

**ADOPTED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION**

LCB File No. R189-08

Effective August 25, 2009

EXPLANATION – Matter in *italics* is new; matter in brackets [~~omitted material~~] is material to be omitted.

AUTHORITY: §§1-16, NRS 445A.425; §17, NRS 445A.425 and 445A.465; §§18, 20, 21, 23 and 24, NRS 459.826; §19, NRS 459.636 and 459.656; §22, NRS 459.826 and 459.832; §§25-27, NRS 459.892; §28, NRS 590.830; §29, NRS 445A.425 and 459.826.

A REGULATION relating to pollution; authorizing the Division of Environmental Protection of the State Department of Conservation and Natural Resources to require an owner or operator of a facility to carry out a plan for additional characterization of a contaminated site; authorizing the Director of the Department to consider certain activity in determining whether to accept an action level for soil under certain circumstances; revising the requirements for conducting an assessment of a contaminated site; revising the immediate actions that an owner or operator must take upon the release of a hazardous substance, hazardous waste or a regulated substance; authorizing an action level for soil to be based upon a study approved by the Division under certain circumstances; revising the circumstances under which the Director may grant an exemption from certain corrective actions; revising provisions governing releases from underground storage tanks; and providing other matters properly relating thereto.

Section 1. Chapter 445A of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 5, inclusive, of this regulation.

Sec. 2. *“Environmental covenant” has the meaning ascribed to it in NRS 445D.060.*

Sec. 3. *The Division may require an owner or operator of a facility to submit and carry out a plan and schedule for an additional characterization of a site to collect any information that is not submitted as part of an assessment of the conditions of a site pursuant to NAC 445A.2269 if the information is required to:*

- 1. Evaluate the efficacy of any proposed corrective action;*
- 2. Establish any appropriate action level for soil or groundwater; or*
- 3. Support the issuance of an exemption, waiver or determination that corrective action is not required pursuant to NAC 445A.227 or 445A.22725.*

Sec. 4. In determining whether to accept an action level for soil pursuant to NAC 445A.2272 that is based on a scenario for exposure other than a standard residential exposure specified by the Director, or to approve an exemption from corrective action for soil pursuant to NAC 445A.227 or groundwater pursuant to NAC 445A.22725, the Director may consider any activity or limitation on use established by the owner or operator of the facility through an environmental covenant accepted by the Division.

Sec. 5. Any soil or groundwater which is contaminated with any amount of a hazardous substance, hazardous waste or a regulated substance and which is removed through a corrective action or an assessment of conditions at a site pursuant to NAC 445A.2269 or section 3 of this regulation must be managed in a manner approved by the Division.

Sec. 6. NAC 445A.226 is hereby amended to read as follows:

445A.226 As used in NAC 445A.226 to 445A.22755, inclusive, *and sections 2 to 5, inclusive, of this regulation*, unless the context otherwise requires, the words and terms defined in NAC 445A.22605 to 445A.2268, inclusive, *and section 2 of this regulation* have the meanings ascribed to them in those sections.

Sec. 7. NAC 445A.22685 is hereby amended to read as follows:

445A.22685 The provisions of NAC 445A.226 to 445A.22755, inclusive, *and sections 2 to 5, inclusive, of this regulation* apply to any site, business or other operation where corrective action is required, unless the corrective action is required at:

1. A facility for the treatment, storage or disposal of hazardous waste that is issued a permit pursuant to NRS 459.400 to 459.600, inclusive, and the corrective action is required for any violation of NAC 444.8632.

2. A disposal site, as defined in NRS 444.460, and the corrective action is required pursuant to NAC 444.7481 to 444.7499, inclusive.

Sec. 8. NAC 445A.2269 is hereby amended to read as follows:

445A.2269 1. Except as otherwise provided in this section, if the owner or operator of a facility, or his designated agent, is required to give notice of a release pursuant to NAC 445A.345 to 445A.348, inclusive, the Division shall require the owner or operator to conduct an assessment of the conditions at the site of the facility, including an assessment of the condition of the soil or water, or both, to determine the extent and magnitude of the contamination.

2. ~~[The Division shall not require an owner or operator to conduct an assessment of the soil required by subsection 1 if the level of contamination of the soil does not exceed the action level established for that soil pursuant to NAC 445A.2272 because of the actions taken by the owner or operator of the facility pursuant to NAC 445A.22695.~~

~~—3.]~~ An assessment conducted pursuant to subsection 1 must:

(a) ~~[Identify]~~ *Characterize* the relevant pathways specifically related to the site that affect public health and the environment ~~[; and]~~, *including, without limitation, any information concerning sources of release, pathways and rates of migration of any released substances and any possible receptors of those substances;*

(b) *Rely upon methods of field sampling and analytical methods used in laboratories, if any, that are acceptable to the Division; and*

(c) Be approved by the Division.

3. The Division shall not require an owner or operator to conduct an assessment pursuant to subsection 1 if documentation is submitted to and approved by the Division or if any follow-up reporting is sufficient to demonstrate one or more of the following:

(a) The level of contamination of the soil no longer exceeds the action level established for that soil pursuant to NAC 445A.2272 because of any actions taken by the owner or operator of the facility pursuant to NAC 445A.22695;

(b) The release does not meet the reportable quantities set forth in NAC 445A.345 to 445A.348, inclusive, as originally reported;

(c) The release:

(1) Has not affected any environmental media that are subject to any corrective action pursuant to NAC 445A.226 to 445A.22755, inclusive, and sections 2 to 5, inclusive, of this regulation; and

(2) Has been sufficiently controlled to prevent any future migration to the environmental media; or

(d) The notification was required because of a confirmed release from an underground storage tank and the conditions indicating a confirmed release have not resulted in any contamination of the soil in excess of 3 cubic yards by a regulated substance and that all appropriate actions have been taken to prevent any continued release.

4. The Division may, at any time that is reasonably required to determine if an assessment is required pursuant to subsection 1:

(a) Question the owner or operator concerning any matter relating to the release; or

(b) Require the owner or operator to provide, in writing, any records or other information relating to the release or any damage caused by the release.

Sec. 9. NAC 445A.22695 is hereby amended to read as follows:

445A.22695 **1.** An owner or operator shall immediately take any action necessary to mitigate and abate imminent and substantial hazards to public health or safety created by the release of a hazardous substance, hazardous waste or a regulated substance ~~H~~, *including, without limitation:*

(a) The removal of the hazardous substance, hazardous waste or regulated substance from any leaking container in an amount that is required to prevent any additional release of the hazardous substance, hazardous waste or regulated substance into the environment;

(b) Conducting a visual inspection of any aboveground release or exposed underground release of the hazardous substance, hazardous waste or regulated substance and the prevention of any additional migration of the hazardous substance, hazardous waste or regulated substance into any surrounding soil, groundwater or surface water;

(c) The reduction or elimination of any hazard that is caused or may be caused by any contaminated soil that is excavated or exposed during the confirmation of the release or investigation of the site; and

(d) Initiation of free product removal as soon as practicable and in consultation with the Division.

2. *The Director may waive any provision of NAC 445A.226 to 445A.22755, inclusive, and sections 2 to 5, inclusive, of this regulation, other than a provision of NAC 445A.2272, 445A.22735 or 445A.2275, and require an owner or operator to take immediate action after a release of a hazardous substance, hazardous waste or a regulated substance occurs or upon a discovery of any contaminated media specified by the Director if the release or contamination:*

(a) Has an actual or imminent effect on groundwater or surface water; or

(b) Is hazardous to public health and safety.

Sec. 10. NAC 445A.227 is hereby amended to read as follows:

445A.227 1. Except as otherwise provided in ~~[NAC 445A.22715,]~~ *subsection 2*, the Director ~~[may]~~ *shall* require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste or a regulated substance contaminates soil and the level of contamination exceeds the action level established for the soil pursuant to NAC 445A.2272.

2. In determining whether corrective action is required ~~[;]~~ *or may be terminated after corrective action has been taken*, the Director ~~[shall]~~ *may* consider ~~[;]~~ *an evaluation of the conditions at the site which indicate that any contamination remaining at the site does not cause any current or potential threat to human health or the environment. Such an evaluation must use accepted methodologies and calculations which consider, without limitation, the following factors:*

- (a) The depth of any groundwater;
- (b) The distance to irrigation wells or wells for drinking water;
- (c) The type of soil that is contaminated;
- (d) The annual precipitation;
- (e) The type of waste or substance that was released;
- (f) The extent of the contamination;
- (g) The present and potential use for the land;
- (h) The preferred routes of migration;
- (i) The location of structures or impediments;
- (j) The potential for a hazard related to fire, vapor or an explosion; and

(k) Any other information specifically related to the site which the ~~director~~ *Director* determines is appropriate.

Sec. 11. NAC 445A.22705 is hereby amended to read as follows:

445A.22705 1. Except as otherwise provided in NAC ~~[445A.22715,]~~ *445A.22695*, if an owner or operator is required to take corrective action pursuant to NAC 445A.227, the owner or operator may conduct an evaluation of the site, based on the risk it poses to public health and the environment, to determine the necessary remediation standards or to establish that corrective action is not necessary. Such an evaluation must be conducted using Method E1739-95, adopted by the American Society for Testing and Materials, as it exists on October 3, 1996, or an equivalent method approved by the Division.

2. The Division shall determine whether an evaluation complies with the requirements of Method E1739-95, or an equivalent method of testing approved by the Division. The Division may reject, require revisions be made to, or withdraw its concurrence with the evaluation at any time after the completion of the evaluation for the following reasons:

- (a) The evaluation does not comply with the applicable requirements for conducting the evaluation;
- (b) Conditions at the site have changed; or
- (c) New information or previously unidentified information which would alter the results of the evaluation becomes available and demonstrates that the release may have a detrimental impact on public health or the environment.

3. If the Division rejects, requires revisions be made to or withdraws its concurrence with an evaluation, it shall provide written notice of its determination and the reasons for its determination to the owner or operator. The owner or operator shall:

- (a) Submit a revised evaluation to the Division; or
- (b) Carry out the corrective action required by the Director.

4. Unless an evaluation is rejected by the Division or returned to the owner or operator for revision, the Director shall consider the results of the evaluation, the level of concentration of the hazardous substance, hazardous waste or regulated substance in the soil, and the points of compliance to be elements of the plan for corrective action.

5. Method E1739-95, adopted by the American Society for Testing and Materials, as it exists on October 3, 1996, is hereby adopted by reference. A copy of the method may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, at a cost of \$31.

Sec. 12. NAC 445A.2271 is hereby amended to read as follows:

445A.2271 An owner or operator who is required to take corrective action pursuant to NAC 445A.227 shall submit to the Division a plan and schedule for completing the corrective action. Except as otherwise provided in NAC ~~445A.22715,~~ **445A.22695**, the owner or operator shall not take any corrective action until the plan and schedule are approved by the Division.

Sec. 13. NAC 445A.2272 is hereby amended to read as follows:

445A.2272 1. For the purposes of NAC ~~445A.227~~ **445A.22695** to ~~445A.22715,~~ **445A.2271**, inclusive, the action level for soil must be established at the following levels:

(a) The background concentration or volume of a hazardous substance, hazardous waste or a regulated substance set forth in ~~the~~ :

(1) The permit issued to the owner or operator by the Division ~~[-]~~ ; or

(2) A study approved by the Division.

(b) The presence of ~~[petroleum substance in soil in excess of 100 milligrams per kilogram].~~
~~The level of concentration must be measured using Analytical Method 8015, adopted by the Environmental Protection Agency and modified for petroleum hydrocarbons, as it exists on October 3, 1996, or an equivalent method approved by the Division.~~

~~—(c) If the potential for human exposure or damage to the environment from contaminated surface water or groundwater is the primary pathway of concern, the presence of a hazardous substance, hazardous waste or a regulated substance in soil at the level of concentration for that substance or waste listed in the Toxicity Characteristics Leaching Rule, 40 C.F.R. Part 261.24, as it existed on October 3, 1996. The level of concentration must be measured using Analytical Method 1311, adopted by the Environmental Protection Agency, as it existed on October 3, 1996, or an equivalent method approved by the Division.~~

~~—(d) If inhalation, ingestion or dermal exposure is the primary pathway of concern or an applicable level of concentration is not listed in the Toxicity Characteristics Leaching Rule, the presence of]~~ a hazardous substance, hazardous waste or a regulated substance in the soil at an appropriate level of concentration that is based on the protection of *the waters of the State*, public health and safety *for all identified routes of exposure* and the environment. The appropriate level of concentration must be determined by the Division using the Integrated Risk Information System, adopted by the Environmental Protection Agency, as it existed on October 3, 1996, or ~~[an]~~ *any other* equivalent method *or peer-reviewed source of information* chosen by the Division.

2. Except as otherwise provided ~~[by]~~ *in* this subsection, if more than one action level for soil may be established using the criteria set forth in *paragraph (b) of* subsection 1, the most

restrictive action level must be used. In no case may the action level be more restrictive than the background concentration of the hazardous substance, hazardous waste or regulated substance.

3. The State Environmental Commission hereby adopts by reference ~~the~~

~~—(a) Analytical Method 8015, adopted by the Environmental Protection Agency, as it existed on October 3, 1996. A copy of the method may be obtained from the Environmental Protection Agency, at a cost of \$5.~~

~~—(b) The Toxicity Characteristics Leaching Rule, 40 C.F.R. Part 261.24, as it existed on October 3, 1996. A copy of the rule may be obtained from the United States Government Printing Office, Washington, D.C. 20402, at a cost of \$28.~~

~~—(c) Analytical Method 1311, adopted by the Environmental Protection Agency, as it existed on October 3, 1996. A copy of the method may be obtained from the Environmental Protection Agency, at a cost of \$5.~~

~~—(d) The~~ *the* Integrated Risk Information System, adopted by the Environmental Protection Agency, as it existed on October 3, 1996. A copy of the system is available on-line through the Internet and may be obtained from an Integrated Risk Information System Representative at (301) 496-6531, free of charge.

Sec. 14. NAC 445A.22725 is hereby amended to read as follows:

445A.22725 1. Except as otherwise provided in this section, the Director may require an owner or operator to take corrective action if the release of a hazardous substance, hazardous waste or a regulated substance contaminates groundwater and the level of contamination exceeds the action level established for the groundwater pursuant to NAC 445A.22735.

2. An owner or operator may , *before initiating corrective action or after the termination of remediation pursuant to NAC 445A.22745*, submit a written request to the Director for an

exemption from the provisions of subsection 1. The request must be accompanied by such supporting information as the Director may require. The Director may grant the request if:

(a) The *following conditions are satisfied*:

(1) Each source of the contamination of the groundwater is identified and controlled or no source of the contamination remains based upon the age and nature of the release;

(2) The magnitude and extent of the contamination of the groundwater is known; and

(3) Data are available from at least 3 years of quarterly monitoring or another period specified by the Division based upon the magnitude of the contamination of the groundwater and the data do not show a trend of increasing concentrations of the contamination in the body of the plume of the contamination;

(b) A demonstration is made which indicates that natural attenuation is sufficient to reduce any concentration of the contamination below action levels or to prevent any migration of the contaminant to a receptor or another point of demonstration established by the Division at concentrations that are greater than action levels, if the demonstration relies upon analytical or numerical models of diffusion and dispersion or any other calculations of physical or chemical processes of retardation or degradation that are approved by the Division; and

(c) *The* groundwater contaminated by the release is not a source of drinking water and is not likely to be a source of drinking water *in the future* because ~~fit~~ :

(1) It is economically or technologically impractical to ~~fit~~

~~(1) Recover~~ *recover* the water for drinking because of the depth or location of the water

~~fit~~ or

~~(2) Render~~ *render* the water fit for human consumption; or

~~[(b) The total concentration of dissolved solids in the groundwater is more than 10,000 milligrams per liter and the groundwater is not reasonably expected to be a source of drinking water.]~~

(2) A legal restriction or institutional control is in effect concerning the use of the groundwater based upon the depth of the groundwater, the presence of a municipal system, the use of an environmental covenant or other controls accepted by the Division.

3. *In addition to any calculations of physical or chemical processes required pursuant to paragraph (b) of subsection 2, a demonstration made pursuant to that paragraph may also rely upon:*

(a) Any known mechanism of biological degradation and any evidence obtained for the site relating to metabolic activity and the presence of the appropriate redox potential which supports biological degradation of the contamination;

(b) Any indication of degradation based upon the presence of any daughter products; or

(c) Any other applicable factors specified by the Division which are appropriate for making a decision based upon risk.

4. The Director shall not require an owner or operator to take corrective action pursuant to subsection 1 to achieve the remediation standard required by the Division if the owner or operator files with the Division a study which is acceptable to the Division and which demonstrates that, based on a review of available technology and the prohibitive cost of the corrective action, it is not feasible to achieve the required remediation standard.

Sec. 15. NAC 445A.22745 is hereby amended to read as follows:

445A.22745 1. After any corrective action required by NAC 445A.22725 *involving the treatment of groundwater* is begun, the owner or operator ~~[shall ensure that the contaminated~~

~~groundwater is monitored for not less than 1 year to determine the level of contamination in the water. The Division shall determine the frequency of the monitoring, but in no case may the Division require monitoring more frequently than once each month.~~

~~—2.— After any corrective action required by NAC 445A.22725 is completed, the owner or operator]~~ may terminate remediation of the release *after submitting written documentation and receiving written concurrence from the Division* if:

(a) An assessment of the contaminated groundwater is conducted and indicates that the level of contamination is consistently below the action level for that water established pursuant to NAC 445A.22735; ~~[or]~~

(b) *A test of asymptotic concentrations specified in paragraph (c) is not appropriate, as determined by the Division based on the nature of the treatment used or the conditions at the site which limit the effectiveness of any available treatment, and the owner or operator complies with the conditions for the termination of remediation set forth in an approved plan of corrective action or an approved amendment to such a plan; or*

(c) After the groundwater is treated for not less than 1 year, the concentration of dissolved constituents in the water, measured monthly, fits a curve that is substantially linear and approaches zero slope at the final portion of the curve. The curve must be established using the following equation:

$$C = C_f + C_o e^{-kt}$$

Where: “C” means the concentration of the contaminant at “t” in micrograms per liter.

“Cf” means the final concentration of the contaminant in micrograms per liter which the curve approaches asymptotically.

“Co” means the difference between the final concentration of the contaminant and the concentration of the contaminant at time zero in micrograms per liter.

“e” means the base of the natural log or 2.718.

“t” means the time measured in days.

“k” means the decay constant.

2. After any remediation is terminated pursuant to subsection 1, the owner or operator shall ensure that any contaminated groundwater is monitored for not less than 1 year to determine the level of contamination in the groundwater. The Division shall determine the frequency of any monitoring required pursuant to this subsection, except that the Division shall not require monitoring more frequently than once each month.

Sec. 16. NAC 445A.22755 is hereby amended to read as follows:

445A.22755 The Administrator may hold such hearings as he deems necessary to obtain public testimony regarding any corrective action required to be taken pursuant to NAC 445A.226 to 445A.2275, inclusive, *and sections 2 to 5, inclusive, of this regulation* which affects more than one owner or operator or members of the general public.

Sec. 17. NAC 445A.856 is hereby amended to read as follows:

445A.856 1. Except as otherwise provided in this section, Class I and Class IV injection wells are prohibited, and the Division shall not issue any permit to construct or operate such a well.

2. Cesspools and other types of vertical injection wells or drywells used for the injection of sanitary waste, other than engineered leach fields approved by the Division or local health authority, are prohibited.

3. The injection of any hazardous waste through a well is prohibited, except under conditions where injection wells are used to inject contaminated groundwater that has been treated and is being injected into the same formation from which it was drawn, if the subsurface emplacement of fluids is approved by the Environmental Protection Agency, or this State, as required pursuant to the provisions for the cleanup of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 et seq., or pursuant to NAC 445A.226 to 445A.22755, inclusive ~~§~~, *and sections 2 to 5, inclusive, of this regulation.*

4. Motor vehicle waste disposal wells that were not operational or under construction on or before April 5, 2000, are prohibited.

Sec. 18. Chapter 459 of NAC is hereby amended by adding thereto a new section to read as follows:

1. An owner or operator of a storage tank who submits a report pursuant to NAC 459.996 or a notice pursuant to NAC 459.9972 shall comply with the provisions of NAC 445A.226 to 445A.22755, inclusive, and sections 2 to 5, inclusive, of this regulation. The Division may allow the owner or operator to use any alternative technology approved by the Division when taking any corrective action concerning soil or groundwater pursuant to those provisions.

2. If the report or notice indicates that a regulated substance has been released, the Division may require the owner or operator to assess any soil or water contaminated by the release to determine whether the presence of any hazardous waste was created by the release.

3. As used in this section, "hazardous waste" has the meaning ascribed to it in NAC 445A.826.

Sec. 19. NAC 459.974 is hereby amended to read as follows:

459.974 1. A participant must submit a remedial agreement to the Administrator within 1 year after the date on which his application was approved by the Administrator. In addition to the requirements of NRS 459.636, a remedial agreement must include:

(a) A cost estimate and information regarding the financial ability of the participant to perform the voluntary cleanup as set forth in NAC 459.9741;

(b) A phase II environmental assessment using the Standard Practice for Environmental Site Assessments of the American Society for Testing and Materials or any equivalent method that is approved by the Administrator;

(c) A corrective action plan that identifies the substances to be removed or remediated, the proposed removal or remediation methods and appropriate remediation standards, consistent with NAC 445A.226 to 445A.22755, inclusive, ~~§~~ and *sections 2 to 5, inclusive, of this regulation; and*

(d) A description of the intended use of the property.

2. A participant may not initiate any removal or remediation that is described in a remedial agreement until the remedial agreement has been approved by the Administrator.

Sec. 20. NAC 459.9921 is hereby amended to read as follows:

459.9921 As used in NAC 459.9921 to 459.999, inclusive, *and section 18 of this regulation*, unless the context otherwise requires, the words and terms defined in NAC 459.9922 to 459.9929, inclusive, have the meanings ascribed to them in those sections.

Sec. 21. NAC 459.996 is hereby amended to read as follows:

459.996 1. The owner or operator of a storage tank shall report any release promptly in accordance with the requirements of NAC 445A.347 and 40 C.F.R. ~~[\§§ 280.50 and 280.53.]~~ *§ 280.61 if the release from the storage tank is confirmed in accordance with the provisions of 40 C.F.R. § 280.52. The owner or operator shall submit the report regardless of the amount of the release for which the report is submitted.*

2. ~~[As soon as possible after the release, the operator shall provide the Division with a written description of how, when and where the release occurred. This report must include a description of any damage known to the operator to have been caused by the release.]~~ *The owner or operator of a facility where a storage tank is located shall, in accordance with the reportable quantities established in NAC 445A.347 and 40 C.F.R. § 280.53, report each spill or overflow and the discovery of any soil contaminated by any previous spill or overflow.*

3. The owner or operator shall take all steps for initial response and abatement prescribed in 40 C.F.R. §§ 280.60, 280.61 ~~[]~~ and 280.62 to protect the site of the release from further damage.

4. The owner or operator shall permit the Division to inspect any property or records relating to the release or damage caused by the release.

5. As used in this section, “spill or overflow” means any release of a regulated substance that occurs:

(a) Above the surface of the ground at a facility where a storage tank is located;

(b) From a dispenser for motor fuel above the sheer valve for the dispenser; or

(c) From any ancillary equipment for the tank system that:

(1) Is not included in any system for the detection of a leak; and

(2) Is accessible to visual inspection.

Sec. 22. NAC 459.9972 is hereby amended to read as follows:

459.9972 1. The owner or operator of a storage tank shall provide an assessment to the Division before a storage tank is permanently closed.

2. The assessment must be conducted:

(a) Using analytical test method 8015 of the Environmental Protection Agency that is modified for petroleum hydrocarbons and other constituents as required by the Division; and

(b) On two soil samples that are obtained from native soil less than 2 feet below the bottom of the excavation, from opposite sides or ends of the excavation in an area where contamination is most likely to be present.

3. The analysis must be conducted by a laboratory that is approved by the Division.

4. The owner or operator of an underground storage tank *shall notify the Director in the manner prescribed in NAC 445A.347 if, during an assessment conducted pursuant to this section, any contaminated soil or groundwater is discovered in an amount that exceeds an amount of a release for which a notice is required pursuant to that section.*

5. *The owner or operator of an underground storage tank* that is removed from the ground shall:

(a) Dispose of or reuse the tank in accordance with the provisions of NRS 459.800 to 459.856, inclusive; and

(b) Maintain a record of the disposal or reuse.

Sec. 23. NAC 459.9985 is hereby amended to read as follows:

459.9985 NAC ~~[459.9971 to 459.9979, inclusive,]~~ 459.9972 does not relieve the owner or operator of the responsibility for securing an approval or permit from other governmental or regulatory entities.

Sec. 24. NAC 459.999 is hereby amended to read as follows:

459.999 If any provision of NAC 459.9921 to 459.999, inclusive, *and section 18 of this regulation*, or the application of any such provision to any person, thing or circumstance is held invalid, it is intended that the invalidity not affect the remaining provisions, or their application, that can be given effect without the invalid provision or application.

Sec. 25. NAC 459.99913 is hereby amended to read as follows:

459.99913 “Corrective action” means any action taken at a brownfield site pursuant to the requirements of NAC 445A.226 to 445A.22755, inclusive ~~[]~~, *and sections 2 to 5, inclusive, of this regulation.*

Sec. 26. NAC 459.99925 is hereby amended to read as follows:

459.99925 1. Except as otherwise provided in this section, for an applicant to be eligible for a loan from the Fund with respect to a property, the property must contain the site of a release of a hazardous substance, pollutant or petroleum product and qualify as a brownfield site.

2. An applicant may be eligible for a loan from the Fund with respect to a disposal site only if the Division determines that:

(a) The disposal site poses a threat to human health or the environment because of the presence of a hazardous substance and presents a danger to human health beyond any physical hazards that may be present at the disposal site;

(b) The disposal site was closed before the enactment of the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq.; and

(c) Corrective action is not required by the Division pursuant to NAC 444.7481 to 444.7499, inclusive.

3. An applicant is not eligible for a loan from the Fund with respect to a property which is eligible for funding pursuant to NAC 590.700 to 590.790, inclusive, or is otherwise subject to NAC 459.9921 to 459.999, inclusive, *and section 18 of this regulation*, unless:

(a) The loan will be used for corrective action on the property exclusively to address a hazardous substance which is distinct from, and not commingled with, petroleum contamination that is eligible for reimbursement pursuant to NAC 590.700 to 590.790, inclusive;

(b) The Division determines that the applicant is not eligible for funding pursuant to NAC 590.700 to 590.790, inclusive, for petroleum contamination on the property and:

(1) The applicant did not cause or contribute to the release of petroleum products; and

(2) The cleanup of the petroleum contamination would protect human health and the environment and result in the redevelopment of the site; or

(c) The loan will be used to continue the remediation of a hazardous substance commingled with petroleum contamination after the issues relating to the petroleum contamination have been mitigated.

4. As used in this section, “disposal site” has the meaning ascribed to it in NRS 444.460.

Sec. 27. NAC 459.99935 is hereby amended to read as follows:

459.99935 1. Any cleanup of a brownfield site financed with money from the Fund by a recipient who is not enrolled in the program for voluntary cleanup must be done in compliance with NAC 445A.226 to 445A.22755, inclusive ~~§~~, *and sections 2 to 5, inclusive, of this regulation.*

2. Before approving a plan and schedule for completing the corrective action that is submitted by the recipient pursuant to NAC 445A.2271 or 445A.2273, the Division must:

(a) Publish a notice and brief summary of the plan and schedule in a newspaper of general circulation in the county where the brownfield site is located;

(b) Make an electronic version of the entire plan and schedule available on its Internet website;

(c) Make reasonable efforts to provide personal notice to all owners and residents of property located within 500 yards of the outer boundary of the property on which the corrective action is to be performed; and

(d) Provide 30 days for the submission of written comments by the public.

3. The Division may withdraw financial assistance paid to a recipient if the Division determines that the recipient is not complying with the requirements set forth in NAC 445A.226 to 445A.22755, inclusive ~~[H]~~, *and sections 2 to 5, inclusive, of this regulation.*

Sec. 28. NAC 590.774 is hereby amended to read as follows:

590.774 In determining whether cleaning up a discharge from a storage tank:

1. Which has a capacity of 1,100 gallons or less; and

2. Which is used to store heating oil for consumption on the same premises where the oil is stored,

↪ is necessary to protect the environment or the public health and safety, the Division may consider the factors listed in subsection ~~[H]~~ 2 of NAC ~~[459.9973.]~~ *445A.227.*

Sec. 29. NAC 445A.22715, 459.9923, 459.9926, 459.997, 459.9971, 459.9973, 459.9974, 459.9975, 459.9976, 459.9977, 459.9978 and 459.9979 are hereby repealed.

TEXT OF REPEALED SECTIONS

445A.22715 Contamination of soil: Waiver of requirements. The Director may waive the provisions of NAC 445A.227, 445A.22705 and 445A.2271 and require an owner or operator to take corrective action immediately after the release of a hazardous substance, hazardous waste or a regulated substance that contaminates soil if the release:

1. Has an actual or imminent impact on groundwater; or
2. Is hazardous to public health and safety.

459.9923 “Aquifer” defined. “Aquifer” has the meaning ascribed to it in NAC 445A.812.

459.9926 “Dissolved product action level” defined. “Dissolved product action level” means the presence of a regulated substance or a constituent of such a substance in groundwater or surface water in excess of the maximum level of contaminants allowed by the Federal Government.

459.997 Releases: Authority of Administrator of Division. If a release occurs from an underground storage tank, the Administrator of the Division may, at such times as are reasonably required:

1. Question the owner or operator of the tank, under oath, about any matter relating to the release;
2. Examine the books and records of the owner or operator; and

3. Waive any of the provisions of subsections 1, 2, and 6 of NAC 459.9973 and require corrective action to be taken immediately based on:

- (a) Any actual or imminent impacts to bodies of water or groundwater; and
- (b) Any hazards to human health and safety.

459.9971 Releases: Assessment of contaminated soil or water.

1. If a regulated substance is released, the Division may require the owner or operator to assess the soil or water contaminated by the release to determine if hazardous waste generated from that release is present.

2. As used in this section, “hazardous waste” has the meaning ascribed to it in NAC 445A.826.

459.9973 Presence of excessive petroleum in soil: Evaluation; assessment of risk; corrective action.

1. If soil exceeds the soil action level, the Division shall consider, after an initial response and abatement as prescribed in 40 C.F.R. §§ 280.60, 280.61 and 280.62, an evaluation based upon the following factors before taking any corrective action:

- (a) The depth of groundwater;
- (b) The distance to irrigation or drinking water wells;
- (c) The type of soil;
- (d) The annual precipitation;
- (e) The type of regulated substance released;
- (f) The extent of contamination;
- (g) The present and potential land use;
- (h) The preferred routes of migration;

- (i) The location of structures or impediments;
- (j) The potential for a hazard related to fire, vapor or explosion; and
- (k) Any other factor that is specific to a site as determined by the Division.

2. If corrective action is required pursuant to subsection 1, the owner or operator may conduct an assessment of the site based on the risk that it poses to human health and the environment using test method E1739-95 of the American Society for Testing and Materials, or any equivalent method approved by the Division, to determine the necessary corrective action or to establish that corrective action is not necessary. A reimbursement of the cost of the assessment and the corrective action taken may be sought pursuant to the provisions of NRS 590.700 to 590.920, inclusive.

3. The Division shall determine whether an assessment complies with the requirements of test method E1739-95, or any equivalent method, and may reject, require revisions to, or withdraw its concurrence with the assessment at any time after the completion of the assessment because:

- (a) The assessment does not comply with those requirements; or
- (b) Conditions at the site have changed or previously unidentified or new information has become available which may have a detrimental impact on human health or the environment, unless the new condition or information would not alter the results of the assessment.

4. The Division shall provide written notice of its determination and the reasons for rejecting or requiring revisions to the assessment to the owner or operator. The owner or operator may submit a revised assessment to the Division or take the appropriate corrective action.

5. Unless the assessment is rejected or returned for revisions, the Division shall consider the results of the assessment pursuant to the evaluation of the level of petroleum hydrocarbons in the soil and the points of compliance to be elements of the plan for corrective action.

6. If corrective action is proposed pursuant to the requirements of this section or NAC 459.9976 or 459.9977, the owner or operator of a storage tank and his environmental manager, if applicable, shall prepare and submit to the Division a written certification that the corrective action selected is cost-effective.

7. As used in this section, "soil action level" means the presence in soil of a petroleum substance in excess of 100 milligrams per kilogram measured by using the analytical test method 8015 modified for petroleum hydrocarbons, or any other method approved by the Division.

459.9974 Management and evaluation of contaminated soil.

1. Soil that is removed through a corrective action and:

(a) Is contaminated at or above the soil action level by:

(1) A petroleum hydrocarbon substance only must be managed:

(I) In a municipal solid waste landfill unit or a Class III site, after obtaining written approval from the holder of the permit to operate the landfill unit or site, and the solid waste management authority; or

(II) At a disposal or treatment facility that is approved by the Division.

(2) A petroleum hydrocarbon substance and any other hazardous substance must be evaluated by the responsible person, who is certified pursuant to NAC 459.970 to 459.9729, inclusive, to determine if the soil is a hazardous waste.

(b) Is below the soil action level must be managed in a manner approved by the Division after obtaining written approval from the Division.

2. As used in this section:

(a) "Hazardous substance" has the meaning ascribed to it in NRS 459.429.

(b) "Hazardous waste" has the meaning ascribed to it in NAC 445A.826.

(c) "Soil action level" has the meaning ascribed to it in NAC 459.9973.

459.9975 Monitoring of groundwater.

1. If a regulated substance is detected in or is suspected to have contaminated groundwater, the owner or operator shall, with the approval of the Division, install at least one monitoring well. The number of wells and the location, design and installation of each well must be approved by the Division of Water Resources of the Department and the Division.

2. Monitoring of groundwater must be conducted for:

(a) Benzene, toluene, xylene, and ethylbenzene (BTEX), by test method 8260 of the Environmental Protection Agency or an equivalent method that is approved by the Division;

(b) If suspected or detected, methyl tertiary-butyl ether (MTBE), by test method 8260 of the Environmental Protection Agency or an equivalent method that is approved by the Division;

(c) Any other pollutant that is present in the groundwater as a result of the action of the owner or operator; and

(d) Any other constituent as directed by the Division.

459.9976 Corrective action required when excessive petroleum floating on surface of water of aquifer.

1. The owner or operator shall take corrective action if the free product action level is exceeded.

2. As used in this section, “free product action level” means the presence of 1/2 inch or more of a petroleum substance that is free-floating on the surface of the water of an aquifer using a measurement of accuracy of .01 feet.

459.9977 Corrective action required when dissolved product action level exceeded; exemptions.

1. Except as otherwise provided in subsections 2 and 3, the owner or operator of a storage tank shall take corrective action if the dissolved product action level is exceeded.

2. The Administrator of the Division may exempt an owner or operator from the requirements of subsection 1 if a written request and supporting information are filed with the Division. The Administrator may grant an exemption if:

(a) The groundwater affected by the release does not serve as a source of drinking water and is not likely to serve as a source of drinking water in the future because it is economically or technologically impractical to:

- (1) Recover the water for drinking because of the depth or location of the water; or
- (2) Render the water fit for human consumption.

(b) The total dissolved solids in the groundwater is more than 10,000 milligrams per liter and the groundwater is not reasonably expected to become a supply of drinking water; or

(c) The owner or operator demonstrates that the contamination does not and will not in the future exceed the dissolved product action level beyond the boundary of the site.

3. The Division:

(a) Will not require corrective action for dissolved product action level if the owner or operator provides a study which demonstrates that it is not feasible to achieve the water quality criteria based on a review of the available technology and the cost of corrective action.

(b) May require the owner or operator to take corrective action for dissolved product that is below the dissolved product action level if the use or potential use of the ground or surface water affected by the release would be detrimental to the potential or actual beneficial use of that water.

459.9978 Corrective action: Determining when aquifer is clean.

1. After corrective action, an aquifer is clean if:

(a) The results of an assessment indicate that the affected groundwater is consistently below the dissolved product action level; or

(b) After treatment of groundwater for not less than 1 year, the concentration of dissolved constituents versus time, measured monthly, fits a curve that is substantially linear and approaches zero slope at the final portion of the curve. The curve is defined by the following equation:

$$C = C_f + C_o e^{-kt}$$

2. For the purposes of subsection 1:

(a) “C” means the concentration of contaminant at t in micrograms per liter.

(b) “C_f” means the final concentration in micrograms per liter which the curve approaches asymptotically.

(c) “C_o” means the difference between the final concentration and the concentration at time zero in micrograms per liter.

(d) “e” means the base of the natural log or 2.718.

(e) “k” means the decay constant.

(f) “t” means time in days.

459.9979 Corrective action: Periodic monitoring; use of alternative technology.

1. After any corrective action has been taken, the responsible person shall monitor the groundwater for not less than 1 year. The Division shall determine the frequency of the monitoring, but in no case may the Division require monitoring more frequent than once each month of that year.

2. The Division may allow an owner or operator to use alternative technology when taking corrective action on soil or groundwater.

**NOTICE OF ADOPTION OF PROPOSED REGULATION
LCB File No. R189-08**

The State Environmental Commission adopted regulations assigned LCB File No. R189-08 which pertain to chapters 445A, 454 and 590 of the Nevada Administrative Code.

INFORMATIONAL STATEMENT

Regulation R189-08: Leaking Underground Storage Tank and Corrective Action

Regulation: This regulation revises the Underground Storage Tank regulations and the Corrective Action regulations that address environmental site cleanups. These regulations are contained in the Nevada Administrative Code at NAC 459.9921 to 459.999 and NAC 445A.226 to 445A.22755 respectively. More specifically, the proposed regulation consolidates cleanup requirements for hazardous substance, hazardous waste, or regulated substance released from underground storage tanks and all other release sources. The regulations also make revisions to site assessment procedures to accommodate all types of releases from minor incidents to large sites with long operational histories of potential releases. The regulations better define abatement actions and they refine soil action levels to include consideration of all potential exposure pathways. Detail has been added in the regulations to address requests for exemptions from groundwater corrective actions. The regulations also seek to clarify the transition from Underground Storage Tank compliance requirements, to the initiation of a Leaking Underground Storage Tank cleanup case.

1. A description of how public comment was solicited, a summary of public response and an explanation of how other interested persons may obtain a copy of the summary. The Nevada Division of Environmental Protection, Bureau of Corrective Actions held two public workshops on the above referenced regulation at the locations noted below.

Las Vegas May 13, 2009 9:00am – 12:00pm Las Vegas Readiness Center auditorium 4500 W. Silverado Ranch Blvd.	Carson City May 14, 2009 9:00am – 12:00pm NV Army National Guard 2444 Fairview Drive
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Approximately 50 people combined attended the workshops, largely representing the regulated community and the environmental consulting industry. In addition to the public workshops, targeted outreach was made to agencies responsible for resource management, local governments, and large facility owners who could be impacted by the propose regulations. Specific “outreach” was made to the following entities’: American Council of Engineering Companies; Resource management agencies; Truckee Meadows Water Authority; Southern Nevada Water Authority; Las Vegas Valley Watershed Advisory Council; Department of Defense (Hawthorne Army Depot, Nellis AFB, NAS Fallon); Kinder Morgan; and the Boeing company.

Official comments were solicited through public announcement, targeted outreach, and public workshops. The Nevada Division of Environmental Protection fielded numerous clarifying questions and informal comments that help to involve language changes being suggested by the Division in the errata sheet attached to R189-08. Official comment letters were received from the American Council of Engineering Companies, Kinder Morgan, and a certified environmental manager. Responses to comments were prepared for all formal comments received. Response to comments for Kinder Morgan and Ms. Tamara Pelham were made available to the State Environmental Commission because they encapsulated the major issues discussed in public workshops and related outreach efforts.

Following this workshop, the State Environmental Commission (SEC) held a public hearing to consider the regulation on June 17, 2009. The hearing was held at the Nevada Department of Wildlife's Conference Room A, 1100 Valley Road, Reno, Nevada. The SEC hearing agenda was posted at the meeting location, at the State Library in Carson City, and at the Offices of the Division of Environmental Protection in Carson City and Las Vegas. Copies of the agenda, the public notice, and the proposed regulation were also made available to all public libraries throughout the state as well as to individuals on the SEC electronic and ground-based mailing lists.

The public notice for the regulation was published on Monday June 1, June 8th and June 15th in the Las Vegas Review Journal and Reno Gazette Journal newspapers. Information about the regulation was also made available on the SEC website at:
http://sec.nv.gov/main/hearing_061709.htm#r189-08

2. The number persons who attended the SEC Regulatory Hearing:

- (a) Attended June 17, 2009 hearing; 30 (approx.)
 - (b) Testified on this Petition at the hearing: 2 (1 NDEP Staff & 1 support comment from Industry trade association)
 - (c) Submitted to the agency written comments: 3
- Note:** A comment/response document is posted on the SEC Website at:
http://sec.nv.gov/docs/r189_public_outreach_summary.pdf

3. A description of how comment was solicited from affected businesses, a summary of their response, and an explanation of how other interested persons may obtain a copy of the summary.

Comments were solicited from affected businesses as indicated in number 1 above.

4. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change.

The State Environmental Commission adopted the regulations with several non-substantive word clarifications to reflect comments acquired during the public workshop process. These changes are detailed in Errata Sheet attached to the above referenced regulations R189-08.

5. The estimated economic effect of the adopted regulation on the business which it is to regulate and on the public.

The regulation is not anticipated to have any significant economic impact on the public or Nevada businesses.

6. The estimated cost to the agency for enforcement of the adopted regulation.

There will be no additional cost to the agency for enforcement of the proposed regulation.

7. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the name of the regulating federal agency.

This regulation does not duplicate any other federal, state or local regulation.

8. If the regulation includes provisions which are more stringent than a federal regulation, which regulates the same activity, a summary of such provisions.

The regulation is not more stringent than any local or federal laws and regulations. More importantly, the proposed regulation is consistent with provisions of the federal Resource Conservation and Recovery Act (RCRA) which establishes requirements for corrective action at sites that generate or store hazardous wastes. The RCRA program has been delegated to the Division of Environmental Protection, and the corrective action elements of the program are routinely reviewed for their consistency with federal provisions. The proposed regulation is no more stringent than the federal Superfund cleanup program, which cannot be delegated to the States. However, the State's cleanup program has been found to be sufficient to maintain an enforcement bar that prevents direct federal action where a State-lead cleanup is in progress.

9. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

The proposed regulation does not address any fees.