Guidance Document for Addressing An Onsite Sewage Disposal System Upset, Bypass or Failure

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Nevada Division of Environmental Protection
Bureau of Water Pollution Control
Technical Services, Compliance & Enforcement Branch

I. Noncompliance, Unauthorized Discharge, Bypass, and Upset

a. The Permittee (owner or operator) of a commercial, Onsite Sewage Disposal System (OSDS) is required to notify the Division (NDEP) within 24 hours in the event of a diversion, bypass, spill, overflow, upset or other discharge not authorized by the General or Individual Permit (including commercial septic systems, aerobic or nitrogen reducing treatment units, or sewage holding tanks (vault toilets and graywater holding tanks)).

b. To report a bypass, failure or upset of an OSDS, contact:

   I. NDEP Spill Hotline at (775) 687-9485 or (888) 331-6337, 24-hr. assistance, or
   II. Website: www.ndep.nv.gov (Report a Spill).

c. A written report is also required for submittal to the Division (NDEP) within five (5) days of the time the Permittee became aware of the OSDS failure, bypass or upset. The written submission of the five-day report shall contain a description of the event, including:

   1. Time and date of failure, bypass, or upset.
   2. Type of failure, bypass, or upset.
   3. The effluent limitation, condition or standard violated.
   4. Exact location and estimated amount of discharge (sewage, septage, or effluent).
   5. Flow path and any surface bodies of water where the discharge reached.
   6. The specific cause of the discharge; and
   7. The preventive and/or corrective actions taken.

II. Example of an OSDS Upset, Bypass or Failure

a. Observation of a plumbing system backup or Sanitary Sewer Overflow (SSO) released through a plumbing fixture (toilet, sink, or shower), floor drain, sewer system cleanout, manhole vault, septic tank lid, or the ground surface via leach (drain) field surfacing.

b. Unauthorized diversion of septage or effluent onto the ground, ditch, watercourse, or municipal collection system or storm drain.

c. Standing water accumulation (effluent mounding) or damp spots observed in and around the septic system, including on top of the septic tank, leach field, or absorption mound.

c. Green vegetative growth (weeds, cattails, or shrubs) growing over the septic tank, leach field, or absorption mound, indicative of surfacing or mounded effluent (even in dry weather periods).

d. Strong and recurring objectionable sewage odor (rotten egg odor) inside buildings (plumbing vent gases) or outdoors, around the septic tank, leach field, or absorption mound.

e. Collapse of a septic tank cover or manhole lid (subsidence or corrosion).

f. Broken sewer or effluent pipe discharging sewage or effluent directly onto the ground or ditch, into a surface water body, or municipal storm drain.

g. Elevated levels of coliform bacteria or nitrates, or detection of foul-tasting water from a nearby drinking water well.

h. Algal blooms observed down-gradient of the septic tank, leach field, or absorption mound, found in a nearby stream, pond, lake, or watercourse.

III. Permittee's Response to an OSDS Upset, Bypass, or Failure

a. As soon as practicable (within one (1) day), notify the NDEP Spill Hotline and/or BWPC Office (Carson City or Las Vegas) of the upset, bypass, or failure. Other agencies may require notification (e.g., OSDS servicing a school, daycare facility, nursing home, medical facility, or commercial food establishment).

b. Minimize the amount of sewage spillage or effluent surfacing (e.g., limit indoor water use until issue is repaired, and if needed, provide portable toilets and handwash stations).

c. Barricade public access (including pets) to the spill or surfacing area site (install orange traffic cones, yellow caution tape, warning signs, or temporary plastic fencing). Notify all affected persons of the incident and implement water conservation.

d. Contract with a licensed septage pumper to pump the septic or holding tanks as frequently as required to reduce (minimize) any further spilling or surfacing of effluent.

e. Disinfect all affected soil or media (pavement and walkways) with chlorine bleach (powdered or liquid), lime, or other disinfectant (apply bleach at a 1:10 solution or add lime to increase the waste's pH level to 12.5 Std. Units). Use appropriate Personal Protective Equipment (PPE) when handling all chemicals, including disposable gloves, safety eyewear, and chemical fume respirators.

f. Contract with a licensed plumbing contractor to address the sewage backup, including blocked laterals, buildup of cooking grease in pipes or traps, or other flow obstructions caused from the accumulation of wipes or rags in the sewer lines.

g. *Note:* Nevada regulations require all Onsite Sewage Disposal Systems to be designed by a registered Nevada professional engineer (P.E.). All OSDS plans and calculations shall be wet stamped by the engineer, including certifying completion of the installation in writing. Please contact our office for approval of any emergency repairs of an Onsite Sewage Disposal System not designed by a registered Nevada P.E.

IV. Recommendations to Avoid an OSDS Upset, Bypass, or Failure

a. Operate the OSDS within the approved design capacity, occupancy flow, and sludge storage allowance capacity (design capacity in gallons is listed on the NDEP Letter of Inclusion or Individual Permit).

b. Contract with a licensed septage hauler to annually check the septic tank scum and sludge levels and maintain these levels below 50% of the total liquid operating depth (see attachment).

c. Address all plumbing issues promptly such as fixing leaky faucets or stopping running toilets.

d. Limit sanitary wastewater disposal to fecal/urine wastes, septic-safe toilet paper, and moderate usage of non-hazardous household cleaners. Consider not using a kitchen sink food grinder and instead, disposing of food wastes into a lined trash receptacle to prevent organic overload of a septic system.

e. An OSDS shall not be hydraulically overloaded by receiving prohibited discharges into the onsite sewer including cooling water, air-conditioning water, water softener or reverse osmosis brine, swimming pool or hot tub water, intercepted groundwater (French drain or tile drainage systems), roof drainage, or other sources of water detrimental to the performance of the system and drain field. Commercial kitchens must provide a grease interceptor, approved by the appropriate local health authority, and laundromats must provide a lint interceptor (lint trap).

f. NDEP prohibits disposal of any industrial wastes or hazardous materials into an OSDS. Commercial (OSDS) and residential (ISDS) septic systems are designed and permitted only for domestic wastewater treatment. Hazardous chemicals not only adversely affect the biological performance of a septic system, but such contaminants pollute State groundwater resources, which supply our drinking water.

Fig. 1 – Example (failed leach field)

Fig. 2 – Example (unauthorized bypass of effluent)

Fig. 3 – Example (illicit septage disposal)

Fig. 4 – Example (surfaced effluent & weed growth)

Fig. 5 – Example (fencing/posting during field repair)

Fig. 6 – Example (providing portable toilets during sewer repair)

Fig. 7 – Example (posting a sewage spill)

Fig. 8 – 2nd Example (posting a sewage spill)

Fig. 9 – Disinfecting spills (1:10 dilution of bleach to water)

Fig. 10 – Safety first! (Use proper PPE when cleaning up sewage spills)

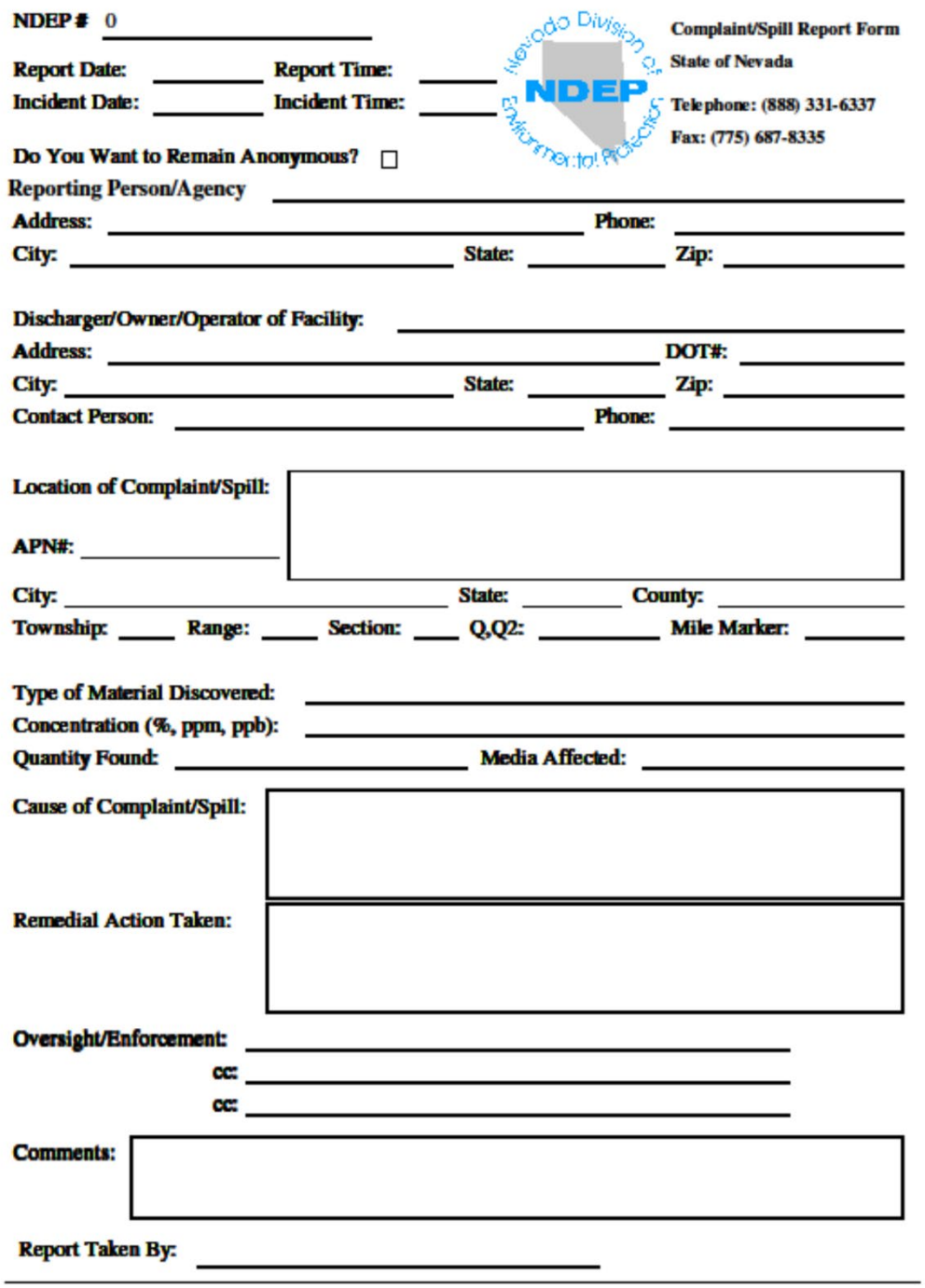

Fig. 11 – Spill Report Template

Nevada Division of Environmental Protection
Bureau of Water Pollution Control
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Ph: 775-687-9418

Annual Large-Capacity Septic System Evaluation Report

Due by January 28th of every year

Permit Number: _____

This form is meant to collect information that will help 1) you report required information on your system(s) and 2) maintain your septic system(s) to prevent system failure. **Failure to check your system on a regular basis will lead to system failure, public health hazards, enforcement action, and very costly repairs.** Your system may require checking more frequently than once a year.

Facility Name _____ Contact Person _____

Address _____

City/Zip Code _____ Facility Phone _____

Number Tanks _____; Size of each Tank:_____ Total Volume:_____ gal.

Does the system have a grease trap/interceptor? **Yes No** Does the system have a sand oil separator? **Yes No**

Year system installed: _____ System designed by: _____

Type and number facilities, persons or units served: _____
(i.e. mobile home park – number of sites; school – number of students & staff)

Please complete a separate form for each septic tank/system for the information below.

Level of	Date measured	By whom	Depth(s)	Method(s) used	**Tank must be pumped if:** Total of scum and sludge depths are equal to or greater than 50% of the liquid depth
Scum:					
Sludge:					Scum ____ + Sludge ____ = _____
Total Liquid:					$(S_{Total} / L_{Total}) \times 100 =$ _____ %

Leach/Drain field conditions (circle one each): Winter: Dry Damp Wet Summer: Dry Damp Wet
(If field is Damp, field may be failing. If field is Wet, you must contact an engineer to evaluate system, and our office immediately)

Date septic tank last pumped: _____ Volume of septage pumped: _____ Name of pumping company: _____

Dates and types of maintenance performed on any components of system (grease traps and sand oil separators require routine maintenance, and should be pumped as necessary, but pumping must occur every six (6) months):

_____

Are Monitoring Wells present at location? ☐ Yes ☐ No
If yes, number present _____ If Yes, attach copy of laboratory analysis.

Are piezometers present within the drain field area? ☐ Yes ☐ No
If yes, number present: _____ Readings and dates of reading: _____
_____

PLEASE NOTE: ATTACH THE ON-SITE MAINENANCE LOG WHEN RETURNING THIS FORM

Please print your name, sign and date below:

Print Name _____ Signature _____ Date _____

Fig. 12 – Annual OSDS Report Template