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PROPOSED REGULATION OF THE STATE
ENVIRONMENTAL COMMISSION

Petition 2005-03

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

AUTHORITY: NRS. §§ 459.800 to 459.956

STORAGE TANKS

- 459.9921 Definitions.
- 459.9922 “Assessment” defined.
- 459.9923 “Aquifer” defined.
- 459.9924 “Corrective action” defined.
- 459.9925 “Department” defined.
- 459.9926 “Dissolved product action level” defined.
- 459.9927 “Division” defined.
- 459.9928 “Ground water” defined.
- 459.99281 “Listed” defined.***
- 459.99282 “Marina storage tank” defined.***
- 459.99283 “Petroleum” defined.***
- 459.9929 “Storage tank” defined.
- 459.993 Federal regulations: Adoption by reference of certain provisions; compliance required.
- 459.994 Testing of tanks for tightness.
- 459.99411 Marina Storage Tank: Applicability.***
- 459.99412 Marina Storage Tank: Secondary containment.***

- 459.99413** *Marina Storage Tank: Piping.*
- 459.99414** *Marina Storage Tank: Dispensers.*
- 459.9942** *Marina Storage Tank: Operation.*
- 459.995 Financial responsibility of owners and operators.
- 459.996 Releases: Reporting; protection of site; inspection by Division.
- 459.997 Releases: Authority of Administrator of Division.
- 459.9971 Releases: Assessment of contaminated soil or water.
- 459.9972 Assessment required before closure of tank; removal of tank from ground.
- 459.9973 Presence of excessive petroleum in soil: Evaluation; assessment of risk;
corrective action.
- 459.9974 Disposal and evaluation of contaminated soil.
- 459.9975 Monitoring of ground water.
- 459.9976 Corrective action required when excessive petroleum floating on surface of
water of aquifer.
- 459.9977 Corrective action required when dissolved product action level exceeded;
exemptions.
- 459.9978 Corrective action: Determining when aquifer is clean.
- 459.9979 Corrective action: Periodic monitoring; use of alternative technology.
- 459.9985 No relief of responsibility to secure approval or permit.
- 459.999 Severability.

STORAGE TANKS

NAC 459.9921 Definitions. (NRS 459.826) As used in NAC 459.9921 to 459.999, inclusive, 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.

NAC 459.9922 “Assessment” defined. (NRS 459.826) “Assessment” means a test for the presence of a regulated substance.

NAC 459.9923 “Aquifer” defined. (NRS 459.826) “Aquifer” has the meaning ascribed to it in NAC 445A.812.

NAC 459.9924 “Corrective action” defined. (NRS 459.826) “Corrective action” means a permanent remedy that is taken if a regulated substance is released to prevent the substance from migrating and causing danger to the present or future health of the public or to the environment.

NAC 459.9925 “Department” defined. (NRS 459.826) “Department” means the State Department of Conservation and Natural Resources.

NAC 459.9926 “Dissolved product action level” defined. (NRS 459.826) “Dissolved product action level” means the presence of a regulated substance or a constituent of such a substance in ground water or surface water in excess of the maximum level of contaminants allowed by the Federal Government.

NAC 459.9927 “Division” defined. (NRS 459.826) “Division” means the Division of Environmental Protection of the Department.

NAC 459.9928 “Ground water” defined. (NRS 459.826) “Ground water” has the meaning ascribed to it in NAC 444.579.

NAC 459.99281 "Listed" defined. "Listed" has the meaning ascribed to it in International Fire Code, 2003.

NAC 459.99282 “Marina storage tank” defined. “Marina Storage Tank” means a petroleum storage tank of at least 110 but not more than 12,000 gallons used to fuel water vessels of which more than 90% of the tank is either above ground level or in or over water and includes all connected piping except piping, valves, hose(s), filter(s), and nozzle(s) associated with the dispenser.

NAC 459.99283 "Petroleum" defined. "Petroleum" has the meaning ascribed to it in 40 CFR § 280.12.

NAC 459.9929 “*Underground* storage tank” defined. (NRS 459.826) “*Underground* storage tank” has the meaning ascribed to “*underground* storage tank” in 40 C.F.R. § 280.12.

NAC 459.993 Federal regulations: Adoption by reference of certain provisions; compliance required. (NRS 459.826, 459.830)

1. The State Environmental Commission hereby adopts by reference the provisions of 40 C.F.R. §§ 280.10 to 280.116, inclusive, as they existed on July 1, 1995. A copy of the volume containing these provisions may be obtained at a cost of \$40 from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402.

2. Each owner and operator of *an underground* storage tank shall comply with the requirements of 40 C.F.R. §§ 280.10 to 280.116, inclusive.

3. For the purposes of this section, any reference to “implementing agency” in 40 C.F.R. §§ 280.10 to 280.116, inclusive, shall be deemed to mean the Division.

NAC 459.9931 2003 International Fire Code: Adoption by reference of certain provisions; compliance required.

1. The state environmental commission hereby adopts by reference certain provisions of the 2003 International Fire Code, (IFC 2003), as it existed October 2003. A copy of the volume containing these provisions may be obtained at a cost of \$60 (2005) from the International Code Council, (www.iccsafe.org.)

NAC 459.994 Testing of tanks for tightness. (NRS 459.826)

1. Except as otherwise provided in this section, each owner or operator of *an underground* storage tank shall perform or cause to be performed a test of the tank for tightness in accordance with the schedule contained in subsection (c) of 40 C.F.R. § 280.40.

2. The test must be performed by a contractor ~~[who is]~~ certified by the Division.

3. The owner or operator shall retain a certificate from the person performing the test showing that the test has been performed. The certificate must be made on a form approved by the Division.

4. In lieu of a test for tightness, each owner or operator may conduct any release detection methods prescribed in 40 C.F.R. §§ 280.43 and 280.44 as an acceptable means of release detection.

5. An operator of *an underground* storage tank that is not empty but is temporarily closed in accordance with 40 C.F.R. § 280.70 shall perform or cause to be performed a test of the storage tank for tightness in accordance with 40 C.F.R. §§ 280.40 to 280.45, inclusive.

6. Except as otherwise provided in this subsection, an abandoned storage tank must be tested for tightness in accordance with subsection (c) of 40 C.F.R. § 280.43 before it is returned to service. If a test of the abandoned storage tank will cause a threat to human health or the environment, as determined by the Division, the Division may waive the test for tightness or require any other method of testing in accordance with the provisions of subsection (h) of 40 C.F.R. 280.43 and subsection (c) of 40 C.F.R. 280.44. The allocation of costs pursuant to NRS 590.880 or 590.890 will be applied if there is a discharge from the storage tank.

7. A test for tightness is not required before *an underground* storage tank is closed pursuant to subsection (b) of 40 C.F.R. § 280.71 if the Division:

(a) Has no record of the storage tank being installed, operated, or closed; and

(b) Is unable to locate the owner of the storage tank.

8. As used in subsection 6, “abandoned storage tank” means an *underground* storage tank that:

(a) Is not maintained and whose owner or operator has not provided the Division with a written statement of his intention to close the storage tank; or

(b) Is not in service and does not comply with 40 C.F.R. § 280.70 or 280.71.

NAC 459.9941 Marina Storage Tanks – Applicability

1. Timeframe for registration and compliance with regulations for marina storage tanks

On or before September 30, 2005 and each year thereafter the owner or operator must register with the Division on a prescribed form and pay a fee of \$50 for each marina storage tank compartment. Marina tanks must come into compliance with the regulations on or before September 30, 2006. Compliance may be required sooner for any part of an existing system that poses a current threat to nearby property, to human health, or to the environment.

NAC 459.99411 Marina tank construction, design, and location

1. Tanks must meet the requirements of IFC 2003.

2. Location of aboveground storage tanks at marinas

Tanks supplying marina service stations and pumps not integral with the dispensing device must be onshore. Double walled tanks not exceeding 1100 gallons aggregate capacity may be located on a pier of the solid fill type provided spacing, containment and piping are in compliance with applicable regulations.

3. Overfill prevention.

Tanks must meet the requirements of IFC 2003.

4. Corrosion protection

(a) Any metallic portion of a tank or its piping system that is in contact with the soil or water and is subject to corrosion must be protected from corrosion by a properly engineered, installed and maintained, continuously operating cathodic protection system in accordance with 40 CFR 280.20. (B) (2)

(b) A metal tank sitting on a concrete pad will be considered in contact with the soil unless it is insulated from the concrete by a dielectric material. Anchoring hardware is not considered part of the tank.

NAC 459.99412 Secondary containment.

Aboveground storage tanks must have secondary containment for the fuels stored in them.

(a) Multiple products stored within the same containment area must be compatible with each other.

(b) If the secondary containment area is open to precipitation, it must be able to contain 110 percent of the capacity of the largest tank plus the volume displaced by other tanks within the containment area.

(c) Secondary containment can be made of concrete or steel and must be compatible with and impermeable to the products stored in the tanks.

(d) Liquid discharges to the environment from secondary containment are prohibited if contamination of the liquid by a regulated substance is detected or suspected. Secondary containment must not have any uncapped drain that extends outside of the containment area.

Double-walled tanks do not require additional containment if all the following conditions are met:

(a) All piping connections to the tanks are made above the normal maximum liquid level.

(b) A mechanism is provided to prevent the release of liquid from the tank by siphon flow.

(c) A mechanism, accessible to the delivery operator, is provided for determining the level of liquid in the tank.

(d) A mechanism is provided to prevent overfilling by sounding an alarm when the liquid level in the tank reaches 90 percent of capacity and by automatically stopping the delivery of liquid to the tank when the level in the tank reaches 95 percent of capacity. In no case will these provisions restrict or interfere with the proper functioning of the normal vent or the emergency vent.

(e) Where the interstitial space is enclosed, it is provided with emergency venting.

(f) A means is provided to verify the integrity of the double wall.

NAC 459.99413 Piping

1. Valves on piping

(a) If a submersible pump system is used, a listed emergency shutoff valve must be installed at each dispensing device.

(b) If a suction pump-type dispensing device is used, a listed, vacuum-actuated shutoff valve, with a shear section or equivalent-type valve must be installed directly under each dispensing device.

(c) Piping and valves subject to pressure extremes caused by thermal expansion of the contents must be equipped with a pressure-relieving device that has secondary containment.

2. External piping protection

Above ground piping runs must be prevented from contaminating the environment as a result of leaks by enclosure in a protective containment leading to a catch basin equipped with an operating automatic leak detection audible alarm and shutoff device.

3. Underground piping materials

(a) After September 30, 2005 all new underground piping must be installed as follows:

(1) Non-metallic;

(2) Double-walled and integral with a listed leak sensor;

(3) A tracer locator wire must be installed in all buried piping trenches; and

(a) Existing facilities that have metallic piping that fails due to corrosion must upgrade all piping and come into full compliance with NAC 459.99413.

(b) Existing facilities that have metallic or single-walled nonmetallic piping that are permanently relocating a fuel island must install dispenser sumps with leak sensors. Any additions to the metallic piping must be nonmetallic single- or double-walled piping.

4. Piping at floating marinas

(a) Suitable lengths of oil, weather, and UV resistant flexible hose UL approved for use at marinas must be used between the onshore piping and the piping on the floating structure.

(b) Piping at all hinge locations must be connected with UL approved listed flexible piping.

(c) All docks and pier installations must have double-walled piping.

(d) A listed emergency breakaway device designed to retain liquid on both sides of breakaway point shall be installed in a spill containment box monitored with a leak sensor on each line serving the dock and anchored at the onshore end of the piping.

NAC 459.99414 Dispensers

1. Requirements

(a) A control must be provided that will permit the fuel delivery pump to operate only when a dispensing nozzle is removed from its bracket or normal position with respect to the dispensing device and only when the switch on this dispensing device is manually actuated. This control must also stop the pump when all nozzles have been returned either to their brackets or to the normal non-dispensing position.

(b) Dispensers not integral with the tank must have sumps with operating leak-monitoring sensors that automatically shut off the electricity to the pumping device.

2. Dispenser hose

Hoses must be checked and a record kept daily for evidence of blistering, carcass saturation or separation, cuts, nicks or abrasions that expose reinforcement material, and for slippage, misalignment or leaks at couplings.

(a) Defective hoses must be removed from service within 48 hours of evidence of failure.

(b) At least once each month the hose must be completely extended and inspected as follows:

(1) The hose couplings and the first twelve inches of hose adjacent to the couplings must be examined.

(2) The hose must be checked for structural weakness evidenced by soft spots by pressing the hose in the area around its entire circumference. Hoses that show evidence of soft spots must be removed from service.

3. Nozzles

Dispensing nozzles used at marina service stations must be equipped with a non-drip check valve.

NAC 459.9942 Operation

1. Tight-fill connection requirements

(a) All aboveground marina tanks must be filled through a liquid tight connection enclosed in a grounded fill pipe spill containment box located at least 3 feet above the ground, 20 feet away from a water body, and capable of containing a minimum of 5 gallons.

(b) Where the storage tank is filled by means of remote piping, either a check valve and shutoff valve with a quick-connect coupling or a check valve with a dry-break coupling must be installed in the piping at a point where connection and disconnection is made between the

tank and the delivery vehicle. This device must be protected from tampering and physical damage.

(c) Exceptions are tanks not exceeding 1,100 gallons or older tanks not equipped to accept a tight-fill that are filled from a delivery nozzle from the delivery vehicle.

2. Monitoring requirements

Monitoring consists of performing the task and dating and recording the results.

(a) Weekly monitoring. Aboveground storage tank systems that comply with the containment requirements for new aboveground storage tanks must be visually monitored for leaks weekly.

(1) Double-walled aboveground storage tanks are exempt from weekly monitoring.

(b) Monthly monitoring. The monthly monitoring requirements are:

(1) Visual inspection in accordance with NAC 590.740 (2).

(2) Release detection in accordance with 40 CFR 280.43 (a-d & g).

(3) Weekly and monthly monitoring is not required when a marina is closed during the off-season provided the tank(s) contain only a de minimis quantity.

(c) Annual monitoring. All underground or underwater product lines that are not double-walled with interstitial leak sensors must be tightness tested for leaks in accordance with the requirements of 40 CFR 280.41 (b).

(d) Manufacturer recommended monitoring. All electronic and mechanical equipment used for release detection, monitoring or warning must be tested for proper operation and calibration annually or per the manufacturer's recommendation, whichever is more frequent.

3. Inventory records

(a) Inventory daily records are required where due to the nature of the aboveground storage tank and/or its secondary containment visual inspections are not adequate for purpose of determining whether a leak has occurred.

(1) The records must be kept at the premises or made available for inspection upon 24 hours notice. Records must be kept for three years.

(2) The records must include at a minimum, recordings showing, by product, daily reconciliation between fuel received, fuel used, fuel sold and inventory on hand. If there is more than one system consisting of a tank(s) serving a separate pump(s) or dispenser(s) for any product, the reconciliation must be maintained separately for each tank system.

(3) Daily inventory records are not required during the off-season provided the tanks contain a de minimis quantity.

NAC 459.995 Financial responsibility of owners and operators. (NRS 459.826, 459.834)

1. If requested by the Division, each owner and operator of a registered storage tank shall submit to the Division evidence of his financial responsibility. As used in this subsection, “registered storage tank” means a storage tank operated by a person who is:

(a) Required to demonstrate financial responsibility pursuant to 40 C.F.R. § 280.93; or

(b) Required to or who elects to register the storage tank pursuant to NRS 590.850 or 590.920.

2. An owner or operator may demonstrate his financial responsibility pursuant to the provisions of 40 C.F.R. §§ 280.94 to 280.103, inclusive.

3. An owner or operator:

(a) Who operates a storage tank containing fuel for jet or turbine-powered aircraft; and

(b) Who does not elect to obtain coverage pursuant to subsection 2 of NRS 590.920, shall comply with the requirements for financial responsibility contained in 40 C.F.R. §§ 280.90 to 280.116, inclusive.

NAC 459.996 Releases: Reporting; protection of site; inspection by Division. (NRS 459.826)

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.

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.

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.

NAC 459.997 Releases: Authority of Administrator of Division. (NRS 459.826, 459.834) If a release occurs from a 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 *water bodies or* ground water; and

(b) Any hazards to human health and safety.

NAC 459.9971 Releases: Assessment of contaminated soil or water. (NRS 459.826)

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.

NAC 459.9972 Assessment required before closure of tank; removal of tank from ground. (NRS 459.826, 459.832)

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 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.

NAC 459.9973 Presence of excessive petroleum in soil: Evaluation; assessment of risk; corrective action. (NRS 459.826, 459.834)

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 ground water;
- (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.

NAC 459.9974 ~~Disposal~~ **Management** and evaluation of contaminated soil. (NRS 459.826, 459.834)

1. Soil that is contaminated:

(a) By a petroleum hydrocarbon substance only, and is removed through a corrective action, must be ~~disposed of~~ **managed**:

(1) 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

~~[(2) At a disposal or treatment facility that is approved by the Division.]~~

(2) In a manner approved by the Division if contaminated with total petroleum hydrocarbon (TPH) below the soil action level.

(3) In a manner approved by the Division and after obtaining written approval from the Division.

(b) By 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.

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.

NAC 459.9975 Monitoring of ground water. (NRS 459.826)

1. If a regulated substance is detected in or is suspected to have contaminated ground water, 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 ground water must be conducted for:

(a) Benzene, toluene, xylene, and ethylbenzene (*BTEX*) by test method ~~624~~ 8260 of the Environmental Protection Agency or an equivalent method that is approved by the Division;

~~[(b) Total petroleum hydrocarbons, by analytical test method 8015 modified for petroleum hydrocarbons; and]~~

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

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

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

NAC 459.9976 Corrective action required when excessive petroleum floating on surface of water of aquifer. (NRS 459.826, 459.834)

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.

NAC 459.9977 Corrective action required when dissolved product action level exceeded; exemptions. (NRS 459.826, 459.834)

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 ground water 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 ground water is more than 10,000 milligrams per liter and the ground water 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.

NAC 459.9978 Corrective action: Determining when aquifer is clean. (NRS 459.826, 459.834)

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

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

(b) After treatment of ground water 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:

$$C = C_f + \frac{C_0 - C_f}{k} e^{-kt}$$

2. For the purposes of subsection 1:

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

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

(c) “Co” 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.

NAC 459.9979 Corrective action: Periodic monitoring; use of alternative technology. (NRS 459.826, 459.834)

1. After any corrective action has been taken, the responsible person shall monitor the ground water 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 ground water.

NAC 459.9985 No relief of responsibility to secure approval or permit. (NRS 459.826) NAC 459.9971 to 459.9979, inclusive, does not relieve the owner or operator of the responsibility for securing an approval or permit from other governmental or regulatory entities.

NAC 459.999 Severability. (NRS 459.826) If any provision of NAC 459.9921 to 459.999, inclusive, 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.