TITLE 20 ENVIRONMENTAL PROTECTION
CHAPTER 5 PETROLEUM STORAGE TANKS
PART 12 CORRECTIVE ACTION FOR STORAGE TANK SYSTEMS CONTAINING PETROLEUM PRODUCTS

20.5.12.1 ISSUING AGENCY: New Mexico Environmental Improvement Board.
[20.5.12.1 NMAC - Rp, 20.5.12.1 NMAC, 6/15/2009]

20.5.12.2 SCOPE: This part applies to owners and operators of petroleum storage tanks as defined in 20.5.1 NMAC. If the owner and operator of a petroleum storage tank are separate persons, only one person is required to comply with the requirements of this part, including any notice and reporting requirements; however, both parties are liable in the event of non-compliance.
[20.5.12.2 NMAC - Rp, 20.5.12.2 NMAC, 6/15/2009]

20.5.12.3 STATUTORY AUTHORITY: This part is promulgated pursuant to the provisions of the Hazardous Waste Act, Sections 74-4-1 through 74-4-14, the Ground Water Protection Act, Sections 74-6B-1 through 74-6B-14, NMSA 1978; the Water Quality Act, Sections 74-6-1 through 74-6-17, NMSA 1978; and the general provisions of the Environmental Improvement Act, Sections 74-1-1 through ~~74-1-16~~74-1-17, NMSA 1978.
[20.5.12.3 NMAC - Rp, 20.5.12.3 NMAC, 6/15/2009]

20.5.12.4 DURATION: Permanent.
[20.5.12.4 NMAC - Rp, 20.5.12.4 NMAC, 6/15/2009]

20.5.12.5 EFFECTIVE DATE: June 15, 2009, unless a later date is indicated in the bracketed history note at the end of a section.
[20.5.12.5 NMAC - Rp, 20.5.12.5 NMAC, 6/15/2009]

20.5.12.6 OBJECTIVE: The purpose of this part is to provide for corrective action at sites contaminated by releases from petroleum storage tank systems and to protect the public health, safety and welfare and the environment of the state.
[20.5.12.6 NMAC - Rp, 20.5.12.6 NMAC, 6/15/2009]

20.5.12.7 DEFINITIONS: The definitions in 20.5.1 NMAC apply to this part.
[20.5.12.7 NMAC - Rp, 20.5.12.7 NMAC, 6/15/2009]

20.5.12.8 GENERAL:

A. Owners and operators of petroleum storage tank systems shall take corrective action to address all releases, including such action as collection and analysis of relevant site-specific data, soil remediation, groundwater and surface water remediation and any other appropriate actions pursuant to this part, in a manner protective of public health, safety and welfare and the environment.

B. Upon confirmation of a release pursuant to 20.5.7 NMAC or identification and reporting of a release in any other manner, owners and operators of petroleum storage tank systems shall comply with the requirements of this part if the release:

(1) is of unknown volume or is greater in volume than 25 gallons; or

(2) is of any size and the owner or operator is directed by the department to comply with this part.

C. Owners and operators shall mail or deliver all written notices and reports required under this part to be submitted to the department to the owner or operator's assigned project manager from the petroleum storage tank bureau, New Mexico environment department.

D. Owners and operators shall comply with any site-specific timeline or deadline that is ~~issued or~~ approved in writing by the department at the time of workplan approval. If no applicable site-specific timeline has been ~~issued or~~ approved, the following timeline shall apply to all corrective action requirements under this part. The time deadlines set forth in this part are computed from the date of reporting of a release or of reporting of the confirmation of a suspected release pursuant to 20.5.7 NMAC unless another event is specified in these.

Default Corrective Action Timeline

Deadline, in days from report:	Action or deliverable due date, as defined above:
0	report discovery or confirmation of a release

3	72-hour report
14	14-day report
60	submit NAPL assessment
60	initiate interim removal of contaminated soil
60	preliminary investigation report
120	secondary investigation report
150	tier one evaluation report
180	tier two evaluation report
210	tier three evaluation report
When monitored natural attenuation is used:	
510	monitored natural attenuation (MNA) plan
570	implementation of MNA
935	first annual MNA monitoring report
935	annual evaluation of MNA report
When other remediation is used:	
510	conceptual remediation plan
540	final remediation plan
600	implementation of remediation
690	first quarterly monitoring report
965	annual evaluation of remediation system report

E. All owners and operators are responsible for compliance with all provisions of this part. An owner or operator may designate a representative to facilitate compliance with this part. The designation of such a representative shall not affect the department's right to seek compliance at any time from any owner or operator and shall not relieve owners or operators of any legal liabilities or responsibilities they may have under this part or otherwise under the law.

F. Except for 20.5.12.10, 20.5.12.11 and 20.5.12.12 NMAC, owners and operators shall submit to the department written workplans for all ~~required~~ corrective action under this part. Owners and operators may submit workplans in stages to reflect the sequence or types of corrective action ~~required by~~ described in 20.5.12 NMAC at the site, but the owners and operators shall submit all ~~required~~ workplans to and obtain approval by the department in writing for technical adequacy before the corrective action is commenced.

G. Unless otherwise approved, a qualified firm as specified in ~~20.5.12~~ 20.5.16 NMAC shall perform all corrective action and, when required by the rules in Title 20, Chapter 5, a professional engineer as defined in 20.5.1.7 NMAC.

(1) All contractors and their subcontractors shall have appropriate licenses and certifications and be in compliance with applicable local, state and federal laws and regulations, including but not limited to the rules in Title 16, Chapter 39 governing engineers, 14.6.3 NMAC governing contractors and 29 CFR part 1910 governing worker health and safety.

(2) Owners and operators shall identify all prime contractors and all subcontractors in all workplans submitted to the department.

H. Where site conditions are amenable, owners and operators may use accelerated site characterization techniques if pre-approved by the department.

I. All monitoring wells shall be permitted in conformance with applicable federal, state and local laws and regulations in effect at the time of installation.

J. Owners and operators shall clearly mark and secure monitoring wells and major remediation equipment to prevent unauthorized access, tampering and damage. Owners and operators shall close or abandon all wells in accordance with the requirements of applicable federal, state and local laws and regulations.

K. The department shall notify ~~all~~ owners and operators ~~of responsible party-lead sites~~ taking corrective action and contractors of state-lead sites in writing when it has determined that a deliverable completed under an approved workplan is satisfactory. The written notice shall also inform the owner, operator or contractor that any application for payment from the fund of costs associated with the approved deliverable must be received by the department within 90 days of the date the owner, operator or contractor received written notice of approval and that ~~no extensions of this deadline shall be granted.~~ the department shall not grant extensions of the deadline except for good cause as shown pursuant to 20.5.17.26 NMAC.

[20.5.12.8 NMAC - Rp, 20.5.12.1200 NMAC, 6/15/2009].

[The address of the petroleum storage tank bureau, remediation section is: 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.]

20.5.12.9 CRITERIA FOR TIER ONE, TIER TWO AND TIER THREE EVALUATIONS:

A. ~~The department and owners and operators shall use~~ Owners and operators shall perform a risk assessment if approved by the department and in accordance with the following criteria for tier one, tier two and tier three evaluations as described in 20.5.12.21, 20.5.12.23 and 20.5.12.25 NMAC.

(1) Owners and operators shall develop a conceptual site exposure scenario to identify all current and potential future receptors, direct and indirect pathways, routes of exposure, and complete and incomplete exposure pathways, and to ensure that sufficient data is available to evaluate sites in accordance with this part.

(2) For all complete pathways, owners and operators shall calculate target concentrations for the relevant exposure media (air, soil, surface water, groundwater) using the following components: intake equations, fate and transport models and parameters, target risk goals, physical and chemical property parameters, toxicity parameters and exposure factors, as approved by the department.

(3) Owners and operators shall compare representative site concentrations to tier one levels in accordance with 20.5.12.21 NMAC and determine whether a tier two or a tier three evaluation in accordance with 20.5.12.23 and 20.5.12.25 NMAC is necessary.

(4) The tier two and tier three evaluations shall consider site-specific measurements or estimates for saturated hydraulic conductivity (cm/sec), groundwater gradient, soil bulk density (g/cc), soil gradation, soil moisture content (percent by volume), effective porosity, and fraction organic carbon content (percent), and other parameters if required by the department. Owners and operators shall compare representative site concentrations to the tier two site specific target concentrations (SSTLs) in accordance with 20.5.12.23 NMAC.

(5) In no case will the department make a "no further action" determination for a release if, for the target concentration for any contaminant of concern originating from the release or any route of exposure:

(a) the individual carcinogenic risk exceeds 0.00001; or

(b) the hazard quotient exceeds one.

(6) Owners and operators shall determine RBSLs using residential land use unless the owner or operator can demonstrate that the current and the reasonable future land use is or will likely be commercial or industrial and, therefore, that the assumption of commercial or industrial land use is equally protective of public health, safety and welfare and the environment.

(7) Target surface water concentration criteria shall be as provided in 20.6.2, 20.7.10 and 20.5.12.42 NMAC.

(8) Target groundwater concentration criteria shall be as provided in 20.6.2 and 20.5.12.42 NMAC, and, for domestic water supplies, as provided in 20.7.10 NMAC.

(9) Target concentrations for air, soil and water shall also take into account other factors including vegetation effects, sensitive environmental receptors, and nuisance considerations as required by this part.

B. Owners and operators shall obtain department concurrence with the results of and the procedures used for the tiered evaluations before a remediation plan is approved by the department, or before a "no further action" determination is approved by the department.

[20.5.12.9 NMAC - Rp, 20.5.12.1202 NMAC, 6/15/2009]

20.5.12.10 MINIMUM SITE ASSESSMENT, INITIAL RESPONSE:

A. Upon discovery or confirmation of a release, owners and operators of the storage tank system shall immediately prevent any further release from the storage tank system by whatever means necessary, including removing product from the storage tank system or any part of the storage tank system that is known to leak or is suspected of leaking. If necessary, owners and operators shall remove the storage tank system from service in accordance with 20.5.8 NMAC.

B. Owners and operators shall inform the department in accordance with 20.5.7.8 NMAC of any release and action taken to mitigate immediate damage from the release.

[20.5.12.10 NMAC - Rp, 20.5.12.1203 NMAC, 6/15/2009]

20.5.12.11 MINIMUM SITE ASSESSMENT, INITIAL ABATEMENT:

A. Owners and operators shall undertake the initial abatement and site investigation actions specified in this section within 72 hours of discovery or confirmation of a release pursuant to 20.5.7 NMAC, using the default timeline as set forth in Subsection D of 20.5.12.8 NMAC or as otherwise ~~directed or~~ approved by the department.

B. Owners and operators shall identify the location and details of construction of all private water supply wells, using readily accessible public records, within a 1,000 foot radius, and all public water supply wells within a one mile radius of the storage tank system, and shall determine if the identified wells lie within a designated wellhead protection area. Owners and operators shall take appropriate measures to protect these water supplies from contamination.

C. Owners and operators shall contain or remediate releases which present an imminent threat of contamination to or are within 500 feet of a surface water course as soon as practicable to prevent contamination of surface water. If the surface water course is a drinking water supply, within 24 hours owners and operators shall notify the owners or operators of all drinking water supplies likely to be affected by the release.

D. If the release has contaminated a water supply, owners and operators shall immediately provide a temporary replacement drinking water supply, as well as adequate warnings or other mechanisms to prevent persons from drinking or otherwise contacting water contaminated by the release. Within seven days of the discovery or confirmation of a release pursuant to 20.5.7 NMAC that has contaminated a water supply, owners and operators shall provide a replacement water supply which is of adequate quality and quantity for drinking, bathing, cooking and washing. Owners and operators shall maintain the replacement water supply until an alternate water supply sufficient for all domestic purposes is available.

E. Owners and operators shall identify the depth, location, composition and construction of all underground utilities including water lines, sewer lines, communication cables, electric lines, and natural gas lines within the area of the release to assess the susceptibility of these utilities to permeation by contaminants or deterioration caused by contaminants. Owners and operators shall notify the utility owner that the release has occurred and obtain permission to perform a site check of the utilities or other subsurface structures most likely to be contaminated by the release to determine whether petroleum products or vapors are present.

F. Owners and operators shall complete an investigation to determine whether potentially explosive or harmful vapors are present in any building, utility corridor, basement, or other surface or subsurface structure on or adjacent to the release site.

(1) The investigation shall include testing for vapors using the following:

(a) a combustible gas indicator or equivalent instrument calibrated according to the manufacturer's instructions to test for potentially explosive levels of petroleum hydrocarbon vapors; and

(b) a photoionization detector, flame ionization detector or another method approved by the department calibrated according to the manufacturer's instructions to test for potentially harmful petroleum hydrocarbon vapors.

(2) In the event owners and operators discover ~~actual or~~ potentially explosive levels of petroleum hydrocarbon vapors ~~greater than 20 percent of the lower explosive limit (LEL)~~ or potentially harmful petroleum hydrocarbon vapors ~~reading greater than five whole instrument units above ambient concentrations~~ in any structure in the vicinity of the release site, owners and operators shall ~~confirm and, if necessary,~~ take immediate action to mitigate the vapor hazard. Within seven days of the discovery of the vapors, owners and operators shall install and place into operation a vapor mitigation system capable of reducing petroleum hydrocarbon vapors to safe levels within the shortest reasonable time. The vapor mitigation system shall be designed by and constructed under the direct, responsible, supervisory control of a professional engineer, when required by the department.

(a) Once a vapor mitigation system has been installed, owners and operators shall monitor and report in writing to the department the levels of ~~potentially explosive or harmful~~ petroleum hydrocarbon vapors in the affected structures weekly for the first month and monthly thereafter unless a different monitoring schedule is approved in writing by the department. This monitoring shall be performed in accordance with Subparagraphs (a) and (b) of Paragraph (1) of this subsection.

(b) After the vapor mitigation system has been in operation for three months, owners and operators shall have 30 days to submit to the department a written summary report containing the monitoring results. The department may direct the owner and operator to modify the vapor mitigation system as necessary to reduce petroleum hydrocarbon vapors to safe levels. Owners and operators shall submit monitoring results to the department at three-month intervals until operation of the vapor mitigation system is discontinued in accordance with this section.

(3) Owners and operators shall continue to operate the vapor mitigation system until the results of three consecutive monthly monitoring events indicate the following:

(a) levels of ~~potentially explosive~~ petroleum hydrocarbon vapors are less than ~~20~~ten percent LEL; and

(b) levels of ~~potentially harmful~~ petroleum hydrocarbon vapors are less than or equal to five whole instrument units above ambient levels in any structure in the vicinity of the release site when measured as required in Subparagraphs (a) and (b) of Paragraph (1) of this subsection.

(4) When operation of a vapor mitigation system is discontinued, owners and operators shall monitor the vapor levels in the structure weekly for the first month and monthly thereafter until one calendar year has passed, or as otherwise ~~directed or~~ approved by the department. If during this period the levels exceed those set forth in Subparagraphs (a) and (b) of Paragraph (3) of this subsection, owners and operators shall notify the department and take the necessary corrective action, as directed by the department.

G. Owners and operators shall remove any exposed petroleum products related to the release and mitigate any related immediate fire and safety hazards as soon as possible, but in no case no later than 72 hours after the confirmation or other identification of the release.

[20.5.12.11 NMAC - Rp, 20.5.12.1204 NMAC, 6/15/2009]

20.5.12.12 MINIMUM SITE ASSESSMENT, 72-HOUR AND 14-DAY REPORTS:

A. Owners and operators shall make an oral report to the department summarizing the abatement procedures undertaken and the results of action taken under 20.5.12.10 and 20.5.12.11 NMAC within 72 hours of the discovery or confirmation of a release pursuant to 20.5.7 NMAC.

B. Owners and operators shall submit a written report to the department within 14 days of the discovery or confirmation of a release pursuant to 20.5.7 NMAC, in addition to the written notice required under 20.5.7 NMAC. This report shall summarize all the work performed pursuant to 20.5.12.10 and 20.5.12.11 NMAC and shall include the following information, as appropriate:

(1) a map based on a United States geologic survey topographic map showing locations of actual and potential receptors, including, but not limited to, private and public water supplies identified pursuant to Subsection A of 20.5.12.11 NMAC; owners and operators shall draw two concentric circles, at 1,000 feet and at one mile radii from the center of the release, and shall also show on the map all surface water courses within a one mile radius of the site;

(2) information about any water supplies known or suspected to have been contaminated by the release;

(3) most likely direction of groundwater flow;

(4) a site plan map showing locations of utilities, surface structures and storage tank systems;

(5) information about underground utilities gathered in accordance with Subsection E of 20.5.12.11 NMAC;

(6) soil borings, logs, and details of construction of all wells, if available;

(7) description of any actions taken to abate adverse effects;

(8) data from vapor monitoring performed in the vicinity of the site;

(9) description of any actions taken to abate potentially explosive or harmful vapors and any plans for further action;

(10) description of fire and safety hazards resulting from the release and actions taken to abate such hazards;

(11) description of current and past ownership of the property, storage tank systems, the substance stored in the system, age of tank and history of any tank removals;

(12) present land use, within 1,000 feet of the site; and

(13) records of tightness tests, repairs to the storage tank system, release detection and monitoring results.

[20.5.12.12 NMAC - Rp, 20.5.12.1205 NMAC, 6/15/2009]

20.5.12.13 NOTICE, SPLIT SAMPLES AND SAMPLING PROCEDURES:

A. Except for the 72-hour vapor check, owners and operators shall notify the department at least four days prior to the collection of any samples which are required pursuant to this part and upon which laboratory analyses are to be performed to allow the department an opportunity to be present at the collection of samples or to split samples.

B. Owners and operators shall notify the department at least four days prior to the decommissioning, destruction or abandonment of any wells.

C. Owners and operators shall collect, store and transport all samples necessary to comply with the requirements of this part in a manner consistent with the nature of the known or suspected contaminants and in conformance with applicable federal, state and local laws and regulations.

[20.5.12.13 NMAC - Rp, 20.5.12.1206 NMAC, 6/15/2009]

20.5.12.14 INTERIM REMOVAL OF NON-AQUEOUS PHASE LIQUID:

A. Owners and operators shall assess the potential for remediation of non-aqueous phase liquid (NAPL) where there is a thickness of greater than one-eighth inch of NAPL on surface water, in any excavation pit, or in any well. Owners and operators shall submit the assessment to the department in accordance with a timeline approved ~~or issued~~ by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

B. The department may ~~direct or~~ approve interim removal of NAPL when such action is determined to be practical and necessary to protect public health, safety and welfare or the environment. In this event, owners and operators shall remove NAPL in accordance with a timeline approved ~~or issued~~ by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

C. Owners and operators shall remove NAPL in a manner that minimizes the spread of contamination into uncontaminated media.

D. Owners and operators shall store and dispose of NAPL in accordance with all flammable and combustible liquids codes approved by the state fire marshal or other local authority, state hazardous waste regulations (20.4.1 NMAC), and any other applicable laws or regulations.

E. Owners and operators shall report recovery and disposal of NAPL to the department.

[20.5.12.14 NMAC - Rp, 20.5.12.1207 NMAC, 6/15/2009]

20.5.12.15 INTERIM REMOVAL OF CONTAMINATED SOIL:

A. Owners and operators shall remediate contaminated soil in accordance with 20.5.12.9, 20.5.12.21, 20.5.12.23, 20.5.12.25, 20.5.12.27, and 20.5.12.35 NMAC, unless ~~directed or~~ approved by the department to remove and treat contaminated soil in accordance with this section.

(1) The department may ~~direct or~~ approve interim removal of contaminated soil when such action is determined to be practical and necessary to protect public health, safety and welfare or the environment.

(2) Under this section, owners and operators shall excavate, treat and dispose of contaminated soil using methods approved by the department, in compliance with local laws and regulations, and under a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

(3) The department shall approve the vertical and horizontal extent of soil to be excavated.

B. When treating or temporarily storing soil on site, owners and operators shall:

(1) for treatment on site, spread soil in a six-inch layer over an impervious liner or other surface approved by the department to prevent infiltration to groundwater and place the layer of soil on level ground and berm to prevent runoff from contaminating other soil or surface water;

(2) for temporary storage, place the soil in a secure, bermed area on an impervious liner or surface or in a secured and properly labeled container, as approved by the department; and

(3) handle soil in a manner that does not contaminate groundwater, surface water or other uncontaminated soil or does not create or cause a public nuisance or threat to human health, safety and welfare or the environment.

C. When contaminated soil is taken off site, owners and operators shall provide the department with the following information within 14 days of removal of the soil from the site:

(1) written documentation of the type and concentration of contaminants, volume and weight of soil, method of treatment, date transported, and location of the site of disposal or treatment;

(2) a signed, written statement by the owner of the treatment or disposal site describing the location of the site and expressly accepting the contaminated soil; and

(3) if contaminated soil is taken to a permitted solid waste facility, a manifest signed by the generator, transporter and the owner or operator of the solid waste facility.

D. Remediation shall be considered complete when the requirements in 20.5.12.42 NMAC are met.

E. In accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC, owners and operators shall submit to the department a report describing the removal and treatment of contaminated soil.

(1) The report shall describe the soil removal action and its effectiveness, including volumes and weight removed.

(2) Owners and operators shall submit the report within 30 days of the soil removal action.

[20.5.12.15 NMAC - Rp, 20.5.12.1208 NMAC, 6/15/2009]

20.5.12.16 MINIMUM SITE ASSESSMENT, PRELIMINARY AND OTHER REQUIRED INVESTIGATIONS:

A. A preliminary investigation is not required when owners and operators can demonstrate that ~~groundwater has not been contaminated~~ the contamination has not reached groundwater and one of the following two conditions apply:

(1) the release is remediated in accordance with this part within 72 hours of discovery or confirmation; or

(2) the release is permanently contained within the UST excavation area or the AST containment system.

B. If the contamination extends beyond the boundaries of the property where the release originated, owners and operators shall conduct a secondary investigation in accordance with 20.5.12.19 NMAC.

C. When the horizontal and vertical extent and magnitude of contamination from the release have been characterized, owners and operators, if approved by the department, shall perform a tier one evaluation ~~as outlined in~~ in accordance with 20.5.12.9 and 20.5.12.21 NMAC.

[20.5.12.16 NMAC - Rp, 20.5.12.1209 NMAC, 6/15/2009]

20.5.12.17 MINIMUM SITE ASSESSMENT, PRELIMINARY INVESTIGATION - REQUIREMENTS: Owners and operators shall conduct a preliminary investigation in accordance with this subsection and under a timeline approved ~~or issued~~ by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC. The preliminary investigation shall determine the following, unless otherwise ~~directed or~~ approved by the department.

A. If not previously identified and reported under 20.5.12.12 NMAC, the preliminary investigation shall determine the source of contamination, the regulated substance released or suspected of being released at the site, the media of concern, current and potential receptors, current and anticipated use of property, complete and incomplete exposure pathways, and routes of exposure.

B. The preliminary investigation shall also determine the horizontal and vertical extent and magnitude of soil contamination.

(1) Owners and operators shall conduct a soil boring survey by advancing a continuously cored soil boring at each area of release where soil contamination is most likely to be encountered unless otherwise directed by the department. The initial incident report and a soil vapor survey may be used in locating these areas. Owners and operators shall advance at least one of the borings into the groundwater saturated zone or, with approval from the department, to a depth ~~of 50 feet below the depth~~ at which measured levels of contaminants in soil are no longer detectable by laboratory analysis, and hydrocarbon vapor concentrations, as determined with a field instrument, are less than 100 whole instrument units.

(2) Owners and operators shall advance at least four additional soil borings to characterize the release within property boundaries. Borings shall be completed to the depth at which contaminants in soil are no longer detectable by laboratory analysis, and hydrocarbon vapor concentrations, as determined with a field instrument, are less than 100 whole instruments units. If the soil borings indicate that contaminated soil extends beyond the boundary of the property on which the storage tank system is located, owners and operators shall advance soil borings sufficient to characterize the extent and magnitude of contamination within site boundaries.

(3) Owners and operators shall assess at five-foot intervals, field estimates of concentrations of petroleum hydrocarbons in the soil borings and select and prepare samples for laboratory analysis.

(4) Owners and operators shall gather field data for soil classification, determining and recording color, grain size, texture, description of lithification, plasticity and clay content.

(5) The preliminary investigation shall include determinations of derived values for soil bulk density (g/cc), soil moisture content (percent by volume), and effective porosity, and fraction organic carbon content (percent by volume) using samples taken from an uncontaminated area of the vadose zone.

(6) Owners and operators shall delimit the horizontal and vertical extent of contaminant saturated soil as defined in 20.5.1.7 NMAC.

C. Owners and operators shall determine whether groundwater or surface water has been contaminated above applicable standards or whether a potential for groundwater or surface water contamination is present by performing the following:

(1) install at least three groundwater monitoring wells at locations where the results of the soil boring survey conducted pursuant to this section indicate that groundwater may be contaminated; owners and operators shall:

(a) locate monitoring wells so that groundwater gradient can be determined;

(b) install at least one monitoring well on site in the area of highest contamination as determined by the soil borings installed in ~~accordance~~ conformance with the initial incident report and other relevant information;

(c) install one of the monitoring wells in the estimated down-gradient direction from the area of highest contamination;

(d) construct wells in accordance with all applicable federal, state and local laws and regulations; and

(e) survey the wells using a New Mexico licensed professional surveyor, in decimal degrees of latitude and longitude in accordance with NAD 83;

(2) calculate the direction and gradient of groundwater flow;

(3) inspect all monitoring wells for the presence of NAPL using a method approved by the department; if NAPL is present in any well, measure the apparent thickness, delimit its horizontal extent, and initiate recovery procedures in accordance with 20.5.12.14 NMAC; and

(4) sample each monitoring well that does not contain NAPL and analyze the sample for contaminants of concern to determine whether:

(a) immediate mitigation procedures are warranted; and

(b) other hazardous conditions exist as a result of the release if not previously identified in accordance with 20.5.12.11 NMAC by:

(i) identifying the location and depth of underground utilities and other subsurface structures on or adjacent to the site not identified earlier in accordance with Subsection E of 20.5.12.11 NMAC;

(ii) checking for the presence of vapors in accordance with 20.5.12.11 and 20.5.12.16 NMAC; and

(iii) identifying all other hazards and potential threats to public health, safety and welfare and the environment which may exist as a result of the release.

[20.5.12.17 NMAC - Rp, 20.5.12.1209 NMAC, 6/15/2009]

20.5.12.18 MINIMUM SITE ASSESSMENT, PRELIMINARY INVESTIGATION REPORT:

A. Owners and operators shall submit a written report of the preliminary investigation and other requirements of the minimum site assessment as defined in 20.5.1.7 NMAC in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC. The report shall include the information gathered under 20.5.12.10, 20.5.12.11, 20.5.12.12 and 20.5.12.16 NMAC and shall conform to the requirements of this section and 20.5.12.17 NMAC.

B. Owners and operators shall attach a statement signed by an authorized representative of the qualified firm preparing the report for the owner or operator attesting to the veracity of the information submitted in the report and attached documents.

C. The department shall review the report and notify owners and operators of any inadequacies in the report as soon as feasible. Owners and operators shall, in accordance with a timeline ~~issued or~~ approved by the department, correct the report and resubmit it to the department for review and written approval. If the revised report does not conform to the minimum site assessment, preliminary investigation requirements in this section and 20.5.12.17 NMAC, the department shall reject the report and the owner and operator shall be determined not to have conducted a minimum site assessment for the purposes of section 74-6B-8B(1)(c) NMSA 1978. The department's failure to review or to comment on this report shall not relieve the owner and operator of their responsibilities under this part or the law.

D. Owners and operators shall comply with the requirements of any local government which has designated a wellhead/source water protection area that includes the area of the release.

E. Owners and operators shall provide notice that includes the contaminants identified, as well as the horizontal and vertical extent of those contaminants, to all owners of property located within the extent of contamination.

[20.5.12.18 NMAC - Rp, 20.5.12.1210 NMAC, 6/15/2009]

20.5.12.19 SECONDARY INVESTIGATION:

A. Owners and operators shall perform a secondary investigation in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC when the department makes at least one of the following determinations about the site:

(1) the extent and magnitude of contamination in all media has not been delimited by the preliminary investigation; or

(2) the release threatens public health, safety and welfare or the environment.

B. The secondary investigation shall determine the following:

(1) the horizontal and vertical extent and magnitude of soil contamination both on and off site;

(2) the horizontal extent and magnitude of dissolved phase groundwater contamination both on and off site;

(3) the vertical extent and magnitude of dissolved phase groundwater contamination, when site conditions warrant;

(4) characteristics, aerial extent, estimated volume and apparent thickness of NAPL in wells;

(5) the elevation of groundwater and surface water and the gradient, rate and direction of groundwater and surface water flow;

(6) the rate and direction of contaminant migration;

(7) the hydrologic properties of the contaminated portion of the aquifer including hydraulic conductivity, transmissivity and storativity; the department may require field verification of estimates made from literature;

(8) whether the aquifer is perched;

(9) whether the aquifer is confined or unconfined; and

(10) any other technical information requested by the department which is reasonably necessary to meet the requirements of this part.

[20.5.12.19 NMAC - Rp, 20.5.12.1211 NMAC, 6/15/2009]

20.5.12.20 SECONDARY INVESTIGATION REPORT:

A. Owners and operators shall submit a written report of the secondary investigation to the department in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC. The report shall include all information gathered under 20.5.12.19 NMAC and shall conform to the requirements of this part.

B. Owners and operators shall attach a statement signed by an authorized representative of the qualified firm preparing the report for the owner or operator attesting to the veracity of the information submitted in the report and attached documents.

C. The department shall review the report and notify owners and operators of any inadequacies in the report within 30 days of receipt. Owners and operators shall, in accordance with a timeline ~~issued or~~ approved by the department, correct the report and resubmit it to the department for review and written approval. If the revised report does not meet the requirements of 20.5.12.19 NMAC, the owner and operator will be in violation of this part until the inadequacies are corrected. The department's failure to review or to comment on the secondary investigation report shall not relieve the owner and operator of their responsibilities under this part or the law.

D. Owners and operators shall provide notice that includes the contaminants identified, as well as horizontal and vertical extent of those contaminants, to all owners of property located within the extent of contamination who were not previously notified in accordance with 20.5.12.18 NMAC.

[20.5.12.20 NMAC - Rp, 20.5.12.1212 NMAC, 6/15/2009]

20.5.12.21 TIER ONE EVALUATION:

A. The tier one evaluation is intended to determine whether soil contamination poses a threat to groundwater in the future. A tier one evaluation is required when owners and operators can demonstrate that ~~groundwater has not been contaminated~~ the contamination has not reached groundwater and if approved by the department.

B. After the horizontal and vertical extent and magnitude of the soil contamination from the release has been fully characterized, owners and operators shall perform a tier one evaluation as described below. The owners and operators shall:

(1) develop a site conceptual exposure scenario using data collected in accordance with 20.5.12.9, 20.5.12.12, 20.5.12.16 and 20.5.12.19 NMAC; and

(2) for each receptor and each complete pathway identified in the site conceptual exposure scenario determine representative concentrations of contaminants of concern in soil samples from the investigations, and compare these concentrations to risk-based screening levels (RBSLs).

C. When representative concentrations of any contaminant of concern equal or exceed any RBSL for any exposure pathway, owners and operators shall perform a tier two evaluation unless otherwise directed by the department.

[20.5.12.21 NMAC - Rp, 20.5.12.1213 NMAC, 6/15/2009]

20.5.12.22 TIER ONE EVALUATION REPORT:

A. Owners and operators shall submit a written report of the tier one evaluation in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

B. Owners and operators shall attach a statement signed by an authorized representative of the qualified firm preparing the report for the owner or operator attesting to the veracity of the information submitted in the report and attached documents.

C. The department shall review the report and notify owners and operators of any inadequacies in the report within 30 days of receipt. Owners and operators shall, within 14 days of such notice of inadequacy, correct the report and resubmit it to the department for review and written approval. The department's failure to review or to comment on this report shall not relieve the owner and operator of their responsibilities under this part or the law.

[20.5.12.22 NMAC - Rp, 20.5.12.1214 NMAC, 6/15/2009]

20.5.12.23 TIER TWO EVALUATION:

A. Owners and operators shall perform a tier two evaluation to determine site specific target levels (SSTLs) for soil for any complete exposure pathway where contaminants of concern exceed any RBSL, as described below. Owners and operators shall:

(1) modify the site conceptual exposure scenario as appropriate, using information obtained in the investigations; and

(2) compare representative concentration of contaminants of concern in soil samples from the investigations to SSTLs in soil for each receptor and complete pathway identified in the site conceptual exposure scenario.

B. When representative concentrations of contaminants of concern equal or exceed any SSTL in soil for any complete exposure pathway, owners and operators shall remediate soil to the SSTLs in accordance with 20.5.12.34 or 20.5.12.42 NMAC or, if directed by the department, perform a tier three evaluation.

[20.5.12.23 NMAC - Rp, 20.5.12.1215 NMAC, 6/15/2009]

20.5.12.24 TIER TWO EVALUATION REPORT:

A. Owners and operators shall submit a written report of the tier two evaluation to the department in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8. The report shall conform to the requirements of 20.5.12.9 and 20.5.12.23 NMAC.

B. Owners and operators shall attach a statement signed by an authorized representative of the qualified firm preparing the report for the owner or operator attesting to the veracity of the information submitted in the report and attached documents.

C. The department shall review the report and notify owners and operators in writing of any inadequacies in the report within 30 days of receipt. Owners and operators shall, in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC, address the inadequacies identified and resubmit the report to the department for review and written approval. The department's failure to review or to comment on this report shall not relieve the owner and operator of their responsibilities under this part or the law.

[20.5.12.24 NMAC - Rp, 20.5.12.1216 NMAC, 6/15/2009]

20.5.12.25 TIER THREE EVALUATION:

A. In certain cases, including but not limited to complex hydrogeology or sensitive ecological receptors, the department may require a tier three evaluation, in place of or in addition to a tier two evaluation. Owners and operators shall perform the tier three evaluation in accordance with 20.5.12.9 NMAC.

B. When representative concentrations exceed any SSTL determined in accordance with this section or exceed any WQCC or EIB standard for any contaminant of concern, owners and operators shall remediate the site to the SSTLs in soil and WQCC and EIB standards in groundwater and surface water.

[20.5.12.25 NMAC - Rp, 20.5.12.1217 NMAC, 6/15/2009]

20.5.12.26 TIER THREE EVALUATION REPORT:

A. Owners and operators shall submit a written report of the tier three evaluation to the department in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC. The report shall conform to the requirements of 20.5.12.9 and 20.5.12.25 NMAC.

B. Owners and operators shall attach a statement signed by an authorized representative of the qualified firm preparing the report for the owner or operator attesting to the veracity of the information submitted in the report and attached documents.

C. The department shall review the report and notify owners and operators of any inadequacies in the report within 30 days of receipt. Owners and operators shall, in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC, correct the report and resubmit it to the department for review and written approval. The department's failure to review or to comment on the report shall not relieve the owner and operator of their responsibilities under this part or the law.

[20.5.12.26 NMAC - Rp, 20.5.12.1218 NMAC, 6/15/2009]

20.5.12.27 CORRECTIVE ACTION REQUIREMENTS FOR TOTAL PETROLEUM HYDROCARBONS (TPH): In addition to comparing representative soil concentrations for all contaminants of concern to risk-based screening levels (RBSLs) and site-specific target levels (SSTLs) and concentrations in groundwater and surface water to applicable WQCC and EIB standards, in accordance with 20.5.12.9, 20.5.12.21, 20.5.12.23 and 20.5.12.25 NMAC, owners and operators shall mitigate, remediate, or remove TPH contamination in soil and groundwater, when directed by the department based upon a determination by the department that the TPH contamination adversely affects public health, safety and welfare or the environment.

[20.5.12.27 NMAC - Rp, 20.5.12.1219 NMAC, 6/15/2009]

20.5.12.28 MONITORED NATURAL ATTENUATION:

A. ~~When directed or~~ If approved by the department, owners and operators shall submit a plan for monitored natural attenuation to the department if any of the following conditions have been identified at the site:

(1) concentrations of contaminants of concern exceed site-specific target levels (SSTLs) in soil or WQCC or EIB standards in groundwater or surface water; or

(2) other conditions exist as a result of the release which threaten public health, safety and welfare or the environment, as determined by the department.

B. Owners and operators shall submit the monitored natural attenuation plan in accordance with this section and 20.5.12.29 NMAC and in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

C. The intent of the monitored natural attenuation plan is to provide a written description of the methodology proposed and demonstrate how the plan will achieve target concentrations in a manner that is practicable, cost effective, and protective of public health, safety and welfare and the environment. The content of the monitored natural attenuation plan, at a minimum and as appropriate, shall include:

(1) a site plan drawn to scale of no less than one inch equals 40 feet, showing all existing buildings, structures, paved areas, utilities, buried utility trenches, former and existing petroleum storage tanks and ancillary equipment, other sources of contamination, extent and magnitude of contamination, and existing and proposed monitoring wells;

(2) cross sections showing the source contaminant mass in relation to the groundwater contamination;

(3) a topographic map of appropriate scale showing the site in relation to existing and reasonably foreseeable future receptors;

(4) concentration contour maps depicting the extent and magnitude of the contaminants of concern and the designated monitoring wells in relation to the site;

(5) a schematic drawing depicting the construction details including lithology and screen intervals for the designated monitoring wells;

(6) the justification for selecting the designated monitoring wells;

(7) the recommended approach to monitoring including an implementation and monitoring schedule, the analytical methods, and the justification for the recommendation;

(8) an estimation of the time necessary for achieving target concentrations, and a demonstration through calculations or other appropriate means which supports this schedule;

(9) a contingency plan in case of a change in site conditions that threatens public health, safety and welfare or the environment;

(10) public notice in conformance with the following requirements:

(a) owners and operators shall publish a legal notice of the submission or planned submission of the monitored natural attenuation plan at least twice in a paper of general circulation in the county in which soil or water has been contaminated by the release; the first notice shall appear within one week of, but not later than, the day of submission of the monitored natural attenuation plan to the department; the second publication of this notice

shall occur no later than seven days after the date the monitored natural attenuation plan is submitted to the department, and owners and operators shall submit two certified affidavits of publication from the newspaper to the department within 21 days after the date the monitored natural attenuation plan is submitted;

(b) the notice shall contain the information specified in this section including the following:

(i) a statement that a monitored natural attenuation plan has been submitted to the department proposing actions to monitor natural attenuation of a release of petroleum products;

(ii) the name and physical address of the site at which the release occurred and the names and physical addresses of properties where any part of contaminant plume is located, using adequate identification of the properties, including street addresses if applicable;

(iii) a statement that a copy of the monitored natural attenuation plan and all data and modeling related to the monitored natural attenuation plan, if applicable, can be viewed at the department's main office and at the department's field office for the area in which the release occurred; and

(iv) a statement that public comments on the plan must be delivered within 21 days of the publication of the second notice, to the owner or operator’s assigned project manager at the petroleum storage tank bureau, New Mexico environment department, or a district office if approved by the department, and to the secretary of the environment department;

(c) within seven days of the date a monitored natural attenuation plan is submitted to the department, owners and operators shall also mail by certified mail a copy of the legal notice to adjacent property owners; and

(d) owners and operators shall post a notice of the submission of the monitored natural attenuation plan at the release site within seven days of the submission of the monitored natural attenuation plan; the notice shall contain the information specified in this subsection and shall be at least 8.5 inches by 11 inches in size and prominently displayed in a location where it is likely to be seen by members of the public for a continuous period until the monitored natural attenuation plan is approved and implemented; public comments must be received by the department within 21 days of the date of the second publication of the public notice; and

(11) other requirements as directed by the department.

[20.5.12.28 NMAC - Rp, 20.5.12.1220 NMAC, 6/15/2009]

[The address of the department’s petroleum storage tank bureau, remediation section is: 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.]

20.5.12.29 REVIEW AND APPROVAL OF MONITORED NATURAL ATTENUATION PLAN:

A. After the public comment period has ended, the department shall review the plan and shall either approve the plan or notify the owner and operator in writing of the deficiencies of the plan. If the secretary determines that a decision on the monitored natural attenuation plan must be postponed due to significant comments from the public, the department shall notify the owner and operator within 30 days of such a postponement, and may extend its review period for a period not to exceed 60 days unless otherwise provided in Subsection D of this section. All deadlines calculated from the end of the review period will be adjusted to reflect any extension.

B. The department may approve a monitored natural attenuation plan and impose reasonable conditions.

C. If the department determines that the monitored natural attenuation plan is inadequate, owners and operators shall modify the plan to correct the deficiencies specified by the department and re-submit it within the time period specified by the department.

D. The department may provide notice of the submission of the monitored natural attenuation plan to persons other than the owner and operator and provide for public participation in the review process as the department deems appropriate or when there is significant public interest. In the event that an informal public meeting, public hearing or other form of public participation is conducted, the department may postpone its decision on the monitored natural attenuation plan until after a public hearing or meeting is held and a determination is made. Any public hearing or meeting that is held due to significant public interest shall be held within 60 days of determining that there is significant public interest.

[20.5.12.29 NMAC - Rp, 20.5.12.1221 NMAC, 6/15/2009]

20.5.12.30 MONITORED NATURAL ATTENUATION PLAN IMPLEMENTATION:

A. Owners and operators shall implement the ~~approved~~ monitored natural attenuation plan after department approval in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

B. Owners and operators shall monitor the contamination until the department determines that the natural attenuation is complete pursuant to this part, or unless otherwise approved by the department.
[20.5.12.30 NMAC - Rp, 20.5.12.1222 NMAC, 6/15/2009]

20.5.12.31 REPORTS ON THE MONITORED NATURAL ATTENUATION:

A. Owners and operators shall submit written reports to the department on the progress of the monitored natural attenuation. Owners and operators shall submit the reports annually unless a different reporting period is ~~directed or~~ approved by the department and shall document all work performed during the preceding interval and shall include at a minimum the following information, as appropriate:

(1) a site plan drawn to scale of no less than one inch equals 40 feet, showing all existing buildings, structures, paved areas, utilities, buried utility trenches, former and existing petroleum storage tanks and ancillary equipment, other sources of contamination, extent and magnitude of contamination, and existing and proposed monitoring wells;

(2) a topographic map of appropriate scale showing the site in relation to existing and reasonably foreseeable future receptors;

(3) concentration contour maps depicting the extent and magnitude of the contaminants of concern and the designated monitoring wells in relation to the site;

(4) tabulation of the current and historical results of all water quality analyses and water elevation data;

(5) graphs of appropriate scale of the current and historical water quality analyses and water elevation data versus time;

(6) data evaluation and interpretation, and recommendations; and

(7) other information required by the department.

B. Owners and operators shall submit the report within 30 days of the end of the reporting period or as otherwise approved by the department.
[20.5.12.31 NMAC - Rp, 20.5.12.1223 NMAC, 6/15/2009]

20.5.12.32 EVALUATION OF MONITORED NATURAL ATTENUATION PLAN:

A. Owners and operators shall evaluate the effectiveness of the monitored natural attenuation plan at the end of each year of monitoring and submit the evaluation to the department for review unless otherwise approved ~~or directed~~ by the department.

B. When the department determines that the plan is not effectively mitigating contamination according to the identified risks to public health, safety and welfare or the environment, owners and operators shall propose an alternative approach or change in the existing monitored natural attenuation plan within 30 days of the department's determination of ineffectiveness. Within 30 days of the department's approval, owners and operators shall implement the approved changes.

C. After implementation of any modification, owners and operators shall repeat annually the evaluation process described in this section.
[20.5.12.32 NMAC - Rp, 20.5.12.1224 NMAC, 6/15/2009]

20.5.12.33 MODIFICATION OF MONITORED NATURAL ATTENUATION PLAN:

A. Owners and operators may petition the department to approve a modification of the monitored natural attenuation plan for good cause.

B. The department may approve a modification of the monitored natural attenuation plan only if such modification provides adequate protection of public health, safety and welfare and the environment and the owner or operator complies with the public notice requirements of 20.5.12.28 NMAC.
[20.5.12.33 NMAC - Rp, 20.5.12.1225 NMAC, 6/15/2009]

20.5.12.34 COMPLETION OF MONITORED NATURAL ATTENUATION:

A. Natural attenuation shall be considered complete when all of the following criteria are met:

(1) no layer of NAPL greater than one-eighth inch in thickness is present on the water table or in any of the wells;

(2) the EIB standard of 0.1 mg/L for methyl tertiary butyl ether (MTBE) has been met in groundwater and surface water;

(3) all applicable site-specific target levels or risk-based screening levels in soil and WQCC and EIB standards in groundwater have been achieved:

(a) the applicable standards shall be achieved concurrently at all compliance wells as approved by the department;

(b) for verification that soil has reached target concentrations, owners and operators shall install at least four soil borings, at least three of which are distributed throughout the previously most contaminated portion of the vadose zone, unless otherwise approved by the department;

(4) corrective action requirements for total petroleum hydrocarbons determined in accordance with 20.5.12.27 NMAC have been met; and

(5) any other conditions which threatened public health, safety and welfare or the environment have been abated.

B. If any of the conditions of Paragraphs (1) through (5) of Subsection A of this section are not met, the department may require owners and operators to perform additional remediation.

C. Termination of monitored natural attenuation in accordance with this section does not relieve the owner and operator of any other liability or responsibility they may have under this part or any other federal, state or local law or regulation.

D. Following department approval, and with 30 days notice unless otherwise approved by the department, owners and operators shall properly abandon wells that are no longer needed for monitoring, in accordance with federal, state and local laws and regulations.

[20.5.12.34 NMAC - Rp, 20.5.12.1226 NMAC, 6/15/2009]

20.5.12.35 CONCEPTUAL REMEDIATION PLAN:

A. ~~When directed or~~ If approved by the department, owners and operators shall submit a conceptual remediation plan to the department if any of the following conditions have been identified at the site:

(1) a thickness of greater than one-eighth inch of NAPL is present on the surface of the water, including in any excavation pit, or in any well;

(2) contaminant saturated soil is present;

(3) concentrations of contaminants of concern exceed site-specific target levels (SSTLs) in soil or WQCC or EIB standards in groundwater or surface water;

(4) total petroleum hydrocarbons in soil meet the criteria outlined 20.5.12.27 NMAC; or

(5) other conditions exist as a result of the release which threaten public health, safety and welfare or the environment, as determined by the department.

B. All remediation plans shall include but are not limited to methods to mitigate, remove or otherwise remediate the contaminant source areas.

C. Owners and operators shall submit the conceptual remediation plan in accordance with this section and a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

(1) The conceptual remediation plan shall provide a written description of all of the methodologies proposed and discuss how the plan will achieve target concentrations and other goals of remedial action in a manner that is practicable, cost effective, and protective of public health, safety and welfare and the environment. Owners and operators shall obtain department approval for the conceptual remediation plan before developing the final remediation plan.

(2) The conceptual remediation plan, at a minimum and as appropriate, shall include:

(a) a concise description of site conditions, including hydrogeology, contaminant characteristics and plume dynamics;

(b) the recommended approach to remediation and justification for the recommendation;

(c) a clear description of the goals of remediation and the target concentrations to be met in each medium;

(d) a narrative description of the proposed methodologies including a preliminary cost comparison and time lines for achieving goals of remediation;

(e) a cost estimate of implementation including installation, operation and maintenance, and monitoring;

(f) a schematic diagram of the proposed remediation system or treatment area and a narrative description of its operation;

(g) a plan view, to scale, of the site showing locations of the proposed equipment or excavation boundaries in relation to the site's physical features and contaminant plumes;

(h) a description of how the approach will achieve target concentrations and other goals of remediation; and

(i) a description of additional data required to support the conceptual remediation plan and design of the final plan and how it will be collected.

[20.5.12.35 NMAC - Rp, 20.5.12.1227 NMAC, 6/15/2009]

20.5.12.36 FINAL REMEDIATION PLAN:

A. Following department approval of the conceptual remediation plan, owners and operators shall develop a final remediation plan in accordance with this section and shall submit three copies of the final remediation plan to the department in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC.

B. The design and engineering of any final remediation plan that includes mechanical or electrical equipment, engineered fill, pinning, shoring or slope stability analysis shall be the responsibility of a professional engineer as defined in 20.5.1.7 NMAC. A professional engineer shall sign and seal all plans and drawings required pursuant to this section, unless otherwise approved by the department.

C. In order to eliminate the potential to emit regulated substances to the environment, all engineered remediation systems shall be designed, constructed and operated such that malfunction or failure of any integral component results in automatic shut down of the entire system. Integral components include but are not limited to pumps, blowers, oil-water separators, oxidizer systems, air strippers, filtration systems and computers.

D. All final remediation plans shall, at a minimum, include all of the following:

(1) goals of remediation and target concentrations to be achieved in each medium;

(2) a site plan drawn to scale of no less than one inch equals 40 feet, showing all existing buildings, structures, paved areas, utilities, buried utility trenches, former and existing storage tanks, other sources of contamination, extent and magnitude of contamination, and existing and proposed monitoring wells;

(3) a hydrogeologic cross section showing contaminant mass in relation to the remediation system and a topographic map of appropriate scale showing the site in relation to existing and reasonably foreseeable future receptors;

(4) an implementation schedule;

(5) engineered plans and specifications in accordance with Subsection E of this section;

(6) a schedule for remediation of the source areas, for protection of receptors identified in Paragraph (1) of this subsection, and for achieving target concentrations, and a demonstration through calculations or other appropriate means which supports this schedule;

(7) a design and schedule for a system optimization that meets the requirements of 20.5.12.40 NMAC;

(8) a contingency plan in case of a change in site conditions that threatens public health, safety and welfare or the environment;

(9) copies of all permits, permit applications, and property access agreements required to initiate remediation, including, if necessary, permits required by the state engineer, permits for discharge to groundwater or a waste water treatment plant, permits for air emissions or a surface water national pollution discharge elimination system (NPDES) permit;

(10) public notice in conformance with the following requirements:

(a) owners and operators shall publish a legal notice of the submission or planned submission of the final remediation plan at least twice in a paper of general circulation in the county in which soil or water has been contaminated by the release; the first notice shall appear within one week of, but not later than, the day of submission of the final remediation plan to the department; the second publication of this notice shall occur no later than seven days after the date the remediation plan is submitted to the department, and owners and operators shall submit two certified affidavits of publication from the newspaper to the department within 21 days after the date the final remediation plan is submitted;

(b) the notice shall contain the information specified in this section including the following:

(i) a statement that a remediation plan has been submitted to the department proposing actions to remediate a release of petroleum products;

(ii) the name and physical address of the site at which the release occurred and the names and physical addresses of properties where any part of the remediation system will be located, using adequate identification of the properties, including street addresses if applicable;

(iii) a statement that a copy of the remediation plan and all data and modeling related to the remediation plan, if applicable, can be viewed at the department's main office and at the department's field office for the area in which the release occurred; and

(iv) a statement that public comments on the plan must be delivered, within 21 days of the publication of the second notice, to the owner or operator's assigned project manager at the petroleum storage tank bureau, New Mexico environment department, or a district office if approved by the department, and to the secretary of the environment department;

(c) within seven days of the date a remediation plan is submitted to the department, owners and operators shall also mail by certified mail a copy of the legal notice to adjacent property owners; and

(d) owners and operators shall post a notice of the submission of the remediation plan at the release site within seven days of the submission of the remediation plan; the notice shall contain the information specified in this subsection and shall be at least 8.5 inches by 11 inches in size and prominently displayed in a location where it is likely to be seen by members of the public for a continuous period until the remediation plan is approved and implemented; public comments must be received by the department within 21 days of the date of the second publication of the public notice;

(11) for sites where contaminated media are being removed, a description of the ultimate disposal site of contaminated media, location of excavation and trenching, and method of limiting access by pedestrian and vehicular traffic; and

(12) other requirements as directed by the department.

E. In addition to the requirements of Subsection D of this section, all final remediation plans shall include:

(1) for engineered systems:

(a) unless otherwise approved by the department, a complete and definitive engineering design for a mechanical, electrical, or constructed system, including drawings, plans, diagrams and specifications which are signed and sealed by a professional engineer;

(b) process and instrumentation diagrams;

(c) mechanical arrangement plans and elevations, drawn to scale, showing proposed wells, manifolds, piping details, instrumentation and sampling ports;

(d) details of vapor or fluid extraction or injection wells, as appropriate, including screen length and placement in relation to ground surface, normal and low water table elevations and geologic strata, screen slot size, depths and specifications of the filter pack and seal, and drilling method;

(e) equipment and parts list and specifications including a spare parts list, performance requirements, maintenance requirements and schedule;

(f) electric power requirements including a one-line diagram and schematics;

(g) operation and maintenance commitments and schedules for all facets of the remediation system; and

(h) all other plans, diagrams and specifications that are necessary to properly construct and operate the remediation system in accordance with the remediation plan including but not limited to requirements for:

(i) trenching and protection from traffic;

(ii) concrete repair and replacement;

(iii) restoration of property; and

(iv) location and protection of underground utilities;

(2) for excavation and disposal plans:

(a) plan view of proposed excavation relative to contaminant plume;

(b) cross-sections of proposed excavation depicting overburden, contaminated material to be removed and backfill;

(c) volume calculations and slope stability analysis;

(d) description of excavation and backfill procedure to be performed in conformance with OSHA and ASTM standards and regulations;

(e) traffic control plan;

(f) description of post-excavation of confirmation sampling;

(g) proposed final grade plan;

(h) post-excavation grade survey; and

(i) all other plans, diagrams and specifications that are necessary including but not limited to requirements for:

(i) trenching and protection from traffic;

(ii) concrete repair and replacement;

(iii) restoration of property; and

(iv) location and protection of underground utilities.

[20.5.12.36 NMAC - Rp, 20.5.12.1227 NMAC, 6/15/2009]

[The address of the petroleum storage tank bureau, remediation section is: 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.]

20.5.12.37 REVIEW AND APPROVAL OF FINAL REMEDIATION PLAN:

A. Within 30 days of receipt of the final remediation plan and after the public comment period has ended, the department shall review the plan and shall either approve the plan or notify the owner and operator in writing of the deficiencies of the plan. If the secretary determines that a decision on the remediation plan must be postponed due to significant comments from the public, the department must notify the owner and operator within 30 days of such a postponement, and may extend its review period for a period not to exceed 60 days unless otherwise provided in Subsection D of this section. All deadlines calculated from the end of the review period will be adjusted to reflect any extension.

B. The department may approve a final remediation plan and impose reasonable conditions.

C. If the department determines that the final remediation plan is inadequate, owners and operators shall modify the plan to correct the deficiencies specified by the department and re-submit it within the time period specified by the department.

D. The department may provide notice of the submission of the remediation plan to persons other than the owner and operator and provide for public participation in the review process as the department deems appropriate or when there is significant public interest. In the event that an informal public meeting, public hearing or other form of public participation is conducted, the department may postpone its decision on the final remediation plan until after a public hearing or meeting is held and a determination is made. Any public hearing or meeting that is held due to significant public interest shall be held within 60 days of determining that there is significant public interest.

[20.5.12.37 NMAC - Rp, 20.5.12.1228 NMAC, 6/15/2009]

20.5.12.38 IMPLEMENTATION OF FINAL REMEDIATION PLAN:

A. Owners and operators shall implement the ~~approved,~~ final remediation plan after department approval in accordance with a timeline ~~issued or~~ approved by the department or the timeline set forth in Subsection D of 20.5.12.8 NMAC. Owners and operators shall employ a professional engineer to ensure conformance with the final remediation plan including excavation and installation, commissioning and operation of the system.

B. When the remediation plan includes mechanical or electrical equipment, engineered fill, pinning, shoring or slope stability analysis:

(1) a professional engineer shall supervise conformance with the final remediation plan including installation, commissioning and operation of the system;

(2) owners and operators shall operate the remediation system continuously until the remediation is terminated pursuant to this part unless otherwise approved by the department; and

(3) owners and operators shall report to the department all interruptions of the operation of the remediation system greater than 72 hours.

C. Owners and operators shall obtain written approval from the department prior to implementing any change to the department-approved engineering design.

D. Following implementation of the final remediation plan, owners and operators shall submit an "as-built" report signed and sealed by the project professional engineer including:

(1) any deviations from the drawings and specifications included in the final remediation plan;

(2) a tabulation of pertinent data including but not limited to flow rates, pressures, temperatures, and contaminant concentrations and groundwater elevations at start-up, and boring logs and well completion diagrams; and

(3) information and documentation of purchased major remediation equipment including, but not limited to serial number, model and manufacturer, description, warranty information, operating manuals, maintenance requirements and purchase price.

[20.5.12.38 NMAC - Rp, 20.5.12.1229 NMAC, 6/15/2009]

20.5.12.39 QUARTERLY REPORTS ON THE REMEDIATION:

A. Owners and operators shall submit written reports to the department on the operation of the remediation system. Owners and operators shall submit the reports quarterly unless a different reporting period is

approved by the department, shall document all work performed during the preceding interval, and shall include the following information, as appropriate:

(1) tabulation of the current and historical results of all water quality analyses and water elevation data;

(2) evaluation of the performance and efficiency of each aspect of the remediation:

(a) the evaluation and all adjustments to system operation shall be performed, as appropriate, under the direct, responsible, supervisory control of an authorized representative of the qualified firm and a professional engineer; and

(b) owners and operators shall submit evidence that the performance of the remediation system meets the operating standards outlined in the final remediation plan;

(3) verification based on calculations that the schedule is being met for source removal, protection of actual and potential receptors, achievement of target concentrations, quarterly and cumulative contaminant mass reduction totals to date in pounds and gallons of contaminants;

(4) records of system operation, including but not limited to, periods of shut-down and equipment malfunctions; the maintenance procedures performed on the remediation system during the preceding quarter, including the names of the individuals performing the maintenance; and an operation and maintenance schedule for the next quarter;

(5) NAPL recovery, both cumulative and quarterly, and details of its disposal;

(6) effluent vapor concentrations over time;

(7) evaluation and recommendations for improving the performance of the system to achieve the goals of remediation; and

(8) other information required by the department.

B. Owners and operators shall submit the report within 30 days of the end of the reporting period or as otherwise approved by the department.

[20.5.12.39 NMAC - Rp, 20.5.12.1230 NMAC, 6/15/2009]

20.5.12.40 ANNUAL EVALUATION OF REMEDIATION:

A. Owners and operators shall evaluate the effectiveness of the approach to remediation at the end of each year of operation and submit the evaluation to the department for review.

B. When the department determines that the approach to remediation is not effectively remediating contamination according to the identified risks to public health, safety and welfare and the environment, owners and operators shall propose an alternative approach or change in the existing remediation plan within 30 days of the department's determination of ineffectiveness. Within 30 days of the department's approval, owners and operators shall implement the approved changes.

C. After implementation of any modification, owners and operators shall repeat annually the evaluation process described in this section until monitoring to verify completion of remediation in accordance with 20.5.12.42 NMAC commences.

[20.5.12.40 NMAC - Rp, 20.5.12.1231 NMAC, 6/15/2009]

20.5.12.41 MODIFICATION OF FINAL REMEDIATION PLAN:

A. Owners and operators may petition the department to approve a modification of the final remediation plan for good cause.

B. The department may modify a final remediation plan only if it complies with applicable regulations, provides adequate protection of public health, safety and welfare and the environment, and the owner and operator comply with the public notice requirements of 20.5.12.34 NMAC.

[20.5.12.41 NMAC - Rp, 20.5.12.1232 NMAC, 6/15/2009]

20.5.12.42 COMPLETION OF REMEDIATION:

A. The department shall consider remediation complete when all of the following criteria are met:

(1) no layer of NAPL greater than one-eighth inch in thickness is present on the water table or in any of the wells;

(2) the EIB standard of 0.1 mg/L for methyl tertiary butyl ether (MTBE) has been met in groundwater and surface water;

(3) all applicable site-specific target levels or risk-based screening levels in soil and WQCC and EIB standards in groundwater have been achieved;

(a) all electrical and mechanical components of the remediation system shall remain shut down during the monitoring period described in this subsection;

(b) the department shall approve the designation of certain monitoring wells as compliance wells; the applicable standards shall be achieved concurrently at all compliance wells for at least eight consecutive quarters unless otherwise as approved by the department; and

(c) for verification of remediation of soil to target concentrations, owners and operators shall install at least four soil borings, at least three of which are distributed throughout the previously most contaminated portion of the vadose zone, as approved by the department;

(4) corrective action requirements for total petroleum hydrocarbons determined in accordance with 20.5.12.27 NMAC have been met; and

(5) any other conditions which threatened public health, safety and welfare or the environment have been abated or remediated.

B. If any of the conditions of Paragraphs (1) through (5) of Subsection A of this section are not met, the department may require owners and operators to perform additional remediation.

C. Notwithstanding the conditions in Subsection A of this section, owners and operators may continue to operate the mechanical and electrical components of the remediation system when it is effectively reducing contaminant concentrations, as determined and approved by the department.

D. Termination of remediation in accordance with this section does not relieve the owner and operator of any other liability or responsibility they may have under this part or any other federal, state or local law or regulation.

E. Following department approval, owners and operators shall decommission the electrical and mechanical components of the remediation system and properly abandon wells that are no longer needed for remediation or monitoring, in accordance with federal, state and local laws and regulations.

[20.5.12.42 NMAC - Rp, 20.5.12.1233 NMAC, 6/15/2009]

20.5.12.43 PROPERTY REUSE DETERMINATION:

A. A property reuse determination is a technical determination issued by the department for sites contaminated by releases from petroleum storage tank systems to promote their redevelopment and productive use. The property reuse determination shall only apply to sites that have iron and manganese in groundwater above WQCC standards. A property reuse determination is not a clean-closure certification or grounds for a no further action determination, nor does it provide indemnification of an owner or operator from current or future environmental liabilities or obligations. Further action at a property reuse site may be required under the Water Quality Act and WQCC rules.

B. Any owner or operator may request that the department evaluate a site, multiple sites, or a portion of a site for a property reuse determination by submitting a written request to the department. The request shall include the following:

(1) description of the current and proposed future land use(s) of the site;

(2) description of the site including a historical overview and generalized description of businesses, structures, vegetation, other prominent features, and location of the site;

(3) surveyed plat of the site, site map with legal description, or both;

(4) completed current environmental conditions table listing all areas of environmental concern on the site subject to remediation; the table shall include the following information about each area of environmental concern:

(a) remedial action taken, date, regulatory agency;

(b) residual concentrations of contaminants of concern, including WQCC standards that have not been achieved; and

(c) clean-up standards for contaminants of concern;

(5) chronology of events for each area investigated or remediated;

(6) monitoring plan to ensure that the current and proposed future use(s) upon which the determination is dependent are maintained, if appropriate;

(7) affirmation from the property owner, if different from the requestor, that current or proposed future land uses will be maintained; and

(8) other relevant documents, as requested by the department.

C. Owners and operators shall receive approval of a request for a property reuse determination for the release when the owner or operator has completed remediation pursuant to 20.5.12.42 NMAC, with the exception of iron and manganese in excess of WQCC groundwater standards. A property reuse determination letter shall include

a statement that the department shall have the right to conduct audits to ensure that the current and proposed future use(s) upon which the determination is dependent are maintained.

D. A property reuse determination shall not have any effect on any permit, compliance plan, order, or other formal or informal enforcement mechanism applicable to the site, and shall not relieve an owner or operator from the obligations to comply with other applicable federal, state and local laws.

E. Upon completion of an assessment by the department that a site, multiple sites or portion of a site qualifies for a property reuse determination, the department shall issue the following deliverables:

(1) property reuse determination letter; and

(2) property reuse certificate.

F. The department shall have the right to conduct audits to ensure that the risk to human health, safety and welfare and the environment has not significantly changed and that current and proposed future use(s) upon which the determination is dependent are maintained.

G. If new information becomes available or circumstances arise indicating that the environmental or land use conditions upon which the determination were based have changed, the department may reverse the property reuse determination.

[20.5.12.43 NMAC - N, 6/15/2009]

20.5.12.44 NO FURTHER ACTION DETERMINATION:

A. A no further action determination is a technical determination issued by the department that documents that the owner or operator of a site has met all applicable WQCC and EIB remediation standards and that no contaminant will present a significant risk of harm to public health, safety and welfare and the environment.

B. Any owner or operator may request that the department evaluate a site for a no further action determination by submitting a written request to the department. The request shall include the following, if requested by the department:

(1) description of the site including a historical overview and generalized description of businesses, structures, vegetation, other prominent features, and location of the site;

(2) surveyed plat of the site, site map with legal description, or both;

(3) completed current environmental conditions table listing all areas of environmental concern on the site subject to remediation; the table shall include the following information about each area of environmental concern:

(a) remedial action taken, date, regulatory agency;

(b) residual contaminants of concern;

(c) clean-up status; and

(d) clean-up standards for contaminants of concern;

(4) chronology of events for each area investigated or remediated; and

(5) other relevant documents, as requested by the department.

C. Owners and operators shall receive approval of a request for a no further action determination for the release when all of the following conditions are met:

(1) groundwater and surface water contamination related to the release is less than or equal to WQCC and EIB standards, and where there had been groundwater contamination related to the release, the applicable standards have been achieved concurrently at all compliance wells for at least eight consecutive quarters unless otherwise approved by the department;

(2) soil contamination is less than or equal to applicable RBSLs or SSTLs, unless otherwise approved by the department under Subparagraph (c) of Paragraph (3) of Subsection A of 20.5.12.41 NMAC; and

(3) any other conditions which did threaten public health, safety and welfare or the environment have been adequately mitigated.

D. Owners and operators shall receive approval of a request for no further action determination for the release when subsurface water does not meet the definition of “subsurface water” in 20.6.2.7 NMAC or is unprotected pursuant to Subsection A of 20.6.2.3101 NMAC, if NAPL and contaminant saturated soil have been adequately remediated in accordance with this part and any other conditions which threatened public health, safety and welfare or the environment have been adequately mitigated.

E. Upon completion of an assessment by the department that a site qualifies for a no further action determination, the department shall issue a no further action determination letter.

F. Any of the following may result in a reversal of a no further action determination:

(1) new information becomes available or circumstances arise indicating that an unacceptable risk to public health, safety and welfare or the environment exists; or

(2) a change in use or reasonable foreseeable future use of land or resources, including a change from less sensitive land use to more sensitive land use, such as from commercial or industrial to residential, and including the drilling of water supply wells in the vicinity of remaining contamination.
[20.5.12.44 NMAC - Rp, 20.5.12.1234 NMAC, 6/15/2009]

20.5.12.45 REQUEST FOR EXTENSION OF TIME:

A. For good cause shown, the department may extend the time for complying with any deadline set forth in this part. The request shall specify the reason for the request, all actions taken to comply with the deadline and the period of time for which the extension is requested.

B. The department shall not grant an extension for more than 30 days at a time unless the department determines additional time is warranted. The department may place conditions on the extension.

C. Lack of diligence or failure of owners and operators to comply with these regulations shall be grounds for denying a request for an extension of time.
[20.5.12.45 NMAC - Rp, 20.5.12.1236 NMAC, 6/15/2009]

HISTORY OF 20.5.12 NMAC:

Pre-NMAC History:

The material in this part was derived from that previously filed with the commission of public records - state records center and archives.
EIB/USTR 12, Underground Storage Tank Regulations - Part XII - Corrective Action for Petroleum UST Systems, filed 6/13/90.

History of Repealed Materials:

20 NMAC 5.12, Environmental Protection, Underground Storage Tanks, Corrective Action for UST Systems Containing Petroleum Products (filed 10/6/95), repealed 2/2/00.
20 NMAC 5.12, Corrective Action for UST Systems Containing Petroleum Products (filed 12/30/99), repealed 8/15/03.
20.5.12 NMAC, Corrective Action for Storage Tank Systems Containing Petroleum Products (filed 7/16/03), repealed 6/15/09.

Other History:

EIB/USTR 12, Underground Storage Tank Regulations - Part XII - Corrective Action for Petroleum UST Systems, (filed 6/13/90) was renumbered, reformatted and replaced by 20 NMAC 5.12, Underground Storage Tanks, Corrective Action for UST Systems Containing Petroleum, effective 11/05/95.
20 NMAC 5.12, Underground Storage Tanks, Corrective Action for UST Systems Containing Petroleum, (filed 10/06/95) was replaced by 20 NMAC 5.12, Corrective Action for UST Systems Containing Petroleum Products, effective 2/2/00.
20 NMAC 5.12, Corrective Action for UST Systems Containing Petroleum Products, (filed 12/30/99) was renumbered, reformatted and replaced by 20.5.12 NMAC, Corrective Action for Storage Tank Systems Containing Petroleum Products, effective 8/15/03.
20.5.12 NMAC, Corrective Action for Storage Tank Systems Containing Petroleum Products (filed 7/16/03) was replaced by 20.5.12 NMAC, Corrective Action for Storage Tank Systems Containing Petroleum Products, effective 6/15/09.