



FACT SHEET

WTS – 23

Criteria for Large-Capacity On-site Sewage Disposal Systems Including Commercial and Multiple-Dwelling Structures

(Ref: NAC 278, NAC 444, NAC 445A) Rev. June 2004

Note: For plan submittals, please complete the checklist attached to this document

1. General

In Nevada, a large-capacity individual sewage disposal systems (ISDS) is defined as: 1) a system having a capacity equal to or greater than 5,000 gallons per day (gpd), and 2) as one large tank or a group of smaller tanks under one ownership for a single or multiple-dwelling structure(s) on a common property. These systems are referred to as individual sewage disposal system in the regulations as follows:

NAC 444.764 "Individual sewage disposal system" defined. (NRS 439.200, 444.650) "Individual sewage disposal system" means a single system of sewage treatment tanks and effluent disposal facilities serving:

1. A single-family dwelling; or
2. In the case of a commercial system, one or more buildings that are not used as single-family dwellings.

Generally, for purposes of this and other documents, we will refer to these systems as large-capacity septic systems (LCSS).

The requirements below are to be met for design and installation of LCSS, and may be more stringent than requirements found in NAC 444. At a minimum, NAC 444 requirements must be met unless requirements in WTS-23 are more stringent, then those requirements supersede those of NAC 444. The minimum design criteria for large-capacity septic systems are to be complied with unless approval for revision is obtained from the Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control (BWPC). These criteria are not meant to supersede or circumvent any existing state or local policy, statute or regulation. The BWPC reserves the right pursuant to regulations to require further site characterization and additional design criteria.

All plans and specifications submitted to the Division require an Engineer's stamp, signature and date in accordance with NAC 625.565. **A letter with the engineer's stamp, signature and date shall be submitted to the Division to certify installation pursuant to plans and specs within ten (10) days after installation.**

All ISDSs are required to be located on the same lot as the building or structure that the system serves. The BWPC may approve the use of a part of an abutting lot to provide additional space for an ISDS or any part thereof, however the owner must demonstrate compliance with subsection a. and b. of **NAC 445A.792(1)**. And adequate reserve drain field space must be shown on plans.

The owner/operator of a facility with a large-capacity septic system is required to obtain a permit to operate with the BWPC as required by Nevada law NRS 445A.465. Depending on the size and type of system would be covered under a general permit, GU9201, or issued an individual permit. See the permit fact sheet for criteria under general permit GU9201.

For abandonment requirement of large-capacity septic systems - see Section 6 of this document.

2. Site Evaluation Information Required:

- a) A minimum of two percolation test holes. Percolation tests must be completed in accordance with *NAC Chapter 444 including NAC 444.796*. Infiltration/permeability tests may be used to supplement percolation test findings, but they may not be used as a substitute. These pits must be excavated to a minimum of five feet below the bottom of the proposed disposal system elevation, and within the area of the proposed soil absorption system. The following factors must be evaluated:
 - 1) Depth to bedrock, which is any rock that can not be excavated by power equipment, or is so slowly permeable that it will not transmit effluent, or has open fractures or solution channels.
 - 2) Depth to estimated high groundwater level, which is the highest elevation to which soil is saturated, as observed as a free water surface, or has been saturated as may be indicated by mottling.
 - 3) Depth to limiting soil layer, which is soil based on observed characteristics could have a low percolation rate, i.e. caliche.
 - 4) Thickness and texture of each soil layer encountered.
 - 5) General color and color variation (i.e. mottling).
 - 6) Other prominent features such as structure, roots, fines etc.
- b. The land slope and amount of suitable area for subsurface disposal.
- c. If not determined under Section b above, determine from existing well, or other means, the depth to the seasonal high groundwater level at the proposed leach field site(s).
- d. The location and distance to wells and sewage systems on the lot of interest, and surrounding lots. If the lots are vacant, the plot plan must so indicate

3. Site and ISDS Map, and Documentation Requirements

- a. Name, address and telephone number of Nevada registered professional engineer.
- b. Engineer wet stamp, signature and date on map.
- c. Elevation Contour lines at a minimum interval of 5 feet. The direction of north clearly indicated. Contours must cover the entire project area.
- d. Indicate the location of all components of the septic system. If more than one septic system on property, identify the location and components of each system.
- e. Location of the percolation and boring test holes
- f. Location of all domestic and/or municipal water supply wells on the property and within 200 feet of the property.
- g. The 50-year flood zone must be delineated, or a statement must be made that the property is not within a flood zone.
- h. The distance within 500 feet to any watercourse (pond, lagoon, stream, etc.). If none, so indicate.
- i. Indicate that the local government will be able to dispose of septage from septic tank(s) and septage pumping will be done by a permitted contractor (as per NAC 444.820).
- j. Indicate all setbacks on the map.
- k. The distance to city sewers from the nearest edge of the property line. If there are none, the plot plan must so indicate.
- l. The maximum slope across the absorption system area.

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

- m. The location of the reserve absorption area, which must be of a size not less than the size of the primary absorption area.
- n. The location of the source of water to be used by the dwelling units, including, without limitation, a well or other source approved by the administrative authority.
- o. The location of the fence or other structures that will be used to protect the tanks, lines, and adsorption field.
- p. Estimated groundwater flow direction.

If not displayed on the map, please provide Onsite Wastewater Disposal System Notes referencing construction and installation standards that shall be followed, such as but not limited to, the UPC and Nevada Administrative Code Chapters 278 and 444. These standards should address the following minimum requirements:

- a. Water and sewer line separations; ref. NAC 445A.677
- b. All joints shall be watertight
- c. Septic tank
 - 1) Level installation
 - 2) Leak testing
- d. Disposal field
 - 1) Breaking up of impermeable layers within 5-feet of bottom of proposed adsorption bed.
 - 2) Located in unshaded, unobstructed area
 - 3) No pavement, evaporation inhibiting material, or vehicular traffic shall be atop the disposal field
 - 4) Type of distribution pipe material used
 - 5) Slope of perforated distribution pipe and pipe bends
 - 6) Type of fill materials to be used
 - 7) Bottom of disposal field shall be level
- e. Distribution Box
 - 1) Design shall ensure equal flow to each leach line within the field
 - 2) Installation shall be on a level, concrete slab
- f. The discharge of surface, rain, and other clear water into an ISDS is prohibited; ref. NAC 444.818

4. Septic Tank Requirements

- a. All liquid waste and wastewater shall discharge into the septic tank. Roof, footing, garage and surface water drainage and cooling and process water is prohibited and shall be excluded.
- b. The septic tank shall be located so that it is readily accessible. The following are minimum horizontal separation distances that must be provided between the tank and the features listed below:

1.	Building or structures	8'
2.	Property lines	10'
3.	Lakes, streams or watercourse	100'
4.	Water supply wells	100'
5.	Public water supply wells	150'
6.	Water supply wells, not sealed for the first 50 feet	150'
7.	Any water supply lines – potable or non-potable	10'

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

- c. The septic tank shall be constructed of sound and durable material not subject to excessive corrosion or decay and structurally capable of supporting the loads to which it will be subjected. The tank shall be watertight.
- d. *NAC Chapter 444* should be reviewed for the specific requirements for septic system construction specifications not found in this document.
- e. The size of a large-capacity septic tank shall be determined by the requirements found in **NAC 444.8308, NAC 444.832, and NAC 444.8312**; whichever is appropriate for the type of facility. The size of the tank(s) shall be determined by the largest calculated flow based on either occupancy flow (section f below) or fixture unit count.
- f. The following sewage flow rates should be used when existing or closely related data is not available.

TYPE OF OCCUPANCY	UNIT GALLONS PER DAY
1. Airports	15 per employee 5 per passenger
2. Auto washers	Check with equipment manufacturer
3. Bowling alleys (snack bar only)	75 per lane
4. Camps:	
Campground with central comfort station	35 per person
with flush toilets, no showers	25 per person
Day camps (no meals served)	15 per person
Summer and seasonal	50 per person
5. Churches (Sanctuary)	5 per seat
with Kitchen waste	7 per seat
6. Dance halls	5 per person
7. Factories	
No showers	25 per employee
With showers	35 per employee
Cafeteria, add	5 per employee
8. Hospitals	250 per bed
Kitchen waste add	25 per bed
Laundry waste add	40 per bed
9. Hotels (no kitchen waste)	60 per bed -(2 person bed)
10. Institutions (Resident)	75 per person
Nursing home	125 per person
Rest home	125 per person
11. Laundries, self-service	
(minimum 10 hours per day)	50 per wash cycle
Commercial	Per manufacturer's specifications
12. Motel	50 per bed space
with kitchen	60 per bed space
13. Offices	20 per employee
14. Parks, mobile homes	250 per space
picnic parks (toilets only)	20 per parking space
recreational vehicles - without water hook-up	75 per space
with water and sewer hook-up	100 per space
15. Restaurants - cafeterias	20 per employee
toilet	7 per customer

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

kitchen waste	6 per meal
add for garbage disposal	1 per meal
add for cocktail lounge	2 per meal
kitchen waste - disposable service	2 per meal
16. Schools - Staff and office	20 per person
Elementary students	15 per person
Intermediate and high	20 per student
with gym and showers, and	5 per student
with cafeteria, add	3 per student
Boarding, total waste	100 per person
17. Service station, toilets	1000 for 1st bay
	500 for each additional bay
18. Stores	20 per employee
public restrooms, add	1 per 10 sq.ft. floor space
19. Swimming pools, public	10 per person
20. Theaters, auditoriums	5 per seat
drive-in	10 per space

5. Disposal Design

A. Absorption Trench

- 1) The absorption trench gives additional treatment to the sewage from the septic tank. Disposal trenches shall treat only domestic sewage.
- 2) *NAC Chapter 444* should be reviewed for the specific requirements for septic system construction specifications not found in this document.
- 3) The following are minimum horizontal separation distances that must be provided between the trench and the features listed below:

1.	Building or structures	8'
2.	Property lines	10'
3.	Lakes, streams or watercourse	100'
4.	Water supply wells (sealed to 50 feet)	100'
5.	Public water supply well	150'
6.	Water supply wells, not sealed for the first 50 feet	150'
7.	Water supply lines (mains & laterals)	25'

- 4) The disposal trench system shall be designed in accordance with:

$$Q = \frac{5}{\sqrt{t}}$$

where Q = rate of sewage application (gallons per sq. ft. per day) and t = percolation rate (minutes per inch).

- a) Septic tank capacity divided by Q (application rate) equals the area in square feet of absorption area required.

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

- b) The maximum useable sidewall is three (3) feet. Thus the maximum absorption area allowed per linear foot of trench is six square feet.
- 5) For domestic sewage from commercial or industrial sewage disposal systems, or systems servicing more than one residential dwelling, the minimum or “fastest” acceptable percolation rate is 10 minutes per inch. The Division may approve faster rates depending on site conditions and characteristics. The Maximum percolation rate is 60 min/inch. Soils with fast perc rates may require special trench design if a shallow water table is present.
 - 6) Each absorption trench system shall have a minimum of two (2) trenches.
 - 7) The maximum length of any one trench shall be 110 feet.
 - 8) The bottom of the absorption trenches shall be at least eighteen (18) inches and no more than sixty (60) inches below the finished grade.
 - 9) Plans must show a **reserve** absorption area equal in size to the primary absorption area.
 - 10) Leach field inspection pipes are required for all newly constructed large-capacity septic systems (with tank sizes 4,000 gallons and above). For those existing systems that do not have inspection pipes, inspection pipes may be required if signs of failure develop.

B. Absorption Bed

- 1) The information described under items 5a.1, 5a.2 and 5a.3 apply.

- 2) The disposal bed shall be designed in accordance with: $Q = \frac{5}{\sqrt{t}}$

Where Q = rate of sewage application (gallons per sq. ft. per day) and t = percolation rate (minutes per inch).

- a. Septic tank capacity divided by Q (application rate) equals the area in square feet of absorption area required.
 - b. The absorption area required must equal the area of the bottom of the disposal bed.
- 3) For commercial or industrial domestic sewage disposal systems, or systems servicing more than one dwelling, the minimum or “fastest” acceptable percolation rate is 10 minutes per inch. Maximum is 60 minutes per inch.
 - 4) Each absorption bed shall have a minimum of two distribution lines.
 - 5) The maximum length of any distribution line shall be 110 feet.
 - 6) Distribution lines within an absorption bed shall be uniformly spaced no more than six (6) feet nor less than four (4) feet apart.
 - 7) Distribution lines within an absorption bed shall be placed no more than three (3) feet, nor less than one and one-half (1 ½) feet, from the sidewall of the bed.
 - 8) The bottom of the absorption bed shall be at least eighteen inches and no more than sixty inches below the finished grade.

C. Dosing Tanks.

- 1) Construction and materials shall conform to the provisions of NAC 444.800 to 444.812, inclusive.
- 2) Dosing tanks shall be provided where there are over 500 lineal feet of distribution lines in the absorption system (trench or bed).
- 3) Dosing tanks shall have sufficient capacity to distribute sewage equally to all parts of the absorption system at 3 to 4 hour intervals. Sufficient capacity is equivalent to 60 to 75 percent of the interior volume of the tile in the system.
- 4) Siphons shall be automatic and must be of an alternating type when the length of the distribution lines is over 1,000 feet. Alternating siphons must discharge to separate disposal areas.
- 5) Dosing tanks shall be constructed in a manner that will permit venting the absorption system.
- 6) Each dosing tank or compartment shall be provided with an access opening located to facilitate repair or adjustment of the siphon. The openings shall be over the siphon or siphons and conform to the provisions of subsection 6 of NAC 444.800.

6. Large-Capacity Septic System Abandonment

NAC 444.818(9) states, "with the approval of the administrative authority, an abandoned septic tank may be pumped, removed, and disposed of. An abandoned tank must be filled with dirt or sand after all sewage and sludge have been removed and disposed of in an approved manner. An excavation site created by the removal of a septic tank must be backfilled with suitable material that is compatible to the intended future use of the site". In addition the Nevada Division of Environmental Protection requires the following:

- Any pumps/manhole covers/frames shall be removed and sewer lines disconnected and plugged or capped;
- If a diversion box and/or dosing tank exist, they shall be filled with dirt or sand and the sewer lines disconnected and plugged or capped;
- Sewer lines and distribution lines from a distribution box shall be disconnected and plugged or capped, and the boxes filled with sand;
- Outlets, including monitoring ports to the leach field shall be plugged or capped;
- All monitoring wells shall be abandoned in conformance with the requirements of the Nevada Division of Water Resources;
- If applicable, any addition tanks, i.e. grease, etc., shall be filled or removed and lines plugged or capped; and
- **The holder of the permit shall submit to the Bureau of Water Pollution Control photo documentation and a certification that the facilities were abandoned according to the above noted requirements.**

Recommended reference material for:

Alternative absorption system: The term includes, without limitation, 1) capping fill trench, 2) stepped network of trenches utilizing relief lines, 3) leaching bed, 4) sand filter and 5) elevated mound system

Onsite Wastewater Treatment Systems Manual - EPA/625/R-00/008

APPENDIX

I. Responsibilities of septic system users

The key responsibilities of the Permittee/user in ensuring the best operation of an existing or new septic tank/SWIS system include the following:

- Using household cleansers in moderation. Excessive use of household cleansers, disinfectants, and other common products can kill bacteria residing in the septic tank and the soil adsorption field. Used in moderate amounts and according to label directions, however, cleaners and disinfectants can be flushed into the wastewater system with no significant impacts. The wastewater stream dilutes the product, and organic material adsorbs it. Slug loading (excessive, instantaneous loadings) of household cleaners can be lethal to septic system bacteria, but normal follow-up usage usually reestablishes the tank's bacterial population within a few hours.
- Avoiding disposal of toxic and hazardous materials in the wastewater stream. Many common household products have toxic properties and should never be poured down the drain. The list includes drugs and antibiotics, solvents, paints, varnishes, photography chemicals, weed killers, and insecticides. All of these products have the potential to wipe out septic system bacteria and percolate into ground water supplies.
- Curbing the use of drain cleaners and openers. Products aimed at unclogging indoor wastewater pipes contain strong acids or alkalis as the active ingredient. Used according to the label directions, they can be effective in removing clogs of organic matter in indoor drainpipes. Most product labels warn, however, that the product is caustic or corrosive to pipes and can be hazardous to the user if applied improperly. A controlled study concluded that as little as 1.3 ounces of a name brand drain cleaner could destroy the bacteria population in a 1,000-gallon septic tank. This amount is within the general range of normal usage for some people. Bacteria populations in the tank will recover in a few days if the system inputs return to normal levels.
- Disposing of solids appropriately. Items such as cigarette butts, condoms, sanitary napkins, paper towels, and kitty litter should never be flushed or washed down the toilet or sink. Septic tanks are not designed as a disposal receptacle for these wastes. They can clog drainpipes and cause excessive and rapid sludge buildup in the tank.
- Keeping fats, oils, and grease out of kitchen drains. Fats, oils, and grease are natural by-products of cooking meats and other foods. Grease washed down the drain can stick, accumulate, and in some cases block wastewater drain pipes and the inlet and outlet structures in septic tanks. Food wastes should be scraped from plates and utensils and discarded as solid waste.
- Avoiding the use of a garbage disposal unless the treatment system is designed for one. Homes with garbage disposals generally have 20 to 28 percent higher biochemical oxygen demand (BOD) and 25 to 40 percent higher suspended solid loadings to septic tanks than homes without disposals. These significant contributions of organic matter require special consideration when sizing and installing a septic tank or soil absorption system.
- Conserving water. To function at peak efficiency, the septic tank needs to provide a quiescent environment and adequate detention time (i.e., more than 24 hours) for the solids and floatable matter to separate from the wastewater. Limiting water flows and timely repair of leaking fixtures help maintain these conditions and prevent overloading of the soil adsorption field.

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

SUBMITTAL CHECKLIST – Attachment – Large Capacity Septic System

Engineer's Stamp	<u>WTS-23: LARGE CAPACITY SEPTIC TANK AND DISPOSAL SYSTEMS</u>
	Project: _____
	Contact: _____
	Phone: _____

<u>General</u>	<u>Additional Notes:</u>
-----------------------	--------------------------

Lot Size:

Type of Facilities served by the septic system(s) on property:

Number and size of Septic Tank(s) to be Installed:

Number and size of existing Septic Tank(s) on property:

Total capacity of all Septic Tanks on property, in gallons:

Fixture Count – Current:	Proposed:
---------------------------------	------------------

Number of people served by system(s): Current or typical: _____ and Maximum: _____

Please circle one answer for each question below. All questions must be answered. If N/A, please explain.

N/A	Yes	No	<u>Are all the system parts on one property/lot? If no, explain and provide legal documents.</u>
N/A	Yes	No	<u>Is a water well on site? Depth of well(s): _____ Sealed to: _____</u>
			<u>Water well is used for? Domestic Irrigation Both Other</u>
N/A	Yes	No	<u>Is a community/public sewer system greater than 400' to the nearest property line?</u>
N/A	Yes	No	<u>Is the project served by a community water supply system?</u>
N/A	Yes	No	<u>Is the site located outside the 50-year or 100-year Flood Zone?</u>
N/A	Yes	No	<u>Will all of the wastewater treatment system be located in or under areas NOT subjected to vehicular traffic?</u>
N/A	Yes	No	<u>Do local ordinances or zoning require special design of septic systems? (i.e. nitrate removal)</u>

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

			<u>Percolation Information</u>
N/A	Yes	No	Are the soils classified from surface to 10 feet in depth?
N/A	Yes	No	Submitted the depth to an impermeable soil layer, if any?
N/A	Yes	No	Submitted depth to seasonal high groundwater, if any?
N/A	Yes	No	Submitted percolation test results in tabular format?
N/A	Yes	No	Did the percolation test procedure follow NAC 444.796?
N/A	Fast	Slow	Was a Fast or Slow (presoaking) Percolation Test used as required by NAC 444.7962?
N/A	Yes	No	If percolation rate < 10 min/inch, was 10 min/inch used as percolation rate to determine rate of application?
N/A	Yes	No	Are locations identified on enclosed map?
N/A	Yes	No	Is there a minimum of two test holes for each proposed disposal area?
N/A	Yes	No	Are the holes dug to the proposed bottom of the disposal field?
N/A	Yes	No	Are the test results indicative of the driest/wettest time of year? i.e. perhaps Summer/Fall or Winter/Spring? Identify
			<u>Building Plans (only for commercial and non-dwelling units)</u>
N/A	Yes	No	<u>Submitted plans showing plumbing fixtures connecting to septic system(s)?</u>
			<u>Utility Plan or equal</u>
N/A	Yes	No	Is the Project Name displayed?
N/A	Yes	No	Are contours at a minimum interval of 5 feet?
N/A	Yes	No	Does the plan show sewer lines, cleanouts, septic tank, disposal field etc.?
N/A	Yes	No	Is the cross-section of the disposal field displayed?
N/A	Yes	No	Are notes for the septic system displayed?
N/A	Yes	No	Is there a note stating the potable water supply source (well or agency)?
N/A	Yes	No	If the potable water source is a well, submit the well log(s)
N/A	Yes	No	Within ¼ mile radius of septic system, have all water wells been located?
N/A	Yes	No	Has the groundwater flow direction been determined?
			<u>Septic Tank – if no proceed to next section</u>
N/A	Yes	No	Are calculations for sizing the tank(s) submitted?
N/A	Yes	No	For dwelling occupancies, is the volume sized per UPC Table K-2?
N/A	Yes	No	For non-dwelling occupancies, is the volume sized per UPC Table K-3 or UPC Table K-2 whichever is greater?
N/A	Yes	No	Is the clearance to water supply lines greater than 10 feet?
N/A	Yes	No	Is the distance to the nearest public well greater than 200 feet?

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

N/A	Yes	No	Is the distance to the nearest surface water greater than 100 feet?
N/A	Yes	No	Is the distance to the nearest building greater than 8 feet?
N/A	Yes	No	Is the distance to the nearest property line greater than 10 feet?
N/A	Yes	No	Is it noted that the septic tank shall be designed and constructed in conformance with NAC Chapter 444 and UPC?
N/A	Yes	No	Do plans state risers will be installed around each tank access hole?
—CONSTRUCTION—supply verification of the following			
N/A	Yes	No	Does the tank have 2 compartments minimum?
N/A	Yes	No	Is the septic tank approved by NDEP?
N/A	Yes	No	—Dosing Tank—(if 'no' proceed to next section)
Why is a dosing tank required for this system? _____			
a) It is necessary to raise the elevation of the wastewater for further treatment or disposal of sewage			
b) Intermittent dosing of the disposal field is desired			
c) A pressure distribution system is used			
d) Is there greater than 500 lineal feet of distribution lines in the SOA?			
N/A	Yes	No	Submitted volume calculation if dosing tank required?
N/A	Yes	No	Is the dosing rate determined? If greater than 6-8 times/24 hrs., have calculations for increasing the size of absorption field been submitted?
— Distribution Box —			
N/A	Yes	No	Do plans state that D-Box will be level, and will be tested after installation?
N/A	Yes	No	Is the D-Box a type that can short circuit (straight flow through) Does it require a baffle?
N/A	Yes	No	Statement in letter fill around D-Box must be hand-packed – no heavy equipment use!!
N/A	Yes	No	—Disposal Field—
N/A	Yes	No	Is there suitable area for a back-up disposal field in the event that the original disposal field fails?
N/A	Yes	No	Is the most porous or absorptive portion of soil formation utilized?
N/A	Yes	No	Is it noted that any impermeable layer within 5 ft. of the bottom of disposal field shall be broken up?
N/A	Yes	No	Is disposal only from domestic sewage wastes?
N/A	Yes	No	Is the distance to the nearest surface water greater than 100 feet?
N/A	Yes	No	Is the distance to the nearest public well greater than 200 feet?
N/A	Yes	No	Is the distance to nearest water supply well that has no sanitary seal the first 50' greater than 150'?
N/A	Yes	No	Is the distance to any building is greater than 8 feet?

Underground Injection Control Program
WTS-23 Large-Capacity Septic Systems Fact Sheet

N/A	Yes	No	Is the distance to any property line greater than 10 feet?
N/A	Yes	No	Is the distance to any water supply line greater than 25 feet?
N/A	Yes	No	Is the depth from the bottom of the disposal field to the maximum seasonal high groundwater greater than 4 feet? If no, indicate alternative method on plans.
N/A	Yes	No	Is it located in an unshaded, unobstructed area?
N/A	Yes	No	Is it noted that no pavement or evaporation inhibiting material shall be atop the field?
N/A	Yes	No	Is it located outside a noncompacted filled area?
N/A	Yes	No	Is it located outside an area subject to vehicular traffic?
N/A	Yes	No	Is $Q=5/\text{SQR}(t)$ used to determine the rate of disposal?
N/A	Yes	No	Was a 10 min/inch minimum percolation rate used for sizing the disposal field for commercial, industrial, or multi-residential dwellings?
N/A	Yes	No	Is the gravel size in the field/trench stated on plans?
N/A	Yes	No	Trench? (If 'no' proceed to next section)
N/A	Yes	No	Is only the sidewall height used for calculating the available absorption area?
N/A	Yes	No	Is the maximum sidewall height used in determining the absorption area 3 feet?
N/A	Yes	No	Are there a minimum of 2 trenches?
N/A	Yes	No	Is the maximum distribution line length 110 feet?
N/A	Yes	No	Is the distribution line spacing greater than 4 feet and less than or equal to 6 feet?
N/A	Yes	No	Leaching Chambers? (if 'no' proceed to next section)
N/A	Yes	No	Submitted a calculation to determine the number of chamber sections required?
			<u>Construction Installation Procedure</u>
N/A	Yes	No	Is it noted the septic tank shall be installed level?
N/A	Yes	No	Is it noted the septic tank shall be leak tested?
N/A	Yes	No	Is it noted the bottom of the disposal field shall be level?
N/A	Yes	No	<u>Is it noted all bends in pipe fitting will be 45 deg? (No 90 deg bends.)</u>