

**TITLE 20 ENVIRONMENTAL PROTECTION**  
**CHAPTER 9 SOLID WASTE**  
**PART 9 SOLID WASTE FACILITY GROUND WATER MONITORING SYSTEM PLAN AND**  
**GROUND WATER MONITORING PLAN; CORRECTIVE ACTION**

**20.9.9.1 ISSUING AGENCY.** New Mexico Environmental Improvement Board.  
[20.9.9.1 NMAC - Rp, 20 NMAC 9.1.I.001, 8/2/2007]

**20.9.9.2 SCOPE.** This part applies to all solid waste facilities.  
[20.9.9.2 NMAC - Rp, 20 NMAC 9.1.I.002, 8/2/2007]

**20.9.9.3 STATUTORY AUTHORITY.** NMSA 1978, Sections 74-1-1 to 74-1-15, NMSA 1978, Sections 74-9-1 to 74-9-43, and NMSA 1978 Sections 74-13-1 to 74-13-20.  
[20.9.9.3 NMAC - Rp, 20 NMAC 9.1.I.003, 8/2/2007]

**20.9.9.4 DURATION.** Permanent.  
[20.9.9.4 NMAC - Rp, 20 NMAC 9.1.I.004, 8/2/2007]

**20.9.9.5 EFFECTIVE DATE.** August 2, 2007, unless a later date is cited at the end of a section.  
[20.9.9.5 NMAC - Rp, 20 NMAC 9.1.I.005, 8/2/2007]

**20.9.9.6 OBJECTIVE.** The objective of Part 9 of Chapter 9 is to establish a rule governing solid waste facility ground water monitoring and corrective action requirements.  
[20.9.9.6 NMAC - Rp, 20 NMAC 9.1.I.006, 8/2/2007]

**20.9.9.7 DEFINITIONS.** [RESERVED]  
[See 20.9.1 NMAC for Definitions.]

**20.9.9.8 GROUND WATER MONITORING APPLICABILITY.**

A. The owner or operator of a municipal or special waste landfill, unless it is a category 1 landfill, is waived under 20.9.2.14 NMAC, or is suspended under Subsection C of this section, shall submit, obtain approval of, and implement a ground water monitoring system plan and a ground water monitoring plan in accordance with the following:

(1) owners or operators of category 4 landfills and landfills seeking approval of lateral expansions shall obtain approval of a ground water monitoring system plan and ground water monitoring plan in compliance with 20.9.9 NMAC prior to placement of waste in the landfill or lateral expansion, as part of their permit or permit modification; owners or operators of category 4 landfills and landfills making lateral expansions shall implement and comply with their ground water monitoring system plan and ground water monitoring plan as approved;

(2) owners or operators of category 3 landfills or landfills that closed on or after October 9, 1993 shall submit and obtain approval of a ground water monitoring system plan and ground water monitoring plan in compliance with 20.9.9 NMAC as part of their permit or closure or post closure care plan, and shall implement and comply with the approved ground water monitoring system plan and ground water monitoring plan; and

(3) owners or operators of category 2 landfills shall comply with 20.9.9 NMAC, with the exception that the ground water sampling parameters may be limited to those approved in the closure and post-closure care plan;

(4) the secretary may require monitoring for additional parameters as necessary to protect the public health, welfare and the environment.

B. Construction and demolition landfills, scrap tire monofills, and asbestos monofills are not required to comply with the ground water monitoring requirements of 20.9.9 NMAC unless required in the permit, or if the secretary orders groundwater monitoring, based on a finding that there is a potential for constituents to migrate from the facility to the uppermost aquifer. If contamination is detected at a construction and demolition landfill, scrap tire monofill or asbestos monofill, the requirements of 20.9.9 NMAC shall thereafter apply.

C. The secretary may suspend part or all of the ground water monitoring requirements of 20.9.9.9 - 20.9.9.13 NMAC if the owner or operator demonstrates that there is no potential for migration of constituents referenced in 20.9.9.20 NMAC from the landfill to the uppermost aquifer during the active life or post-closure care period of the landfill. This demonstration shall be certified by a qualified ground water scientist and presented in the

permit application or a permit modification or petition (from non-permitted landfills) for approval by the secretary. For category 2 landfills that closed prior to receiving a solid waste facility permit, the demonstration shall be presented in an application for a closure and post closure care plan or an application to modify the approved closure and post closure care plan. The demonstration shall include:

(1) site-specific field measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport;

(2) contaminant fate and transport predictions that maximize contaminant migration and consider impacts on public health, welfare and environment; and

(3) a plan for periodic leak detection or vadose zone monitoring or ground water monitoring in compliance with Subsection N of 20.9.9.9 NMAC may be implemented as a secondary monitoring approach to support approval of a monitoring suspension.

D. If a suspension is granted, the secretary may require the owner or operator to conduct periodic ground water or vadose zone monitoring and leak detection at any landfill during the active life or post-closure care period as necessary to protect the public health, welfare or environment.

E. If ground water contamination is detected after a suspension has been granted pursuant to Subsection C of this section, the suspension is revoked and the requirements of 20.9.9 NMAC shall apply, unless the owner or operator can demonstrate that ground water cannot be adversely affected and there is no risk to human health or the environment. If contaminants are detected in vadose zone monitoring instruments or a leak is detected after a suspension has been granted pursuant to Subsection C of this section, actions specified in the vadose zone monitoring or leak detection plan must be undertaken to respond.

F. The secretary may require the owner or operator to conduct periodic ground water or vadose zone monitoring at any landfill for which ground water monitoring has been waived under 20.9.2.14 NMAC during the active life or post-closure care period to demonstrate the landfill is not contaminating ground water.

[20.9.9.8 NMAC - Rp, 20 NMAC 9.1.VIII.801, 8/2/2007]

#### **20.9.9.9 GROUND WATER MONITORING SYSTEMS AND GROUND WATER MONITORING SYSTEM PLANS.**

A. A ground water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that:

(1) represent the background quality of ground water that has not been affected by a release from the landfill as determined under 20.9.9.10 NMAC; and

(2) represent the quality of ground water passing the detection monitoring point which shall be at the waste management unit boundaries on land owned by the owner of the landfill:

(a) the downgradient monitoring system shall be installed at the detection monitoring point;

(b) when physical obstacles preclude installation of ground water monitoring wells

immediately downgradient from an existing landfills, the secretary may approve a monitoring system plan that provides for an alternative detection monitoring point at the closest practicable distances hydraulically downgradient from the landfill that ensure detection of ground water contamination in the uppermost aquifer.

B. The ground water monitoring system plan shall comply with this section and shall include a detailed plan for all wells, piezometers or other measurement and sampling devices and an explanation of the purpose and placement of each (with maps). The ground water monitoring system plan shall be certified that it is in compliance with this section by a qualified ground water scientist on a form provided by the department.

C. The ground water monitoring plan shall include a description of the hydrogeologic characteristics of the site, a geologic cross-section of the site, a description of ground water sampling and analysis procedures, and a detection monitoring plan, and shall comply with 20.9.9 NMAC. The ground water monitoring plan shall be certified that it is in compliance with 20.9.9 NMAC by a qualified ground water scientist on a form provided by the department.

D. The owner or operator shall comply with the ground water monitoring system plan and ground water monitoring plan approved by the department throughout the active life and post-closure care period of each landfill subject to the requirements of 20.9.9 NMAC. The secretary may require monitoring for additional constituents, parameters and frequency as necessary to protect the public health, welfare and the environment. No change shall be made to the approved ground water monitoring system plan or ground water monitoring plan without a specific approval by the department.

E. Owners or operators shall not install or decommission any monitoring well, piezometer, or other ground water measurement, sampling, or analytical device unless it is in accordance with an approved ground water monitoring system plan. The owner or operator shall submit a written notice of intent to the department at least 14

days prior to the installation or decommissioning of any monitoring wells or piezometers. The notice shall include a statement, on a form provided by the department, that the installation or decommission of any monitoring well complies with this section and the approved ground water monitoring system plan.

F. The owner or operator shall submit an installation report to the department within 90 days after the installation of a monitoring well or piezometer. The report shall include the following documentation.

(1) A certification by a qualified ground water scientist that the monitoring device has been installed in compliance with the approved ground water monitoring system plan and 20.9.9 NMAC.

(2) A construction and lithologic log for each monitoring well or piezometer. The lithologic log shall be drawn to a scale of one inch equals ten feet, except if the boring is greater than 200 feet, then a scale of one-half inch equals ten feet may be used, graphically depicting the initial depth at which ground water was encountered and the soil or rock strata penetrated and describing each layer.

(a) If soil was encountered, the log should indicate the color, degree of compaction, moisture content plus any additional information necessary for an adequate visual description and classification of each stratum based on the unified soils classification system.

(b) If rock was encountered, the log should include a detailed lithologic description, including rock type, degree of induration, presence of fractures, fissility, and porosity (including vugs) plus any other information necessary for an adequate description. All field notes made by the qualified ground water scientist shall be made available on request of the department.

G. A copy of all construction and lithologic logs, and all sampling data from groundwater monitoring shall be placed in the operating record.

H. The secretary may approve an alternate detection monitoring point in the monitoring system plan if it is located 150 meters or less from the waste management unit boundary and it is located on land owned by the owner of the landfill. When approving an alternate detection monitoring point under this section, the secretary shall consider at least the following factors:

- (1) the hydrogeologic characteristics of the facility and surrounding land;
- (2) the volume and physical and chemical characteristics of the leachate;
- (3) the quantity, quality, and direction of flow of the ground water;
- (4) the proximity and withdrawal rate of the ground water users;
- (5) the availability of alternative drinking water supplies;
- (6) the existing quality of the ground water, including other sources of contamination and their cumulative impacts on the ground water, and whether the ground water is currently used or reasonably expected to be used for drinking water;
- (7) public health, safety, and welfare effects; and
- (8) the practicable capability of the owner or operator.

I. The secretary may approve, in the ground water monitoring system plan or closure and post-closure care plan, a multiunit ground water monitoring system instead of separate systems for each landfill where the facility has several landfills, provided the multiunit system meets the appropriate requirements of this part and will be as protective of public health, welfare and the environment as individual monitoring systems for each landfill, based on the following factors:

- (1) number, spacing, and orientation of the landfills;
- (2) hydrogeologic setting;
- (3) site history;
- (4) engineering design of the landfills; and
- (5) types of waste accepted at the landfills.

J. Unless otherwise approved by the department in the ground water monitoring system plan or by specific approval, monitoring wells shall be constructed in such a manner that the integrity of the bore-hole and well is maintained and is in accordance with American society of testing materials method D-5092 or the following requirements:

- (1) the bore-hole shall be drilled a minimum of 4 inches larger than the casing diameter to allow for the emplacement of sand and sealant;
- (2) care shall be taken not to introduce contamination to the well;
- (3) the well shall be developed so that ground water flows freely through the screen and to decrease turbidity, and that all sediment is removed from the well;
- (4) the casing shall, unless otherwise approved by the secretary, consist of schedule 40 or heavier threaded PVC pipe of not less than 2 inches diameter;
  - (a) the casing shall extend from the top of the screen to at least one foot above ground surface;

- (b) the casing top shall be protected by a cap and a locking shroud shall protect the exposed casing; and
- (c) the shroud shall be large enough to allow easy access for removal of the plastic cap;
- (5) the screen shall be at least a 20-foot section of machine slotted or other manufactured screen; a slot size of 0.01-inch generally is adequate for most installations; no on-site or hack-saw slotting is permitted;
- (6) if the uppermost aquifer is unconfined; the top of the screen shall be 5 feet above the water table to allow for seasonal fluctuations;
- (7) if the uppermost aquifer is confined, the top of the screen shall be at the location of the geologic boundary between the top of the aquifer and the bottom of the confining unit;
- (8) centralizers shall be placed at the top and the bottom of the screen;
- (9) an annular space from 2 feet below to 2 feet above the screen shall be packed with sand;
  - (a) the sand shall be clean and medium to coarse grained;
  - (b) the sand shall be properly sized to prevent fines from entering the well; and
  - (c) a tremmie pipe shall be used for sand placement in deeper wells when appropriate;
- (10) the annular space for at least 2 feet above the sand pack shall be grouted or sealed;
  - (a) pressure grouting with bentonite or cement using a tremmie pipe is preferred; or
  - (b) alternatively, a bentonite seal may be installed using bentonite pellets, 1/4 or 1/2 inch in size;
- (11) the annular space above the seal shall be fully sealed using grout or bentonite to within 3 feet of the ground surface;
- (12) the annular space above the cuttings shall be filled with bentonite-cement grout to within 3 feet of the ground surface;
- (13) the remaining 3 feet shall be filled with concrete (expanding cement); and
- (14) a concrete slab with a minimum 2-foot radius and a 4-inch thickness shall be poured around the shroud; the pad shall be sloped so that rainfall and run-off flows away from the shroud.

K. The casing of each well or wells that will be used to monitor ground water shall be surveyed, referenced to a standard grid, and subsequently mapped by a licensed surveyor. The location of the well shall be determined within one-tenth of a foot, and the height above sea level at the top of the casing shall be determined within one-hundredth of a foot. This information shall be submitted to the department with the installation report required in Subsection F of 20.9.9.9 NMAC.

L. The monitoring wells, piezometers, and other measurement, sampling, and analytical devices shall be operated and maintained so that they perform to design specifications throughout the life of the monitoring plan.

M. The number, spacing, and depths of monitoring systems shall be based upon site-specific technical information that includes thorough characterization of:

- (1) aquifer thickness, ground water flow rate, and flow direction, including seasonal and temporal fluctuations in ground water flow; and
- (2) saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer; and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities, and effective porosities.

N. Vadose zone monitoring or leak detection systems, if required by the secretary pursuant to Subsections C or F of 20.9.9.8 NMAC, shall include:

- (1) direct and indirect monitoring techniques such as:
  - (a) permanent monitoring stations such as those which utilize access tubes for neutron moderation instrumentation, time domain reflectometry (TDR) probes, capacitance probes or other permanently installed devices;
  - (b) nested piezometers when used for monitoring perched water or locally saturated portions of the vadose zone;
  - (c) soil gas measurements;
  - (d) lysimeters;
  - (e) electronic leak detectors; and
  - (f) other devices or methods as approved in the permit ;
- (2) an adequate frequency of testing and a sufficient number of sampling points at appropriate locations and depths to determine a change in soil characteristics; and
- (3) an action plan that addresses potential vadose zone contamination and the sources of the contamination.

O. Amendments to an approved groundwater monitoring system plan shall be by specific approval. [20.9.9.9 NMAC - Rp, 20 NMAC 9.1.VIII.802, 8/2/2007]

**20.9.9.10 GROUND WATER MONITORING PLAN; SAMPLING AND ANALYSIS; ESTABLISHING BACKGROUND CONCENTRATION LEVELS AND ASSESSMENT MONITORING LEVELS.**

A. Ground water monitoring plans shall describe in detail all aspects of the landfill's proposed ground water monitoring program. It shall include descriptions of sampling and analysis procedures to be used, proposed sampling frequencies, test methodologies, procedures that will be used to establish background concentrations of all constituents and parameters listed in 20.9.9.20 NMAC, assessment monitoring levels (AMLs), and practical quantitation limits (PQL) for each constituent listed in 20.9.9.20 NMAC, and any other information describing the program as required by this section.

B. The ground water monitoring plan shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of ground water quality at the upgradient and downgradient wells. The plan shall include procedures and techniques for:

- (1) sample collection;
- (2) sample preservation and shipment;
- (3) analytical procedures;
- (4) chain of custody control; and
- (5) quality assurance and quality control.

C. The ground water monitoring plan shall describe sampling and analytical methods that are appropriate for ground water sampling and that accurately measure constituents and other monitoring parameters in ground water samples. A PQL for each constituent listed in 20.9.9.20 NMAC shall be proposed in the plan based on the proposed sampling and analytical method. A PQL will not be approved unless the level is the lowest concentration that can be reliably determined by an analytic methodology acceptable to the department. Ground water samples shall not be field-filtered prior to laboratory analysis unless otherwise allowed under 40 CFR Part 258 and the approved ground water monitoring plan. The owner or operator shall conduct ground water sampling in accordance with the "*EPA solid waste disposal facility criteria technical manual*" (1998, EPA 530-R-93-017, revised April 13, 1998) unless otherwise approved in the ground water monitoring plan.

D. Ground water elevations shall be measured within one-hundredth of a foot in each well immediately prior to purging, each time ground water is sampled. The owner or operator shall determine the rate and direction of ground water flow each time ground water is sampled. Ground water elevations in wells which monitor the same waste management area shall be measured within a period of time short enough to avoid temporal variations in ground water flow which could preclude accurate determination of ground water flow rate and direction.

E. The owner or operator of a landfill seeking a background determination shall apply for specific approval of background ground water quality concentrations for each constituent and parameter referenced in Subsections A and C of 20.9.9.20 NMAC, and as required in the landfill's approved ground water monitoring plan within 14 months after any waste disposal at the landfill or lateral expansion. The application shall propose background concentrations based upon the following:

- (1) the sampling results from at least four independent samples taken during the first semiannual sampling event and at least one additional sample during the subsequent semiannual sampling event for each individual monitoring well;
- (2) the first sampling event shall occur prior to any waste disposal at a new landfill or lateral expansion; and
- (3) if a constituent is not detected in the sampling used to establish background concentrations, the owner or operator shall propose the PQL approved in the ground water quality monitoring plan as the background concentration.

F. The background ground water quality concentrations and values must be approved by the department in writing. Once background ground water quality concentrations and values for the constituents and the parameters referenced in Subsections A and C of 20.9.9.20 NMAC are approved for a landfill, an individual well comparison procedure shall be used to compare constituent concentrations and parameter values with background constituent concentrations, ground water protection standards and parameter values for purposes of detection and assessment monitoring. Alternatively, if it is in accordance with the approved ground water quality monitoring plan, the background levels established from hydraulically upgradient wells may be used for comparison purposes.

G. For category 4 and 5 landfills, a background determination shall be made at each monitoring well as specified in Subsection E of this section unless the owner operator demonstrates that hydrogeological conditions are such that sampling at upgradient wells will provide an indication of background ground water quality that is as representative or more representative than that provided by making a determination at each monitoring well.

H. For category 2 and 3 landfills, a background determination shall be made at each individual monitoring well as specified in Subsection E of this section, except when the concentration of a hazardous constituent at an upgradient well is lower than the concentration at a downgradient well, in which case the concentration of that constituent at the upgradient well shall be used as the background concentration, unless the owner or operator demonstrates that use of the downgradient well to determine the background concentration of that constituent will provide an indication of background ground water quality that is as representative or more representative than that provided by the upgradient well.

I. The owner or operator shall identify ground water protection standards for which a numeric standard has been established and shall apply for specific approval of proposed assessment monitoring levels (AMLs) in compliance with 20.9.9.12 NMAC for constituents listed or referenced in Subsection A of 20.9.9.20 NMAC, and for the parameter of pH, within 90 days following approval of background ground water quality concentrations by the department. The ground water protection standard for a constituent and for pH shall be the more stringent of the maximum contaminant level (MCL) promulgated at 40 CFR 141, or the ground water protection standard established by the commission at 20.6.2.3103 NMAC.

J. The number of samples collected to establish ground water quality data shall be consistent with the appropriate statistical procedures determined pursuant to this section.

K. The owner or operator of a landfill using an individual well comparison procedure shall use one of the following statistical methods to compare an individual compliance well constituent concentration and parameter value with background constituent concentration and parameter value or the relevant ground water protection standard:

(1) a comparison using a t-interval or t-test with a type I error level of no less than 0.01 shall be made between the approved background concentration or value and any subsequent sample analysis results for each parameter or constituent from each individual well;

(a) background values and concentrations shall be established for each parameter or constituent for each individual well from at least four independent samples during the first semiannual sampling event and at least one additional sample during the subsequent semi-annual sampling event; and

(b) if the background concentration is below the practical quantitation limit (PQL), the PQL shall be used to establish background. A statistical method is not necessary for a comparison between the analytical results and the PQL; or

(2) another method that meets the performance standards of 40 CFR 258.53(h). The alternative must be approved in the ground water monitoring plan, and the owner or operator must demonstrate the method meets the performance standards of 40 CFR 258.53(h).

L. The owner or operator of a landfill using an upgradient well to establish background concentrations shall specify in the ground water monitoring plan one of the statistical methods described in 40 CFR 258.53(g). The statistical method to be used in evaluating ground water monitoring data must be demonstrated to meet the performance criteria of 40 CFR 254.53(h).

(1) If the background concentration at the upgradient well is below the practical quantitation limit (PQL), the PQL shall be used to establish background; a statistical method is not necessary for a comparison between the analytical results and the PQL.

(2) The number of samples collected to establish ground water quality data must be consistent with the appropriate statistical procedure that meets the performance standards of 40 CFR 258.53(h).

M. Ground water samples for the constituents and values referenced in Subsections A and C of 20.9.9.20 NMAC shall be collected from each monitoring well at least semi-annually during the active life of the facility.

(1) At a new landfill, or at a lateral expansion, the first sampling event shall be prior to the receipt of any waste.

(2) Once background concentrations and values have been established and approved, the owner or operator shall conduct detection monitoring for all constituents and parameters listed in or referenced in Subsections A and C of 20.9.9.20 NMAC and determine whether or not the AML has been exceeded for any constituent referenced in Subsection A of 20.9.9.20 NMAC and for the parameter of pH, or as required in the particular ground water monitoring plan that applies to the landfill.

(3) In determining whether the AML has been exceeded, the owner or operator shall compare the ground water quality for each constituent at each monitoring well to the background value for that constituent, according to the statistical procedures and performance standards specified in the ground water monitoring plan and this section.

N. Ground water documentation shall be submitted to the department within 90 days of completing sampling, in a form acceptable to the department, for each sample, and a copy of all monitoring results shall be kept in the operating record. The documentation shall include:

- (1) the constituents and parameter tested;
- (2) the test method (U.S. EPA or equivalent) for each constituent and parameter;
- (3) the ground water protection standard for each constituent detected (if a numeric standard has been established);
- (4) the method detection limit (MDL) for each constituent;
- (5) the practical quantitation limit (PQL) for each constituent and parameter;
- (6) the well number and location for each sample;
- (7) the laboratory ID sample number;
- (8) chain of custody documentation;
- (9) the date sampled;
- (10) the date received at the laboratory;
- (11) the date analysis commenced;
- (12) results, with constituent or parameter, chemical abstract system number, concentration with units, approved AML, ground water protection standard, PQL, qualifier code (e.g., J, B, U, etc.), well number, and sample date;
- (13) sample preservation (field data);
- (14) field blank results, and trip blank results;
- (15) quality assurance/quality control summary report (laboratory blanks, spike recoveries, etc.);
- (16) anomaly report (non-conformance with quality assurance/quality control plan, corrective actions, etc.);
- (17) laboratory review (signature and date);
- (18) an updated ground water elevation contour map for the facility or, if ground water elevation data is insufficient to contour, then the ground water elevation for each monitoring well, prior to purging, reported on a well location map;
- (19) the approved background concentration levels as determined in accordance with Subsection E of this section; and
- (20) a certification by a qualified ground water scientist that AMLs have or have not been exceeded.

O. Amendments to an approved ground water monitoring plan shall be by specific approval.  
[20.9.9.10 NMAC - Rp, 20 NMAC 9.1.VIII.803, 8/2/2007]

#### **20.9.9.11 DETECTION MONITORING PLAN.**

A. The owner or operator shall conduct detection monitoring at all ground water detection monitoring wells unless such monitoring has been suspended in accordance with Subsection C of 20.9.9.8 NMAC. The detection monitoring program shall include the monitoring for constituents and parameters listed and referenced in Subsection A of 20.9.9.20 NMAC, and shall be conducted at least semiannually during the active life and post-closure care period of the facility. After background concentrations have been approved as required in Subsection E of 20.9.9.10 NMAC for all constituents in Subsection A of 20.9.9.20 NMAC, the owner or operator may request a specific approval that the ground water detection monitoring program description be amended to:

- (1) not require testing for particular constituents in Subsection A of 20.9.9.20 NMAC for a municipal landfill if it can be shown that the particular constituents are not reasonably expected to be in or derived from the waste contained in the landfill; and
- (2) establish an alternate list of inorganic indicator parameters constituents for a landfill in lieu of some or all of the heavy metals listed or referenced in Subsection A of 20.9.9.20 NMAC if the alternative constituents provide a reliable indication of inorganic releases from the landfill to the ground water; in determining alternative constituents, the department shall consider the following factors:
  - (a) the types, quantities, and concentrations of constituents in wastes managed at the landfill;
  - (b) the mobility, stability, and persistence of constituents or their reaction products in the unsaturated earth zone beneath the landfill;
  - (c) the detectability of the constituents, and reaction products in the ground water; and

(d) the concentrations or values and coefficients of variation of levels of the constituents in the ground water;

(3) allow annual sampling of the approved alternate list after the first year based on the following factors:

- (a) lithology of the aquifer and unsaturated zone;
- (b) hydraulic conductivity of the aquifer and unsaturated zone;
- (c) ground water flow rates;
- (d) minimum distance between upgradient edge of the landfill and downgradient monitoring well screen (minimum distance of travel); and
- (e) resource value of the aquifer.

B. Regardless of approval by the department of an alternate constituent list under Subsection A of this section, the minimum frequency for testing for all the constituents in Subsection A of 20.9.9.20 NMAC shall be at least once every five years in addition to the required frequencies for the alternate list.

C. If the owner or operator determines, as evidenced in the ground water monitoring data, that the AML has been exceeded for one or more of the constituents or parameters referenced in Subsection A of 20.9.9.20 NMAC or approved alternate constituent list at any monitoring well, the owner or operator:

(1) shall, within 14 days of this finding, notify the department of the exceedance and place a notice in the operating record indicating which constituents or values have exceeded approved AMLs; and

(2) shall submit, within 60 days of the finding, an assessment monitoring plan that meets the requirements of 20.9.9.13 NMAC;

(3) in addition, the owner or operator may submit, within 60 days after the finding, a demonstration that a source other than a landfill caused the contamination or that the AML exceedance resulted from an error in sampling, analysis, statistical evaluation, or natural variation in ground water quality; a report documenting this demonstration shall be certified by a qualified ground water scientist, shall be placed in the operating record, and shall be submitted to the department for specific approval; the department shall issue a specific approval or denial within 90 days approving or denying the demonstration; if the demonstration is denied, the assessment monitoring shall proceed according to the submitted plan within 90 days after the denial.

[20.9.9.11 NMAC - Rp, 20 NMAC 9.1.VIII.804, 8/2/2007]

#### **20.9.9.12 ASSESSMENT MONITORING LEVELS.**

A. Approved background ground water quality determinations shall be used as the baseline for determination of AMLs.

B. For all hazardous constituents, AMLs shall be 50 percent of the ground water protection standard.

C. If the background concentrations of any hazardous constituents is above 50 percent of the ground water protection standards, then the background concentration shall be the AML. Any statistically significant increase above the AML shall be an exceedance of the AML for that constituent.

D. If a ground water protection standard has not been established for a hazardous constituent, the AML shall be the background concentration or a 95 percent increase over the PQL of the constituent, whichever is greater.

E. For constituents identified in Subsections B and C of 20.6.2.3103 NMAC, the AMLs shall be 75 percent of the ground water protection standard, except pH, which shall be within the range of values shown in Subsection B of 20.6.2.3103 NMAC

F. If the background concentration of any constituent identified in Subsections B and C of 20.6.2.3103 NMAC is above 75 percent of the ground water protection standard, then the background concentration shall be the AML. Any statistically significant increase above the AML shall be an exceedance of the AML for that constituent.

G. If more than one toxic pollutant identified in 20.6.2.7 NMAC is detected, the toxic pollutant criteria of the commission rules for the combination of constituents shall be used to determine a ground water standard, using the methods described in Subsection I of 20.9.9.13 NMAC. The AML shall be 50 percent of the ground water standard, or the background concentration, whichever is greater. If the background concentration is greater than the ground water standard, then any statistically significant increase above the background concentration shall be an exceedance of the AML. However, this shall apply only in cases where such AMLs are more stringent than the AMLs otherwise determined under this section.

[20.9.9.12 NMAC - Rp, 20 NMAC 9.1.VIII.805, 8/2/2007]

#### **20.9.9.13 ASSESSMENT MONITORING.**



A. Owners and operators shall conduct assessment monitoring whenever the AML has been exceeded for one or more constituent of Subsection A of 20.9.9.20 NMAC or an alternate constituent list approved under Subsection A of 20.9.9.11 NMAC unless a demonstration has been approved pursuant to Paragraph (3) of Subsection C of 20.9.9.11 NMAC. Assessment monitoring shall be conducted in accordance with an assessment monitoring plan, approved in accordance with Subsection C of 20.9.9.11 NMAC.

B. Within 90 days of the determination of an exceedance under Subsection M of 20.9.9.10 NMAC, and annually thereafter, the owner or operator shall sample and analyze the ground water for all constituents and parameters referenced and listed in Subsections B and C of 20.9.9.20 NMAC for each downgradient well. For any constituents detected in the downgradient wells as a result of the complete analysis, a minimum of four independent samples from each well (upgradient and downgradient) shall be collected and analyzed to establish background for the constituents for which background has not been established. Sampling data and proposed background concentration shall be submitted to the department within 180 days of the determination of an exceedance under Subsection M of 20.9.9.10 NMAC. The upgradient concentrations shall be presumed to be the background unless the owner or operator demonstrates that hydrogeological conditions are such that sampling at other points will provide an indication of background ground water quality that is as representative or more representative than that provided at the upgradient wells. The department shall approve background levels for those detected constituents for which background concentrations have not previously been determined within 60 days, or the upgradient concentrations shall be deemed to be the background concentrations.

C. The department may specifically approve an alternative frequency or subset of wells for repeated sampling for assessment monitoring during the active life and post-closure care period of the facility. In determining an alternative frequency or subset of wells, the department shall consider:

- (1) lithology of the aquifer and unsaturated zone;
- (2) hydraulic conductivity of the aquifer and unsaturated zone;
- (3) ground water flow rate;
- (4) minimum distance between the waste management unit boundary and downgradient monitoring well screen;
- (5) resource value of the aquifer; and
- (6) nature of any constituents detected.

D. After obtaining the results from the sampling required by Subsection B of this section, the owner or operator shall:

(1) within 14 days, notify the department in writing and document in the operating record any constituents that have been detected;

(2) within 90 days and at least semiannually, resample all wells and analyze for all constituents in Subsections A and C of 20.9.9.20 NMAC and any constituents in Subsection B of 20.9.9.20 NMAC or an approved alternate list that have been detected; the department may specify an alternate monitoring frequency in accordance with Subsection A of 20.9.9.11 NMAC, but all constituents in Subsection B of 20.9.9.20 NMAC shall be sampled no less frequently than once every five years during the active life and post-closure care period.

E. If the concentration of each constituents in Subsection A of 20.9.9.20 NMAC, and each detected constituent of Subsection B of 20.9.9.20 NMAC is determined to be at or below the approved AML after two sampling events, the owner or operator shall notify the department in writing and may return to detection monitoring.

F. If the concentration of any constituent in 20.9.9.20 NMAC is above the AML, but below the corrective action level (CAL), the owner or operator shall continue assessment monitoring in accordance with this section.

G. If one or more constituents in 20.9.9.20 NMAC is detected above the CALs in any sampling event, the owner or operator shall:

(1) within 14 days of this finding, notify the department and all appropriate local government officials in writing;

(2) install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with this section within six months; the department may approve an extension for this installation and sampling for good cause for up to an additional six months of the finding of the exceedance;

(3) characterize the nature and extent of the release by installing additional monitoring wells as necessary within one year of the finding of the exceedance;

(4) notify area residents and land owners in the same manner as described in Subsection B of 20.6.2.4108 NMAC; and

(5) initiate an assessment of corrective measures as required by 20.9.9.15 NMAC within 90 days; or  
(6) the owner or operator may demonstrate that a source other than the facility caused the contamination, or that the increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground water quality; a report documenting this demonstration shall be certified by a qualified ground water scientist and submitted to the department for review and approval; if a demonstration is specifically approved by the department, the owner or operator may return to detection monitoring; until a successful demonstration is made, the owner or operator shall comply with 20.9.9.12 - 20.9.9.20 NMAC, including initiating an assessment of corrective action.

H. Within 90 days after any AML exceedance, the owner or operator shall identify the ground water protection standard for each constituent in 20.9.9.20 NMAC that exceeded the AML in the ground water that was not identified pursuant to Subsection I of 20.9.9.10 NMAC. The owner or operator shall propose for department approval ground water protection standards for any constituent that exceeded the AML pursuant to Subsection B of this section and Paragraph (2) of Subsection D of this section that does not have an MCL or numeric standard in commission rules. The owner or operator shall make a demonstration that the proposed standard will be protective of the public health and the environment, in accordance with Subsection I of this section.

(1) The ground water protection standards for constituents shall be the more stringent of the MCL promulgated at 40 CFR 141, or the numeric standard established by commission rules.

(2) For hazardous constituents for which the background concentration is higher than the ground water protection standard, the background concentration shall be used as the ground water protection standard.

I. The secretary may establish an alternative ground water protection standard for constituents for which MCLs or commission standards have not been established. These ground water protection standards shall be appropriate health based levels that satisfy the following:

(1) the level is derived in a manner consistent with U.S. EPA guidelines for assessing the health risks of environmental pollutants;

(2) the level is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act good laboratory practice standards or equivalent;

(3) for carcinogens, the level represents a concentration associated with an excess lifetime cancer risk of more than one cancer per 100,000 exposed persons; and

(4) for systemic toxicants, the level represents a concentration to which the human population could be exposed on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime; systemic toxicants include toxic chemicals that cause effects other than cancer or mutation.

J. In establishing ground water protection standards under Subsection I of this section, the secretary may consider the following:

(1) multiple contaminants in the ground water;

(2) exposure threats to sensitive environmental receptors; and

(3) other site specific exposure or potential exposure to ground water.

[20.9.9.13 NMAC - Rp, 20 NMAC 9.1.VIII.806, 8/2/2007]

#### **20.9.9.14 CORRECTIVE ACTION LEVELS.**

A. Background water quality data approved by the department shall be used as the baseline to determine corrective action levels (CALs).

B. For all constituents, CALs shall be the ground water protection standard.

C. If the background concentrations of any constituent is above what would otherwise be the ground water protection standards, then the background concentration shall be used as the CAL. Any statistically significant increase above the CAL shall be considered an exceedance of the CAL for that constituent.

D. If more than one potential toxic pollutant, as defined in 20.6.2.7 NMAC, is detected, the potential toxic pollutant criteria of the commission rules for the combination of constituents shall be used to determine the CALs. If the background concentration is greater than the ground water standard, then any statistically significant increase above the background concentration shall be an exceedance of the CAL. However, this shall apply only in cases where such CALs are more stringent than the CALs otherwise determined under this section.

[20.9.9.14 NMAC - Rp, 20 NMAC 9.1.VIII.807, 8/2/2007]

#### **20.9.9.15 ASSESSMENT OF CORRECTIVE MEASURES.**

A. Upon finding that any constituent listed in 20.9.9.20 NMAC has exceeded its CAL, the owner or operator shall initiate an assessment of corrective measures. Such an assessment shall be submitted to the department within 180 days of the finding.

B. The owner or operator shall continue to monitor in accordance with the assessment monitoring program as specified in 20.9.9.13 NMAC.

C. The assessment shall include a demonstration of:

- (1) the extent and nature of contamination;
- (2) the practical capabilities of remedial technologies in achieving compliance with ground water protection standards and other objectives of the remedy;
- (3) the availability of treatment or disposal capacity for wastes managed during implementation of the remedy;
- (4) the desirability of utilizing technologies that are not currently available, but which may offer significant advantages over available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;
- (5) the potential risks to public health, welfare and the environment from exposure to contamination prior to completion of the remedy;
- (6) the resource value of the aquifer including:
  - (a) current and future uses;
  - (b) proximity and withdrawal rate of users;
  - (c) ground water quantity and quality;
  - (d) the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
  - (e) the hydrogeologic characteristic of the facility and surrounding land;
  - (f) ground water removal and treatment costs; and
  - (g) the cost and availability of alternative water supplies;
- (7) the practicable capability of the owner or operator;
- (8) the performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts and control of exposure to any residual contamination;
- (9) the time required to begin and complete the remedy;
- (10) the costs of remedy implementation;
- (11) the institutional requirements for local permits or other environmental or public health requirements that may substantially affect implementation of the remedy(s);
- (12) the need for interim measures in accordance with provisions of Paragraph (3) of Subsection A of 20.9.9.17 NMAC;
- (13) an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives and evaluation factors of the remedy as described in 20.9.9.16 NMAC; and
- (14) other relevant factors.

D. The owner or operator shall discuss the results of the corrective measures assessment, prior to the selection of remedy, in a public meeting with interested and affected parties. Notice of the public meeting shall be provided the same as that specified in the Solid Waste Act for permit applications and Paragraph (4) of Subsection G of 20.9.9.13 NMAC. The public notice shall also contain the following information:

- (1) name, address, and telephone number of the owner or operator and contact person;
- (2) name and location of the facility;
- (3) meeting location, date, and time;
- (4) nature and extent of the plume;
- (5) brief description of the assessment of corrective measures and the preferred remedy of the owner or operator;
- (6) location where the assessment of corrective measures can be reviewed; and
- (7) information regarding the opportunity to submit oral or written comments at the public meeting, and until 30 days after the public meeting, regarding the assessment and proposed remedy for consideration by the department.

E. The owner or operator shall make a record of the public meeting and submit it to the department.

F. The secretary may, based on the initial assessment, order interim measures, in accordance with Paragraph (3) of Subsection A of 20.9.9.17 NMAC.

[20.9.9.15 NMAC - Rp, 20 NMAC 9.1.VIII.808, 8/2/2007]

## **20.9.9.16 SELECTION OF REMEDY.**

A. Based on the results of the corrective measures assessment conducted under 20.9.9.15 NMAC, the owner or operator shall, within 120 days following the submission of the assessment of corrective measures, submit a proposed remedy to the department for review and approval that meets the standards listed in this section. The secretary may issue an order approving, approving with conditions, denying the proposed remedy, may require submission of an alternative proposed remedy, or may impose a remedy whether or not proposed by the owner or operator.

B. Prior to approving or imposing a remedy, the department shall hold a hearing on the remedy proposed by the owner or operator and any draft remedy proposed by the department. The owner or operator shall be required to provide notice of hearing on the proposed remedy or remedies in accordance with Section 74-9-22 NMSA 1978. Hearing procedures shall be in accordance with Permit Procedures – Environment Department, 20.1.4 NMAC.

C. The selected remedy shall:

- (1) be protective of public health, welfare and the environment;
- (2) attain the CAL;
- (3) control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases into the environment that may pose a threat to public health, welfare or the environment;
- (4) comply with standards for management of wastes as specified in Subsection C of 20.9.9.17 NMAC.

D. In its submission of a proposed remedy that meets the standards listed above, the owner or operator shall provide evidence demonstrating:

- (1) the long and short term effectiveness and protectiveness of the potential remedy, along with the degree of certainty that the remedy will prove successful based on consideration of the following:
  - (a) magnitude of reduction of existing risks;
  - (b) magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;
  - (c) the type and degree of long term management required, including monitoring, operation, and maintenance;
  - (d) short term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to public health, welfare and the environment associated with excavation, transportation, and redisposal of wastes;
  - (e) time until full protection is achieved;
  - (f) potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to public health, welfare and the environment associated with excavation, transportation, redisposal, or containment;
  - (g) long term reliability of the engineering and institutional controls; and
  - (h) potential need for replacement of the remedy;
- (2) the effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:
  - (a) the extent to which containment practices will reduce further releases; and
  - (b) the extent to which treatment technologies may be used;
- (3) the ease or difficulty of implementing a potential remedy based on consideration of the following factors:
  - (a) degree of difficulty associated with constructing the technology;
  - (b) expected operational reliability of the technology;
  - (c) need to coordinate with, and obtain necessary approvals and permits from, other agencies;
  - (d) availability of necessary equipment and specialists; and
  - (e) available capacity and location of needed treatment, storage, and disposal services;
- (4) practicable capability of the owner or operator, including a consideration of the technical and economic capability; and
- (5) the degree to which community concerns are addressed.

E. The owner or operator shall specify as part of the proposed selected remedy a schedule for initiating and completing remedial activities. Such a schedule shall provide for the initiation of remedial activities within a reasonable period of time, taking into consideration the factors listed in Subsection C of 20.9.9.15 NMAC.

F. In its submission of a proposed remedy under this section, the owner or operator may seek a determination that remediation of a contaminant to the CAL is not required as follows:

(1) if an exceedance of a commission standard would occur, the owner or operator shall seek a variance from the commission standard in accordance with Subsection E or F of 20.6.2.4103 NMAC and incorporate the terms and conditions of any such variance into the selected remedy and corrective action program; or

(2) the owner or operator may seek a determination from the secretary that remediation of a contaminant to the CAL (for CALs not based on a commission standard) is not required by submitting a written request to the secretary for a determination that attainment of the CAL is technically infeasible; the request shall include: a demonstration of technical or physical impossibility of attaining the CAL using potential remedies; the effectiveness of potential remedies; whether the proposed determination will allow a present or future hazard to public health or the environment; and any other information required by the secretary; in addition, the request shall propose an alternate CAL for the secretary's approval, based on the effectiveness of potential remedies and a site-specific risk assessment; the secretary may approve, approve with terms and conditions, or deny the requested determination.

G. A determination by the secretary pursuant to Subsection F of this section shall not affect the authority of the secretary to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize releases to the ground water, to prevent exposure of the ground water to concentrations that are technically practicable and significantly reduce threats to public health, welfare or the environment.

[20.9.9.16 NMAC - Rp, 20 NMAC 9.1.VIII.809, 8/2/2007]

### **20.9.9.17 IMPLEMENTATION OF A CORRECTIVE ACTION PROGRAM.**

A. Based on the schedule approved by the secretary under Subsection F of 20.9.9.16 NMAC for initiation and completion of remedial activities, the owner or operator shall:

- (1) establish and implement a corrective action ground water monitoring program that:
  - (a) at a minimum, meets the requirements of an assessment monitoring program under 20.9.9.13 NMAC;
  - (b) will indicate the effectiveness of the corrective action remedy; and
  - (c) demonstrates compliance with the corrective action levels;
- (2) implement the corrective action remedy approved under 20.9.9.16 NMAC; and
- (3) take any interim measures necessary to ensure the protection of public health, welfare and the environment; interim measures should, to the greatest extent practicable, be consistent with the objectives of, and contribute to the performance of, any remedy that may be required pursuant to 20.9.9.16 NMAC; the following factors shall be considered in determining whether interim measures are necessary:
  - (a) time required to develop and implement a final remedy;
  - (b) actual or potential exposure of nearby populations or environmental receptors to constituents;
  - (c) actual or potential contamination of drinking water supplies or sensitive ecosystems;
  - (d) further degradation of the ground water that may occur if remedial action is not initiated expeditiously;
  - (e) weather conditions that may cause constituents to migrate or be released;
  - (f) risks of fire or explosion, or potential for exposure to constituents as a result of an accident or failure of a container or handling system; and
  - (g) other situations that may pose threats to public health, welfare and the environment.

B. If the secretary determines, based on information developed after implementation of the remedy has begun or other information, that compliance with requirements of Subsection C of 20.9.9.16 NMAC are not being achieved through the remedy selected the secretary may issue an order requiring the owner or operator to propose, for consideration by the secretary, other methods or techniques that could practicably achieve compliance with Subsection C of 20.9.9.16 NMAC. An owner or operator proposing an alternative remedy under this subsection shall comply with all factors and criteria of 20.9.9.15-16 NMAC.

C. All solid wastes that are generated pursuant to this section, or an interim measure required under Paragraph (3) of Subsection A of this section, shall be managed in a manner which:

- (1) is protective of public health, welfare and the environment; and
- (2) complies with applicable RCRA requirements, the Solid Waste Act and 20.9.2 - 20.9.10 NMAC.

D. Remedies selected pursuant to 20.9.9.16 NMAC shall be considered complete when:

(1) the owner or operator complies with the CALs at all points within the plume of contamination for a period of three consecutive years; the secretary may specify an alternative length of time during which the owner or operator shall demonstrate that concentrations of constituents referenced in 20.9.9.20 NMAC have not exceeded

CALs provided the time is not less than eight consecutive calendar quarters with one sampling event per quarter, and taking into consideration:

- (a) extent and concentration of the release(s);
  - (b) behavior characteristics of the hazardous constituents in the ground water;
  - (c) accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that affect the accuracy; and
  - (d) characteristics of the ground water; and
- (2) all actions required to complete the remedy have been satisfied.

E. Upon completion of the remedy, the owner or operator shall notify the secretary in writing within 14 days with a certification that the remedy has been completed in compliance with the requirements of Subsection D of this section. The certification shall be signed by a qualified ground water scientist and submitted to the secretary for specific approval.

F. Upon approval of the certification that the corrective action remedy has been completed in accordance with the requirements under Subsection D of this section, the owner or operator shall be released from the requirements for financial assurance for corrective action under 20.9.10.12 NMAC.

G. In the event that new information becomes available which indicates a constituent release may pose a threat to human health or welfare or the environment, the department may require continued compliance with 20.9.9.17 NMAC, or further investigation or selection of a remedy as necessary.

[20.9.9.17 NMAC - Rp, 20 NMAC 9.1.VIII.810, 8/2/2007]

**20.9.9.18 APPROVED LABORATORIES.** For the purpose of determining compliance with the requirements of 20.9.9 NMAC, within one year of the effective date of this part, analytical results may be considered only if they have been determined by a laboratory acceptable to the department as specified in this section. The department may accept analytical results if they have been determined by:

A. the scientific laboratory division of the New Mexico department of health or other laboratories certified by the U.S. EPA; a laboratory, other than the scientific laboratory division, shall provide the department documentation of its certification by the U.S. EPA;

B. a laboratory certified by an official agency of a state and approved by the department; a laboratory shall provide the department documentation of its certification by an official agency of a state for review and approval; or

C. a laboratory accredited by an approved third party accreditation organization and approved by the department; a third party accreditation organization shall submit a quality assurance project plan to the department for review and approval.

[20.9.9.18 NMAC - N, 8/2/2007]

**20.9.9.19 DEPARTMENT APPROVAL OF BACKGROUND AND TOXIC POLLUTANT**

**STANDARDS.** All background levels proposed by the owner or operator are subject to review and approval by the secretary. All ground water protection standards proposed for toxic pollutants listed in 20.6.2.7 NMAC are subject to review and approval by the secretary.

[20.9.9.19 NMAC - N, 8/2/2007]

**20.9.9.20 CONSTITUENTS AND PARAMETERS.** Constituents and parameters to be evaluated under the requirements of 20.9.9.1 - 20.9.9.19 NMAC include:

- A. every constituent listed in the following:
  - (1) 40 CFR 258 Appendix I;
  - (2) 20.6.2.3103 NMAC, including the parameter of pH;
- B. all constituents listed in 40 CFR 258 Appendix II, 20.6.2.3103 NMAC, potential toxic pollutants listed in 20.6.2.7 NMAC; and
- C. the following constituents and parameters:
  - (1) calcium (CAS No. 7440-70-2);
  - (2) magnesium (CAS No. 7439-95-4);
  - (3) potassium (CAS No. 7440-09-7);
  - (4) sodium (CAS No. 7440-23-5);
  - (5) ammonia (CAS No. 1331-21-6);
  - (6) bicarbonate alkalinity;
  - (7) carbonate alkalinity;

- (8) total nitrogen;
- (9) total kjeldahl nitrogen;
- (10) total organic carbon;
- (11) phosphate;
- (12) specific conductance;
- (13) temperature;
- (14) depth to ground water; and
- (15) ground water elevation.

D. When additional constituents are added to ground water monitoring requirements through updates to the rules cited, the new constituents shall be added to the routine sampling frequency for a particular landfill. Background quality for the new constituent shall be determined after a sufficient number of samples are collected during routine sampling, unless a new constituent is detected above the AML, in which case the procedure in Subsection E of 20.9.9.10 NMAC shall be used to determine background concentration.

E. A list of constituents and parameters to be evaluated under the requirements of 20.9.9 NMAC will be made available to the public and posted on the NMED website.  
[20.9.9.20 NMAC - N, 8/2/2007]

#### **HISTORY OF 20.9.9 NMAC:**

##### **Pre-NMAC History:**

Material in this part was derived from that previously filed with the commission of public records - state records center and archives:

EIB 74-1, Solid Waste Management Regulations, filed 05/03/1974;

EIB/SWMR-2, Solid Waste Management Regulations, filed 04/14/1989;

EIB/SWMR-3, Solid Waste Management Regulations, filed 12/31/1991;

EIB/SWMR-4, Solid Waste Management Regulations, filed 07/18/1994.

**History of Repealed Material:** 20 NMAC 9.1, Solid Waste Management Regulations (filed 10/27/1995), repealed 8/2/2007.

##### **Other History:**

EIB/SWMR-4, Solid Waste Management Regulations (filed 07/18/1994) was renumbered, reformatted, amended and replaced by 20 NMAC 9.1, Solid Waste Management Regulations, effective 11/30/1995.

That applicable portion of 20 NMAC 9.1, Subpart VIII, Ground Water Monitoring; Corrective Action; Contingency Plan, (filed 10/27/1995) was **renumbered, reformatted and replaced** by 20.9.9 NMAC, Solid Waste Facility Ground Water Monitoring System Plan and Ground Water Monitoring Plan; Corrective Action, effective 8/2/2007.