Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

Inspection results must be submitted on this form. Inspection forms may not be altered in any way.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

A. General Information

1. Inspector:

Robert Stover
Name of Inspector

Amherst Civil Engineering
Company Name

P.O. Box 3312
Company Address

Amherst | MA | 01004-3312
City/Town | State | Zip Code

(413) 256-3400
Telephone Number

License Number

B. Certification

I certify that I have personally inspected the sewage disposal system at this address and that the information reported below is true, accurate and complete as of the time of the inspection. The inspection was performed based on my training and experience in the proper function and maintenance of on site sewage disposal systems. **I am a DEP approved system inspector pursuant to Section 15.340 of Title 5 (310 CMR 15.000).** The system:

☒ Passes ☐ Conditionally Passes ☐ Fails

☐ Needs Further Evaluation by the Local Approving Authority

Robert Stover | 4/26/07
Inspector's Signature | Date

see comments on Page two

The system inspector shall submit a copy of this inspection report to the Approving Authority (Board of Health or DEP) within 30 days of completing this inspection. If the system is a shared system or has a design flow of 10,000 gpd or greater, the inspector and the system owner shall submit the report to the appropriate regional office of the DEP. The original should be sent to the system owner and copies sent to the buyer, if applicable, and the approving authority.

****This report only describes conditions at the time of inspection and under the conditions of use at that time. This inspection does not address how the system will perform in the future under the same or different conditions of use.**

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
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Amherst	MA	01002	4/26/07
City/Town	State	Zip Code	Date of Inspection

B. Certification (cont.)

Inspection Summary: Check A,B,C,D or E / ***always*** complete all of Section D

A) System Passes:

☒ I have not found any information which indicates that any of the failure criteria described in 310 CMR 15.303 or in 310 CMR 15.304 exist. Any failure criteria not evaluated are indicated below.

Comments: ① There is a filter on the septic tank outlet pipe and it must be regularly cleaned or the sewage level in the tank may rise and back up toward house. ② There is a stone walk over tank outlet lid and a stone must be lifted to access lid. ③ System is in good condition relative to the criteria that govern these inspections.

B) System Conditionally Passes: NO

☐ One or more system components as described in the "Conditional Pass" section need to be replaced or repaired. The system, upon completion of the replacement or repair, as approved by the Board of Health, will pass. ④ Pump tank in two years to assess length of intervals between pumpings appropriate for your family.

Answer yes, no or not determined (Y, N, ND) in the ☐ for the following statements. If "not determined," please explain.

☐ The septic tank is metal and over 20 years old* **or** the septic tank (whether metal or not) is structurally unsound, exhibits substantial infiltration or exfiltration or tank failure is imminent. System will pass inspection if the existing tank is replaced with a complying septic tank as approved by the Board of Health. ⑤ Pump tank in 12 months and again in 24 months and this inspection will be valid until 4/26/2010.

NO

* A metal septic tank will pass inspection if it is structurally sound, not leaking and if a Certificate of Compliance indicating that the tank is less than 20 years old is available.

ND Explain:

☐ Observation of sewage backup or break out or high static water level in the distribution box due to broken or obstructed pipe(s) or due to a broken, settled or uneven distribution box. System will pass inspection if (with approval of Board of Health):

ND

☐ broken pipe(s) are replaced

☐ obstruction is removed

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

B) System Conditionally Passes (cont.): NO

☐ distribution box is leveled or replaced

ND Explain:

☐ The system required pumping more than 4 times a year due to broken or obstructed pipe(s). The system will pass inspection if (with approval of the Board of Health):

☐ broken pipe(s) are replaced

☐ obstruction is removed

ND Explain:

C) Further Evaluation is Required by the Board of Health: NO

☐ Conditions exist which require further evaluation by the Board of Health in order to determine if the system is failing to protect public health, safety or the environment.

1. System will pass unless Board of Health determines in accordance with 310 CMR 15.303(1)(b) that the system is not functioning in a manner which will protect public health, safety and the environment:

☐ Cesspool or privy is within 50 feet of a surface water

☐ Cesspool or privy is within 50 feet of a bordering vegetated wetland or a salt marsh

2. System will fail unless the Board of Health (and Public Water Supplier, if any) determines that the system is functioning in a manner that protects the public health, safety and environment:

☐ The system has a septic tank and soil absorption system (SAS) and the SAS is within 100 feet of a surface water supply or tributary to a surface water supply.

☐ The system has a septic tank and SAS and the SAS is within a Zone 1 of a public water supply.

☐ The system has a septic tank and SAS and the SAS is within 50 feet of a private water supply well.

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

C) Further Evaluation is Required by the Board of Health (cont.): NO

☐ The system has a septic tank and SAS and the SAS is less than 100 feet but 50 feet or more from a private water supply well**.

Method used to determine distance: _____

** This system passes if the well water analysis, performed at a DEP certified laboratory, for coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis must be attached to this form.

3. Other:

_____

_____

_____

D) System Failure Criteria Applicable to All Systems:

You must indicate "Yes" or "No" to each of the following for all inspections:

Yes	No	
☐	☒	Backup of sewage into facility or system component due to overloaded or clogged SAS or cesspool
☐	☒	Discharge or ponding of effluent to the surface of the ground or surface waters due to an overloaded or clogged SAS or cesspool
☐	☒	Static liquid level in the distribution box above outlet invert due to an overloaded or clogged SAS or cesspool
☐ NA	☐	Liquid depth in cesspool is less than 6" below invert or available volume is less than ½ day flow
☐	☒	Required pumping more than 4 times in the last year ***NOT*** due to clogged or obstructed pipe(s). Number of times pumped: _____.
☐	☒	Any portion of the SAS, cesspool or privy is below high ground water elevation.
☐ NA	☐	Any portion of cesspool or privy is within 100 feet of a surface water supply or tributary to a surface water supply.

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

B. Certification (cont.)

D) System Failure Criteria Applicable to All Systems (cont.)**:**

Yes	No	
☐ NA	☐	Any portion of a cesspool or privy is within a Zone 1 of a public well.
☐ NA	☐	Any portion of a cesspool or privy is within 50 feet of a private water supply well.
☐ NA	☐	Any portion of a cesspool or privy is less than 100 feet but greater than 50 feet from a private water supply well with no acceptable water quality analysis. **[This system passes if the well water analysis, performed at a DEP certified laboratory, for fecal coliform bacteria indicates absent and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm, provided that no other failure criteria are triggered. A copy of the analysis and chain of custody must be attached to this form.]**
☐ NA	☐	The system is a cesspool serving a facility with a design flow of 2000gpd-10,000gpd.
☐	☒	**The system <u>fails</u>.** I have determined that one or more of the above failure criteria exist as described in 310 CMR 15.303, therefore the system fails. The system owner should contact the Board of Health to determine what will be necessary to correct the failure.

E) Large Systems: To be considered a large system the system must serve a facility with a design flow of 10,000 gpd to 15,000 gpd. Not Apply

For large systems, you must indicate either "yes" or "no" to each of the following, in addition to the questions in Section D.

Yes	No	
☐	☐	the system is within 400 feet of a surface drinking water supply
☐	☐	the system is within 200 feet of a tributary to a surface drinking water supply
☐	☐	the system is located in a nitrogen sensitive area (Interim Wellhead Protection Area – IWPA) or a mapped Zone II of a public water supply well

If you have answered "yes" to any question in Section E the system is considered a significant threat, or answered "yes" in Section D above the large system has failed. The owner or operator of any large system considered a significant threat under Section E or failed under Section D shall upgrade the system in accordance with 310 CMR 15.304. The system owner should contact the appropriate regional office of the Department.

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Owner information is required for every page.

Property Address	Owner's Name	City/Town	State	Zip Code	Date of Inspection
68 Mechanic St.	Peter Kassis	Amherst	MA	01002	4/26/07

C. Checklist

Check if the following have been done. You **must** indicate "yes" or "no" as to each of the following:

Yes	No	
☒	☐	Pumping information was provided by the owner, occupant, or Board of Health owner
☐	☒	Were any of the system components pumped out in the previous two weeks?
☒	☐	Has the system received normal flows in the previous two week period?
☐	☒	Have large volumes of water been introduced to the system recently or as part of this inspection?
☒	☐	Were as built plans of the system obtained and examined? (If they were not available note as N/A)
☒	☐	Was the facility or dwelling inspected for signs of sewage back up?
☒	☐	Was the site inspected for signs of break out?
☒	☐	Were all system components, excluding the SAS, located on site?
☒	☐	Were the septic tank manholes uncovered, opened, and the interior of the tank inspected for the condition of the baffles or tees, material of construction, dimensions, depth of liquid, depth of sludge and depth of scum?
☒	☐	Was the facility owner (and occupants if different from owner) provided with information on the proper maintenance of subsurface sewage disposal systems?

The **size and location of the Soil Absorption System (SAS)** on the site has been determined based on:

☒	☐	Existing information. For example, a plan at the Board of Health.
☒	☐	Determined in the field (if any of the failure criteria related to Part C is at issue approximation of distance is unacceptable) [310 CMR 15.302(5)]

Location of dibox, direction of pipes, yard topography

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information

Residential Flow Conditions:

Number of bedrooms (design): 4 Number of bedrooms (actual): 3

DESIGN flow based on 310 CMR 15.203 (for example: 110 gpd x # of bedrooms): 330

Number of current residents: 3

Does residence have a garbage grinder? ☐ Yes ☒ No

Is laundry on a separate sewage system? [if **yes** separate inspection required] ☐ Yes ☒ No

Laundry system inspected? not apply ☐ Yes ☐ No

Seasonal use? ☐ Yes ☒ No

Water meter readings, if available (last 2 years usage (gpd)): from 5/10/06 to 3/6/07: 139 cf x 7.48 gal/cf = 3.85 gpd
gpd = gals. per day 270 days

Sump pump? Yes ☒ Yes ☐ No

Last date of occupancy: occupied @ time of inspection
Date

Commercial/Industrial Flow Conditions:

Type of Establishment: not apply

Design flow (based on 310 CMR 15.203): Gallons per day (gpd)

Basis of design flow (seats/persons/sq.ft., etc.):

Grease trap present? ☐ Yes ☐ No

Industrial waste holding tank present? ☐ Yes ☐ No

Non-sanitary waste discharged to the Title 5 system? ☐ Yes ☐ No

Water meter readings, if available:

Last date of occupancy/use: Date

Other (describe):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

General Information

Pumping Records:

Source of information: owner & previous Title 5 rept. previous owner reported tank was pumped in 2003±

Was system pumped as part of the inspection? ☒ Yes ☐ No

If yes, volume pumped: 1500 gallons

How was quantity pumped determined? tank dimensions

Reason for pumping: inspection & routine maintenance

Type of System:

- ☒ Septic tank, distribution box, soil absorption system
- ☐ Single cesspool
- ☐ Overflow cesspool
- ☐ Privy
- ☐ Shared system (yes or no) (if yes, attach previous inspection records, if any)
- ☐ Innovative/Alternative technology. Attach a copy of the current operation and maintenance contract (to be obtained from system owner)
- ☐ Tight tank. Attach a copy of the DEP approval.
- ☐ Other (describe):

Approximate age of all components, date installed (if known) and source of information:
previous owner reported system was put into use in December, 1999

Were sewage odors detected when arriving at the site? ☐ Yes ☒ No

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Building Sewer (locate on site plan):

Depth below grade: 18" feet

Material of construction:

☐ cast iron ☒ 40 PVC ☐ other (explain):

Distance from private water supply well or suction line: 10'± feet

Comments (on condition of joints, venting, evidence of leakage, etc.):
everything in good condition - no evidence of leakage.

Septic Tank (locate on site plan):

Depth below grade: 5-8" 5-8" feet

Material of construction:

☒ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain)

If tank is metal, list age: not apply years

Is age confirmed by a Certificate of Compliance? (attach a copy of certificate) ☐ Yes ☐ No

Dimensions: 10.5' x 5.5' x 4.0' Liquid Depth

Sludge depth: 3"± first chamber

Distance from top of sludge to bottom of outlet tee or baffle 32"±

Scum thickness 2"± first chamber
≤1" 2nd. chamber

Distance from top of scum to top of outlet tee or baffle 5"±

Distance from bottom of scum to bottom of outlet tee or baffle <13"

How were dimensions determined? measured

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Owner information is required for every page.

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

Two chamber tank with filter on outlet pipe. Tees and outlet filter in good condition. Stone walk over lid to tank outlet. Outlet filter must be rinsed off periodically or sewage may back up toward house.

Grease Trap (locate on site plan): no grease trap

Depth ~~below grade~~:

Material of construction:

Liquid was at outlet invert. Tank is in good condition and no evidence of leakage was observed. Pump tank every two to three years.

☐ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain):

Dimensions:

Scum thickness

Distance from top of scum to top of outlet tee or baffle

Distance from bottom of scum to bottom of outlet tee or baffle

Date of last pumping:
Date

Comments (on pumping recommendations, inlet and outlet tee or baffle condition, structural integrity, liquid levels as related to outlet invert, evidence of leakage, etc.):

Tight or Holding Tank (tank must be pumped at time of inspection) (locate on site plan):

Depth below grade: none

Material of construction:

☐ concrete ☐ metal ☐ fiberglass ☐ polyethylene ☐ other (explain):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

Owner information is required for every page.

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Tight or Holding Tank (cont.)

Dimensions: _____

Capacity: _____ gallons

Design Flow: _____ gallons per day

Alarm present: ☐ Yes ☐ No

Alarm level: _____ Alarm in working order: ☐ Yes ☐ No

Date of last pumping: _____ Date

Comments (condition of alarm and float switches, etc.):

_____

_____

* Attach copy of current pumping contract (required). Is copy attached? ☐ Yes ☐ No

✓ **Distribution Box** (if present must be opened) (locate on site plan): 18-19" below grade.

Depth of liquid level above outlet invert: liquid level was at bottom of speed leveler openings

Comments (note if box is level and distribution to outlets equal, any evidence of solids carryover, any evidence of leakage into or out of box, etc.):

The speed leveler openings were relatively level and distribution to outlets was relatively equal. Slight carryover of fine solids. Walls of box above the liquid level were coated with some white soap residue but no evidence that the box has been flooded.

Pump Chamber (locate on site plan):

Pumps in working order: ☐ Yes ☐ No

Alarms in working order: ☐ Yes ☐ No

We pumped the box and it was in good structural condition. I saw no evidence of leakage.

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

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Amherst | MA | 01002 | 4/26/07
City/Town | State | Zip Code | Date of Inspection

D. System Information (cont.)

Comments (note condition of pump chamber, condition of pumps and appurtenances, etc.):

not apply

Soil Absorption System (SAS) (locate on site plan, excavation not required):

If SAS not located, explain why:

Type:

☐	leaching pits	number:	
☐	leaching chambers	number:	
☐	leaching galleries	number:	
☐	leaching trenches	number, length:	
☒	leaching fields	number, dimensions:	one, 18'W x 44'L 3 lines
☐	overflow cesspool	number:	
☐	innovative/alternative system		
	Type/name of technology:		

Comments (note condition of soil, signs of hydraulic failure, level of ponding, damp soil, condition of vegetation, etc.):

soil and vegetation normal - no ponding, damp soil or other signs of hydraulic failure. Split-rail fence appears to be more-or-less directly above and parallel with middle leach line.

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

Owner information is required for every page.

Amherst — MA — 01002 — 4/26/07
City/Town — State — Zip Code — Date of Inspection

D. System Information (cont.)

Cesspools (cesspool must be pumped as part of inspection) (locate on site plan):

Number and configuration not apply

Depth – top of liquid to inlet invert

Depth of solids layer

Depth of scum layer

Dimensions of cesspool

Materials of construction

Indication of groundwater inflow ☐ Yes ☐ No

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

Privy (locate on site plan): not apply

Materials of construction:

Dimensions

Depth of solids

Comments (note condition of soil, signs of hydraulic failure, level of ponding, condition of vegetation, etc.):

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

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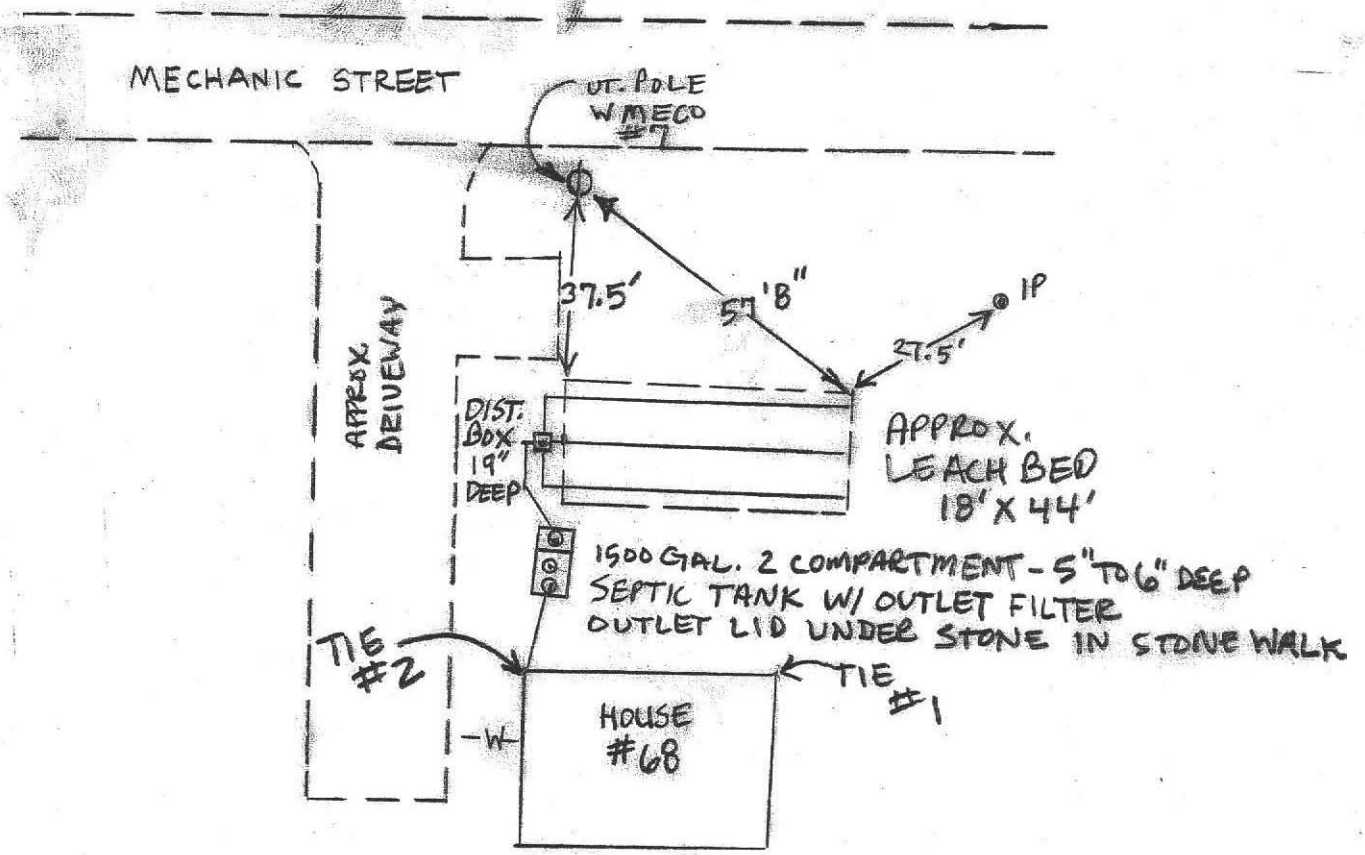
Amherst	MA	01002	4/26/07
City/Town	State	Zip Code	Date of Inspection

D. System Information (cont.)

Sketch Of Sewage Disposal System: Provide a sketch of the sewage disposal system including ties to at least two permanent reference landmarks or benchmarks. Locate all wells within 100 feet. Locate where public water supply enters the building.



TIES TO PERMANENT LANDMARKS		
SYSTEM COMPONENT	TIE #1	TIE #2
TANK INLET	37.5'	13.5'
TANK CENTER	38.5'	16.5'
TANK OUTLET	40.0'	20.5'
DISTRIBUTION BOX	51.5'	35.0'

Commonwealth of Massachusetts

Title 5 Official Inspection Form

Subsurface Sewage Disposal System Form - Not for Voluntary Assessments

68 Mechanic St.
Property Address

Peter Kassis
Owner's Name

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Amherst	MA	01002	4/26/07
City/Town	State	Zip Code	Date of Inspection

D. System Information (cont.)

Site Exam:

☒ Check Slope

☒ Surface water none

☒ Check cellar cellar is subject to groundwater infiltration at juncture of bottom of cellar walls and cellar floor. A sump pump was installed and owner reports that's solved water problem. Elevation of cellar floor is well below elevation of bottom of leach bed.

☐ Shallow wells none known

Estimated depth to ground water: 104" deep + 96" deep feet

Please indicate all methods used to determine the high ground water elevation:

☒ Obtained from system design plans on record

If checked, date of design plan reviewed: 6/1999 (Date)

☐ Observed site (abutting property/observation hole within 150 feet of SAS)

☐ Checked with local Board of Health - explain:

☐ Checked with local excavators, installers - (attach documentation)

☐ Accessed USGS database - explain:

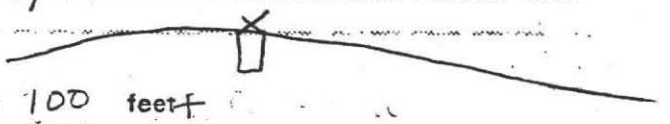
You **must** describe how you established the high ground water elevation:

I established the high ground water elevation from the log of a deep observation hole I evaluated as a DEP certified soil evaluator along with David Zarozinski of the Amherst Health Dept. on 5/27/99. The Estimated High Groundwater Elevation was 104"! A deep observation hole was evaluated by F.A. Filias and David Zarozinski in this area in 1989 and they determined the high groundwater elev. to be at a depth of 96". See Attached.

Location Address or Lot No. Lot 108
Mechanic St., Amherst

On-site Review

Deep Hole Number 1 Date: 5/27/99 Time: 8:30 AM Weather clear + 65°
Location (identify on site plan) see sketch on back
Land Use hay field Slope (%) 1-2% Surface Stones none
Vegetation grasses, Lilacs
Landform outwash plain/terrace
Position on landscape (sketch on the back)



Distances from:

Open Water Body 200 feet+ Drainage way 100 feet+
Possible Wet Area 100 feet+ Property Line 20 feet± front line
Drinking Water Well 200 feet+ Other
town water

DEEP OBSERVATION HOLE LOG*

Depth from Surface (Inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0-10	Ap	FSL	10YR4/3	none	friable - granular
10-19	Bw	FSL	10YR4/6	none	friable - Massive
19-104	C1	Med to Co. Sand gravelly @ 64" less gr. + firmer	7.5YR 5/6	none	loose + single grain above 64" - slightly firm + almost all sand - no coarse frag. - below 64"
104-112	C2	VFSL	10YR3/3	common 5YR4/4	platy (curved) very firm

* MINIMUM OF 2 HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA

Parent Material (geologic) outwash Depth to Bedrock: > 112"
Depth to Groundwater: Standing Water in the Hole: 110" Weeping from Pit Face: 104"
Estimated Seasonal High Ground Water: 104"

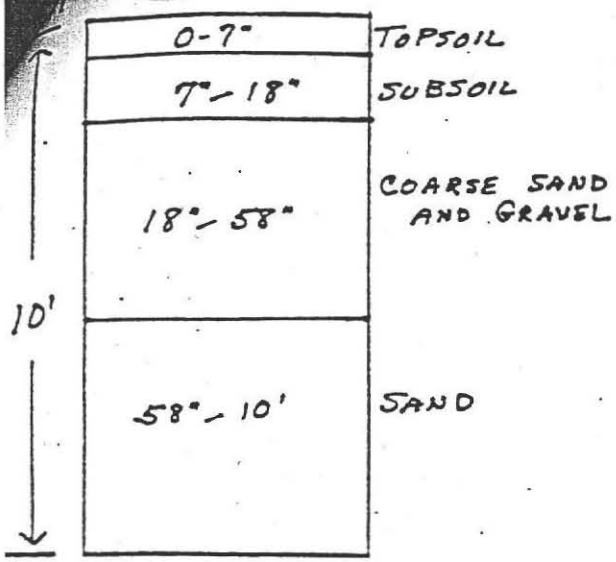
WILLIAM & DONNA DOHERTY DATE MAY 8, 1989

LOCATION 55 MECHANIC ST. OBSERVER

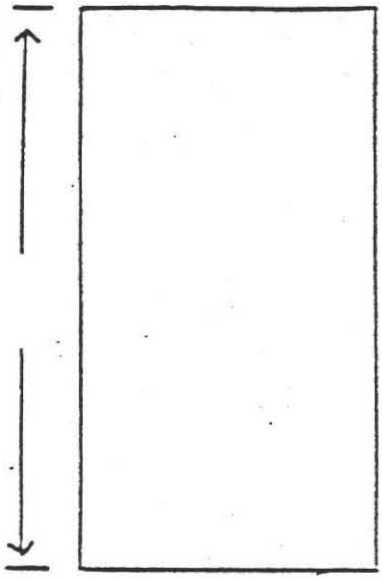
AMHERST, MA. 01002 B of H DAVE ZAROZINSKI

LOT 2

#1

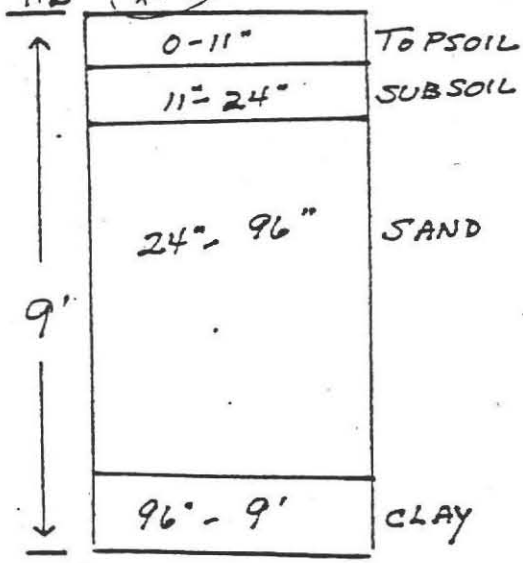


GROUND WATER AT 93"

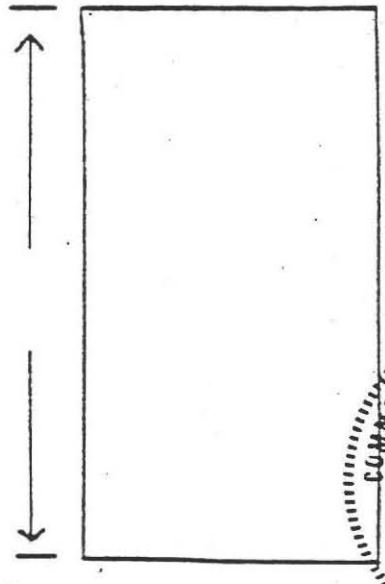


GROUND WATER

#2



GROUND WATER AT 96"



GROUND WATER

COMMONWEALTH OF MASSACHUSETTS
FREDERICK
ILLIOS, R.S.
668

#1
PERCOLATION RATE AT 55":

<2 min./inch

#2
PERCOLATION RATE AT 42":

<2 MIN/INCH