Unless superseded by a CAD)

|  |  |
| --- | --- |
| Type of Report or Activity | PRSR Action or Submittal Time Frames |
| Notice of Initiation of Emergency Response Action or Interim Source Removal Action per Rule 62-780.500, F.A.C. or 62-780.525, F.A.C. | Within 24 hours of initiation of the action |
| Emergency or Interim Source Removal Proposal | When seeking approval before implementation of an alternative product recovery method, groundwater recovery, soil treatment or disposal technique (Rule 62-780.500, F.A.C. or Rule 62-780.525, F.A.C.) |
| Emergency Source Removal Status Report or 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 |
| Emergency Source Removal Status Report or 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 62-780.600(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 62-780.680, F.A.C.) |
| Natural Attenuation Monitoring (NAM) Plan | When the site meets the criteria for NAM (Rule 62-780.690, F.A.C.) |
| Natural Attenuation Monitoring (NAM) Report | Within 60 days of sample collection or in accordance with the approved NAM plan |
| 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 or in accordance with the approved RAP |
| Proposals submitted pursuant to subsection 62-780.700(14), F.A.C. | Optional during active remediation |
| Post Active Remediation Monitoring (PARM) Plan | When the site meets the criteria for NFA (Rule 62-780.680, F.A.C.) or Leveling Off (subsection 62-780.700(18), F.A.C.) |
| Post Active Remediation Monitoring (PARM) Report | Within 60 days of sample collection or in accordance with the approved PARM plan |
| Leveling Off Determination | Within 60 days of sample collection |
| Post Active Remediation Monitoring Plan resampling proposal (paragraph 62-780.750(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 62-780.700(2), F.A.C. |
| Combined Document (optional submittal) | Governed by the earliest submission deadline for any component, unless the Department agrees to a different schedule in advance, and in writing.~~Submitted within 270 days of discharge or discovery~~ |
| Notices for Field Activities (except for Initiation of Emergency Response Action, De Minimis Discharges or Interim Source Removal Action) | Notice to the Department within seven days but not less than 24 hours prior to performing field activity |
| Submittal to the Department of addenda, responses, or modification to plans or reports, pursuant to Rule 62-780.790, F.A.C. | Within 60 days of receipt of the Department’s response |
| Submittal of Form and Actual Notice required in subsection 62-780.220(2), F.A.C.  | See text of rule for “Initial Notice of Contamination Beyond Property Boundaries” in subsection 62-780.220(2), F.A.C. |

TABLE B

Petroleum, Petroleum Product and Drycleaning Solvent Contaminants of Concern (COCs)

|  |  |
| --- | --- |
| Petroleum or Petroleum Product COCs | Drycleaning Solvent COCs |
| Petroleum or Petroleum Product Sites | Chlorinated Solvent Sites |
| Benzene | Carbon tetrachloride |
| Ethylbenzene | Chloroform |
| Toluene | Dichloroethane, 1,1- |
| Xylenes, total | Dichloroethane, 1,2- [or EDC] |
| Acenaphthene | Dichloroethene, 1,1- |
| Acenaphthylene | Dichloroethene, cis-1,2- |
| Anthracene | Dichloroethene, trans-1,2- |
| Benzo(a)anthracene | Ethyl chloride [or Chloroethane] |
| Benzo(a)pyrene | Methyl chloride [or Chloromethane] |
| Benzo(b)fluoranthene | Methylene chloride |
| Benzo(g,h,i)perylene | Tetrachloroethene [or PCE] |
| Benzo(k)fluoranthene | Trichloro-1,2,2-trifluoroethane, 1,1,2 [or CFC 113] |
| Chrysene | Trichloroethane, 1,1,1- [or Methyl chloroform] |
| Dibenz(a,h)anthracene | Trichloroethene [or TCE] |
| Fluoranthene | Vinyl chloride |
| Fluorene | Petroleum Solvent Sites |
| Indeno(1,2,3-cd)pyrene | Benzene |
| Methylnaphthalene, 1- | Ethylbenzene |
| Methylnaphthalene, 2- | Toluene |
| Naphthalene | Xylenes, total |
| Phenanthrene | Acenaphthene |
| Pyrene | Acenaphthylene |
| Dibromoethane, 1,2- [or EDB] | Methylnaphthalene, 1- |
| Dichloroethane, 1,2- [or EDC] | Methylnaphthalene, 2- |
| Methyl tert-butyl ether [or MTBE] | Naphthalene |
| TRPHs | TRPHs |
| Arsenic |  |
| Cadmium |  |
| Chromium |  |
| Lead |  |
| Chloride |  |
| Sulfate |  |
| Total Dissolved Solids [or TDS] |  |

TABLE C

For Gasoline and Kerosene Analytical Groups

|  |  |  |
| --- | --- | --- |
| Contaminants of Concern | Groundwater and Surface Water | Soil and Sediment |
| Benzene, Ethylbenzene, Toluene, total Xylenes, and MTBE | EPA 602, 624, 8021, or 8260 | EPA 8021 or 8260 |
| 1-methylnaphthalene, 2-methylnaphthalene, and the 16 method-listed PAHs included in Table B | EPA 610 (by HPLC), 625, 8270, or 8310 | EPA 8270 or 8310 |
| 1,2-dichloroethane and other listed Priority Pollutant Volatile Organic Halocarbons | EPA 601, 624, 8021, or 8260 | NOT REQUIRED |
| 1,2-dibromoethane [or EDB] | EPA 504, 504.1, ~~or~~ 8011, or 8260 SIM | NOT REQUIRED |
| Lead, total | EPA 200.7, 200.8, 6010, or 6020 | NOT REQUIRED |
| TRPHs | FL-PRO | FL-PRO |
|  |
| NOTE 1: Practical quantitation limits shall meet the specified cleanup target levels. |
| NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis. |
| NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62‑160, F.A.C. |

TABLE D

For used oil, as defined in Rule 62-780.200(50), F.A.C., for identified products not listed in the Gasoline or Kerosene

Analytical Groups, and for products for which the specific identity is unknown

|  |  |  |
| --- | --- | --- |
| Contaminants of Concern | Groundwater and Surface Water | Soil and Sediment |
| Arsenic, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Cadmium, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Chromium, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Lead, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Priority Pollutant Volatile Organics | EPA 624 or 8260 | EPA 8260 |
| Priority Pollutant Extractable Organics | EPA 625 + 608, 625 + 8081 + 8082, 8270 + 608 (unless certified for Organochlorine Pesticides and PCBs by 8270), or 8270 + 8081 (unless certified for Organochlorine Pesticides by 8270) + 8082 (unless certified for PCBs by 8270) | EPA 8270 + 8081 (unless certified for Organochlorine Pesticides by 8270) + 8082 (unless certified for PCBs by 8270) |
| Nonpriority Pollutant Organics (with GC/MS peaks greater than 10 ug/L) | EPA 624 or 8260, and 625 or 8270 | NOT REQUIRED |
| Priority Pollutant Volatile Organic Halocarbons | EPA 601, 624, 8021, or 8260 | EPA 8021 or 8260 |
| 1-methylnaphthalene, 2-methylnaphthalene, and the 16 method-listed PAHs included in Table B | EPA 610 (by HPLC), 625, 8270, or 8310 | EPA 8270 or 8310 |
| PCBs | EPA 608 or 8082 | EPA 8082 |
| TRPHs | FL-PRO | FL-PRO |
| Toxicity Characteristic Leaching Procedure (TCLP) and the subsequent analyses for metals shall be performed on soil samples to determine if the soil is a hazardous waste and to evaluate leaching potential when the total concentration of any contaminant of concern in the samples meets the following conditions (the applicable analytical method shall be used following sample preparation by EPA Method 1311 and any appropriate digestion procedure): |
| If: | Exceeds: | Use: | Test Criteria: |
| Total Arsenic | 100 mg/kg | EPA 6010 or 6020 | 5.0 mg/L |
| Total Cadmium | 20 mg/kg | EPA 6010 or 6020 | 1.0 mg/L |
| Total Chromium | 100 mg/kg | EPA 6010 or 6020 | 5.0 mg/L |
| Total Lead | 100 mg/kg | EPA 6010 or 6020 | 5.0 mg/L |
|  |
| NOTE 1: Practical quantitation limits shall meet the specified cleanup target levels. |
| NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis. |
| NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62‑160, F.A.C. |

TABLE E

For petroleum as defined in Section 376.301, F.S.

|  |  |  |
| --- | --- | --- |
| Contaminants of Concern | Groundwater and Surface Water | Soil and Sediment |
| Benzene, Ethylbenzene, Toluene, total Xylenes, and MTBE | EPA 602, 624, 8021, or 8260 | EPA 8021 or 8260 |
| 1-methylnaphthalene, 2-methylnaphthalene, and the 16 method-listed PAHs included in Table B | EPA 610 (by HPLC), 625, 8270, or 8310 | EPA 8270 or 8310 |
| 1,2-dichloroethane and other listed Priority Pollutant Volatile Organic Halocarbons | EPA 601, 624, 8021, or 8260 | EPA 8021 or 8260 |
| 1,2-dibromoethane [or EDB] | EPA 504, 504.1, ~~or~~ 8011, or 8260 SIM | NOT REQUIRED |
| Arsenic, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Cadmium, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Chromium, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| Lead, total | EPA 200.7, 200.8, 6010, or 6020 | EPA 6010 or 6020 |
| TRPHs | FL-PRO | FL-PRO |
| Chloride | EPA 300.0, 9056, 9251, or 9253, or SM 4500-Cl B, 4500-Cl C, or 4500-Cl E | NOT REQUIRED |
| Sulfate | EPA 300.0, 300.1, 375.2, 9038, or 9056, or SM 4500-SO4 C | NOT REQUIRED |
| Total Dissolved Solids [or TDS] | SM 2540 C | NOT APPLICABLE |
|  |
| NOTE 1: Practical quantitation limits shall meet the specified cleanup target levels. |
| NOTE 2: Appropriate sample preparation and cleanup methods (e.g., extraction, digestion) shall be performed prior to analysis. |
| NOTE 3: Equivalent methods may be used if approved through protocols described in Chapter 62‑160, F.A.C. |

# Table F

Health-Based Values For Groundwater Cleanup Target Levels at Brownfield Sites

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Contaminant | CAS# | Chapter 62-777, F.A.C.,(ug/L) | Health-Based GCTL(ug/L) | Target Organ/System or Effect |  |
| Acenaphthene | 83-32-9 | 20Organoleptic | 420 | -Liver |
| Aluminum | 7429-90-5 | 200Secondary Standard | 7000 | -Body Weight |
| Biphenyl, 1,1- [or Diphenyl] | 92-52-4 | 0.5Organoleptic | 350 | -Kidney |
| Butyl acetate, n- | 123-86-4 | 43Organoleptic | NA | -None Specified |
| Chloride | 16887-00-6 | 250000Secondary Standard | NA | -None Specified |
| Chlorophenol, 3- | 108-43-0 | 0.1Organoleptic | 35 | -Reproductive |
| Chlorophenol, 4- | 106-48-9 | 0.1Organoleptic | 35 | - Reproductive |
| Chloropicrin | 27913 | 7.3Organoleptic | NA | -None Specified |
| Copper | 7440-50-8 | 1000Secondary Standard | 280(a) | -Gastrointestinal |
| Cumene [or Isopropyl benzene] | 98-82-8 | 0.8Organoleptic | 700 | -Adrenals -Kidney |
| Dichlorophenol, 2,3- | 576-24-9 | 0.04Organoleptic | 21 | - Immunological |
| Dichlorophenol, 2,4- | 120-83-2 | 0.3Organoleptic | 21 | -Immunological |
| Dichlorophenol, 2,5- | 583-78-8 | 0.5Organoleptic | 21 | - Immunological |
| Dichlorophenol, 2,6- | 87-65-0 | 0.2Organoleptic | 21 | - Immunological |
| Dichlorophenol, 3,4- | 95-77-2 | 0.3Organoleptic | 21 | - Immunological |
| Ethanol | 64-17-5 | 10000Organoleptic | 400000 | -Developmental |
| Ethyl acrylate | 140-88-5 | 0.4Organoleptic | 0.7 | -Carcinogen |
| Ethyl ether | 60-29-7 | 750Organoleptic | 1400 | -Body Weight |
| Ethylbenzene | 100-41-4 | 30Secondary Standard | 700(700) | -Developmental -Kidney –Liver |
| Fluoride | 7782-41-4 | 2000Secondary Standard | 420(a) | -Teeth mottling |
| Formaldehyde | 50-00-0 | 600Organoleptic | 1400 | -Body Weight-Carcinogen-Gastrointestinal |
| Hexane, n- | 110-54-3 | 6Organoleptic | 420 | -Neurological |
| Iron | 7439-89-6 | 300Secondary Standard | 4200 | -Gastrointestinal |
| Manganese | 7439-96-5 | 50Secondary Standard | 330 | -Neurological |
| Methyl acetate | 79-20-9 | 3000Organoleptic | 7000 | -Liver |
| Methyl methacrylate | 80-62-6 | 25Organoleptic | 9800 | -None specified |
| Methyl tert-butyl ether [or MTBE] | 1634-04-4 | 20Organoleptic | NA | -Eye-Kidney-Liver |
| Phenol | 108-95-2 | 10Organoleptic | 2100 | -Developmental |
| Silver | 7440-22-4 | 100Secondary Standard | 35(a) | -Skin |
| Sulfate | 14808-79-8 | 250000Secondary Standard | NA | -None Specified |
| Toluene | 108-88-3 | 40Secondary Standard | 1400(1000) (b) | -Kidney-Liver-Neurological |
| Total dissolved solids [or TDS] | C-010 | 500000Secondary Standard | NA | -None Specified |
| Trichlorophenol, 2,4,5- | 95-95-4 | 1Organoleptic | 700 | -Kidney -Liver |
| Trimethylbenzene, 1,2,3- | 526-73-8 | 10Organoleptic | 350 | -None Specified |
| Trimethylbenzene, 1,2,4- | 95-63-6 | 10Organoleptic | 350 | -None Specified |
| Trimethylbenzene, 1,3,5- | 108-67-8 | 10Organoleptic | 350 | -None Specified |
| Vinyl acetate | 108-05-4 | 88Organoleptic | 7000 | -Body Weight-Kidney-Nasal |
| Xylenes, total | 1330-20-7 | 20Secondary Standard | 1400(10000) (c) | -Body Weight-Mortality-Neurological |  |  |
| Zinc | 7440-66-6 | 5000Secondary Standard | 2100(a) | -Blood |  |  |

Note: GCTLs based organoleptic considerations are lower than the health‑based values.

Table F in Chapter 62-780, F.A.C., was duplicated in Table 7 of the technical report referenced in this chapter. Table F is for use only when making decisions for brownfield sites regarding sub-subparagraph 62‑780.680(1)(c)1.a., F.A.C.

NA = Not available at time of rule adoption.

(a) = Health-based GCTL lower than the Secondary Standard. The Secondary Standard shall be used for this contaminant.

(b) = Health-based GCTL higher than Primary Standard (value). The Primary Standard shall be used for this contaminant.

(c) = Health-based GCTL lower than Primary Standard (value). The Primary Standard shall be used for this contaminant.

*Rulemaking Authority 376.303, 376.3071, 376.30701, 376.30702, 376.3078(4), 376.81 FS. Law Implemented 376.3071, 376.30701, 376.30702, 376.3078(4), 376.81 FS. History–New 4-17-05, Amended 12-27-07, 6-12-13, .*

*Editorial Note: Portions of this rule were copied from 62-770.900, Formerly 17-770.900; 62-782.900; and 62-785.900.*