

Conventional System Inspection Requirements

- ▶ Responsibilities and procedures for conventional system inspection:
 - Who can perform an inspection?
 - What tools are needed?
 - The final inspection form.
- Examples of items that arise during an inspection, how are deficiencies corrected, and by whom?



4

Who can perform an Inspection?

- ▶ DOH employees certified per 381.0101, FS.
- ▶ Master Septic Tank Contractors registered with the DOH per 64E-6.020, FAC.:
 - Only for System Repairs.
 - Must use form DH4016pg3 – “System Repair Certification.”
 - This form is then reviewed by the CHD inspector and used to complete the “Construction Inspection and Final Approval” form (DH4016pg2).



5

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6

Tools Required:

- ▶ At minimum, the following tools are required in order to properly conduct a standard system inspection:
 - Six-foot Auger.
 - Water Bottle.
 - 100-foot or longer measuring tape.
 - Sharpshooter Shovel.
 - Insulated Probing Rod.
 - Laser Level or Surveyor's Level with Stadia Rod.
 - Soil Survey of the County.
 - Munsell Soil Color Book.
 - 25-ft x 1-inch stainless steel and self-locking measuring tape.



7

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8

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TANK INSTALLATION
[ ] [01] TANK SIZE [1] _____ [2] _____
[ ] [02] TANK MATERIAL _____
[ ] [03] OUTLET DEVICE _____
[ ] [04] MULTI-CHAMBERED [ Y / N ] _____
[ ] [05] OUTLET FILTER _____
[ ] [06] LEGEND _____
[ ] [07] WATERTIGHT _____
[ ] [08] LEVEL _____
[ ] [09] DEPTH TO LID _____

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DH4016pg2
 Tank Installation
 Items [01] - [09]



9

FILL / EXCAVATION MATERIAL	
[]	[22] FILL AMOUNT
[]	[23] FILL TEXTURE
[]	[24] EXCAVATION DEPTH
[]	[25] AREA REPLACED
[]	[26] REPLACEMENT MATERIAL

DH4016pg2
Fill / Excavation
Approval
Items [22] - [26]



13

On Form DH4016pg2

FILL / EXCAVATION MATERIAL	
[]	[22] FILL AMOUNT
[]	[23] FILL TEXTURE
[]	[24] EXCAVATION DEPTH
[]	[25] AREA REPLACED
[]	[26] REPLACEMENT MATERIAL

- › [22] Fill Amount:
 - Ensure sufficient fill has been placed on-site to properly construct the above-grade portion of the system.
- › [23] Fill Texture:
 - Ensure fill is slightly-limited, or (if LPDS) moderately limited - in accordance with permit specifications.
 - If unable to determine, require further analysis.
- › [24] Excavation Depth:
 - Auger to ensure that the excavated area meets the permit requirements.
 - Ensure the excavated area meets footnote 3 or 4 requirements as appropriate.
- › [25] Area Replaced:
 - Ensure the area replaced is 2' longer and wider than the drainfield area, and the drainfield area is centered in this excavation.
- › [26] Replacement Material:
 - Ensure the material used to replace any unsuitable soils originally found below-grade is in accordance with permit specifications.
 - If unable to determine, require further analysis.

Fill/Excavation Material
Items [22] - [26]



14

SETBACKS	
[]	[27] SURFACE WATER _____ FT
[]	[28] DITCHES _____ FT
[]	[29] PRIVATE WELLS _____ FT
[]	[30] PUBLIC WELLS _____ FT
[]	[31] IRRIGATION WELLS _____ FT
[]	[32] POTABLE WATER LINES _____ FT
[]	[33] BUILDING FOUNDATION _____ FT
[]	[34] PROPERTY LINES _____ FT
[]	[35] OTHER _____ FT

DH4016pg2
Setbacks
Items [27] - [35]



15

So we've added fill to the lot:

- How do we keep the drainfield effluent from spilling out into the environment?
 - We must add shoulder area around the fill already in place.
 - For new conventional systems, 4 feet of shoulder area is required.

Grade, 12" above BM

4 Foot Shoulder

(6" Min. Cover)
(12" tall drainfield.)

36" of fill

18"

30" above the Benchmark

+ 24" WSWT separation.

+12"

- 6" (WSWT)

0" (BM)

19

So we've added fill to the lot:

- How do we keep the drainfield and shoulder area from eroding or falling apart?
 - We must add slopes to hold up the mounded drainfield.
 - At minimum, the slope must be 2:1 (two foot horizontal to one foot vertical).
 - For mounds exceeding 36" in height, slopes must be at least 3:1.
- How tall is our mound?
 - We only measure from natural grade to the top of the fill.
 - This mound is 36 inches tall.

What is the minimum slope required for a 36" tall mound?

Grade, 12" above BM

4 Foot Shoulder

(6" Min. Cover)
(12" tall drainfield.)

36" of fill

18"

30" above the Benchmark

+ 24" WSWT separation.

+12"

- 6" (WSWT)

0" (BM)

20

To determine the minimum slope required:

- Determine whether the mound exceeds 36 inches in height.
 - This mound is 36 inches tall, so it does not.
- Reference the rule requirement for drainfield slopes [64E-6.009(3)(f)].
 - This section requires at minimum, 2:1 slopes for mounds not exceeding 36 inches in height.
 - This mound requires at minimum, 2:1 slopes.
 - The slopes must be extended out two feet (horizontally) for every 1 foot of mound height.

How do we determine how many feet (horizontally) the slopes must measure?

Grade, 12" above BM

4 Foot Shoulder

(6" Min. Cover)
(12" tall drainfield.)

36" of fill

36" tall Mound

18"

30" above the Benchmark

+ 24" WSWT separation.

+12"

- 6" (WSWT)

0" (BM)

21

To calculate the minimum slope required:

- Determine the mound height in feet.
 - This mound is 36 inches tall, so:
 - $36" / 12" = 3$ feet.
- Because the minimum slope requirement (2:1) means we must cover one horizontal foot of area for each vertical foot the mound covers, we multiply the height by 2 to determine how many feet of slope are required.
 - $3 \times 2 = 6$
 - 6 feet of slope must be added for a 3 foot tall mound.

How do we keep the slopes from eroding?

Grade, 12" above BM
+12"
0" (BM)
4 Foot Shoulder
36" of Fill
3 foot tall Mound
+ 24" WSWT separation.
- 6" (WSWT)
15 Horizontal Feet
9 Horizontal Feet
6 Horizontal Feet
22

To keep slopes from eroding, stabilization material must be applied:

- The rule specifies that the required stabilization material depends on the steepness of the slope.
 - For 2:1 slopes, sod (or equivalent) is required.
 - For 3:1 slopes, sod (or equivalent) is required.
 - And if the mound height exceeds 36", the entire mound must be stabilized with sod (or equivalent).
 - For 5:1 slopes or greater, seed and hay is acceptable.

Grade, 12" above BM
+12"
0" (BM)
4 Foot Shoulder
36" of Fill
3 foot tall Mound
+ 24" WSWT separation.
- 6" (WSWT)
15 Horizontal Feet
9 Horizontal Feet
6 Horizontal Feet
23

On Form DH4016pg2

[36] DRAINFIELD COVER
 [37] SHOULDERS
 [38] SLOPES
 [39] STABILIZATION _____

**Filled / Mound System
Items [36] - [39]**

- ▶ [36] Drainfield Cover:
 - Ensure fill material is in accordance with permit specifications.
- ▶ [37] Shoulders:
 - Ensure shoulders measure at least 4-feet from the edge of the drainfield and is composed of suitable material.
 - Ensure the O-horizon and original vegetation were removed prior to placement of fill material.
- ▶ [38] Slopes:
 - Ensure the adequate slopes are in place based on the actual drainfield height.
 - Measure from the outermost edge of the shoulder to the toe of the drainfield slope.
 - Ensure slopes are composed of slightly or moderately limited material.
 - Ensure the O-horizon & vegetation were removed prior to slope construction.
- ▶ [39] Stabilization:
 - Ensure the type, quantity, and quality of stabilization material is appropriate for the constructed mound height and slopes. Record the type of stabilization (seed & hay, sod, etc.).

HEALTH 24

On Form DH4016pg2

ABANDONMENT
 [] [49] TANK PUMPED
 [] [50] TANK CRUSHED & FILLED

- ▶ [49] Tank Pumped:
 - Visually confirm complete removal of tank contents.
 - Verify that the bottom of the tank is ruptured.
 - Record the date the tank was pumped.
- ▶ [50] Tank Crushed & Filled:
 - Confirm that the amount of fill material on site is sufficient and satisfactory to fill the abandoned tank.
 - Confirm that the tank has been crushed or collapsed.
 - Record the date the tank was crushed or collapsed.

**Abandonment
Items [49] - [50]**

 28

EXPLANATION OF VIOLATIONS / REMARKS:
 [] _____
 [] _____
 [] _____
 [] _____

DH4016pg2
Explanation of
Violations/Remarks

 29

On Form DH4016pg2

EXPLANATION OF VIOLATIONS / REMARKS:
 [] _____
 [] _____
 [] _____
 [] _____

- ▶ Explanation of Violations/Remarks:
 - Document, Document, Document!
 - Ensure all violations are explained, using additional sheets as required.
 - Ensure any additional items of note are documented.

**Explanation of Violations
/ Remarks**

 30

CONSTRUCTION (APPROVED/DISAPPROVED): _____ CHD DATE: _____
 FINAL SYSTEM (APPROVED/DISAPPROVED): _____ CHD DATE: _____

DH4016pg2
 OSTDS Construction
 and Final Approval.

 31

On Form DH4016pg2

CONSTRUCTION (APPROVED/DISAPPROVED): _____ CHD DATE: _____
 FINAL SYSTEM (APPROVED/DISAPPROVED): _____ CHD DATE: _____

DH 4016, 08/09 (Obsoletes all previous editions which may not be used) Page 2 of 3
 Incorporated: 648-6.003, PAC

- ▶ Construction Approval:
 - Designate whether the system construction is approved or disapproved.
 - Must be signed and dated by a certified CHD employee.
 - All re-inspections must be recorded on a separate form, each approved or disapproved in turn.
- ▶ Final Approval:
 - Record as "disapproved" until all OSTDS rule and statute requirements have been met.
 - All re-inspections must be recorded on a separate form, each approved or disapproved in turn.

Construction Approval & Final Approval

 32

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 33

Corrections to an installation:

- ▶ What happens when deficiencies are encountered?
 - How they are corrected?
 - By whom?
 - What are the associated fees?
 - What would void an otherwise viable permit?

HEALTH 34



12:00-1:00
LUNCH (Provided) >>

HEALTH 35

Eat

- ▶ Eat.
- ▶ Drink.
- ▶ Pick up after yourself.
- ▶ Digest.
- ▶ Stretch your legs.
- ▶ Have a snack.

HEALTH 36





Conventional System Inspection Field Exercise

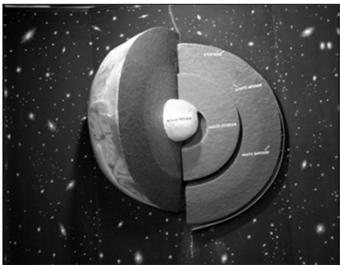
- ▶ Go outside. Bring Water. Dress Appropriately.
 - Show how the items discussed for inspection are collected from the field.
 - Discuss correct and incorrect methods for measuring or determining compliance.
 - Demonstrate procedure for assessing and documenting items in the field.
 - Demonstrate a system inspection, fill out the inspection form.

HEALTH 39



2:15-2:30 **BREAK** »»

HEALTH 40



2:30- 3:00
Review and Questions »»

HEALTH 41

Review and Questions

- ▶ 30 minute review and general discussion.

HEALTH 42



A 3D cutaway diagram of Earth showing its internal layers: the outermost crust, the thick mantle, and the central core. The diagram is set against a starry space background. A small 'HEALTH' logo is in the bottom left corner, and a double arrow '»' is in the bottom right corner.

2:30- 3:00
Review and Questions

43



A close-up photograph of a large, grey, ribbed plastic water storage container, likely used in a training center. A small 'HEALTH' logo is in the bottom left corner, and a double arrow '»' is in the bottom right corner.

3:00- 3:45
Hands-On Tour of Training
Center Stations

44

Hands-On Tour of Training Center
Stations

- ▶ OUTSIDE.
- ▶ Bring water.
- ▶ Dress appropriately.

A small 'HEALTH' logo is in the bottom left corner, and a small number '45' is in the bottom right corner.
