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Incoming:9400862

Department of Energy

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

MAR 13 1994

94-RPS-164

Mr. George B. Schlender, Program Manager  
Larger On-Site Municipal,  
Wastewater Reuse Systems  
State of Washington  
Department of Health  
West 924 Sinto  
Spokane, Washington 99201

Dear Mr. Schlender:

REVISED ENGINEERING REPORT FOR THE SEPTIC SYSTEM TO SUPPORT PROJECT C-018H  
"EFFLUENT TREATMENT FACILITY" PURSUANT TO THE WASHINGTON ADMINISTRATIVE  
CODE 246-272, ONSITE SEWAGE SYSTEMS

On February 16, 1994, a package was Federal Expressed to you containing the revised engineering report and a draft letter of explanation addressing comments received in a letter from E. A. Brown, State of Washington Department of Health (DOH), to A. L. Rodriguez, U.S. Department of Energy, Richland Operations Office, dated August 30, 1993.

This letter is transmitting a copy of the Final Letter of Explanation addressing the August 30, 1993, comments. Ms. A. L. Rodriguez of my staff spoke with Ms. Lisa Brown of your staff and asked her if she needed another copy of the engineering report. She stated the copy she had was adequate for her review.

Should you have any questions regarding this transmittal, please contact me or Ms. A. L. Rodriguez on (509) 372-0277.

Sincerely,

*Robert D. Holt/son*  
James D. Bauer, Program Manager  
Office of Environmental Assurance,  
Permits, and Policy.

EAP:ALR

Enclosure:  
Letter of Explanation

cc w/encl:  
J. L. Hensley, Ecology

cc w/o encl:  
J. R. Kelly,  
J. J. Luke, WHC  
C. S. Mortimer, KEH  
R. F. Stanley, Ecology



94-3725-164

Enclosure 1

9413275.0132

1.

a) Soil investigation locations are shown on the Drawings and the corresponding letter from WDOH (March 18, 1993, Lisa Brown, P.E., to Ms. A.L. Rodriquez) will be referenced in the report.

b) Design includes a one-foot layer of drainrock. This is shown on the Drawings.

c) Part 1: A waiver for conditional approval to begin construction is NOT being requested.

Part 2: The body of the engineering report will NOT contain a reference to verifying soil conditions. **NOTE:** As shown on the Drawings, the KEH Design Engineer shall inspect and verify soil conditions at the invert of the sand beds. This is a KEH quality control measure and does not typically involve WDOH.

d) A draft O&M manual will be included in the Engineering Report; this will be finalized at a later date, as required.

2.

a) The UPC is not used as a reference for the modified design

b) New specifications include an additional 7000 gallon septic tank and an additional 2150 gallon dosing chamber (to expand existing dosing tank); plans for both will be submitted to WDOH during the construction submittal process. The existing 3000 gallon septic tank and 2150 gallon dosing tank were as-built surveyed, inspected, and incorporated as shown on the Drawings with required modifications indicated (addition of an effluent filter and a baffle tee access port).

c) Dosing tank as-built was a 2150 gallon unit by Yakima Precast. Another similar tank will be added parallel to it, providing additional required capacity.

d) There will be no distribution box.

e) Specified drainrock will be as follows:

Drain Rock: Washed stone or gravel of uniform size between 3/4 and 1-1/2 inches. Stone or gravel shall be naturally occurring material. Crushed stone will not be permitted. Fines shall not exceed 12 % passing a No. 4 sieve, 8 % passing a No. 20, 4 % passing a No. 80, or 2 % passing a No. 200.

9413275.0133

- f) ASTM C-33 sand will be specified.
- g) Part 1: Laterals will be installed level within 1/4" per length of each (25").

Part 2: Design complies with appropriate references.

Part 3: Specification C-018H-C9 reads as follows:

3.1.6 Remove smeared or compacted surfaces of disposal beds by raking to a depth of 1 inch minimum. Install filter sand in 1 lift. Distribute and level with a minimum of equipment trafficking across the beds. Use tracked type equipment for distribution and leveling. Do not compact.

3.1.7 Place first lift of drainrock to the bottom elevation of laterals. Distribute and level with a minimum of equipment trafficking across the beds. use tracked type equipment for distribution and leveling. Do not compact.

Part 4: All joints are either glued, mechanical, or gasketed bell & spigot.

- h) The final inspection will be done with witnessing by WDOH and will include a complete operating system test. Laterals are not covered until test is successfully completed. WDOH will receive a minimum 5 working days advance notice of the test date.

3.

- a) Pump will generate 16.6 +/- 2 TDH @ 242 gpm. Pumping and related equipment will meet WISHA and other requirements. Pump hour meters will be included as part of the control panel package.

4.

- a) Current design handles and increased load, with room for expansion. System is oversized about 50% for future expansion.
- b) Soil is Type I and sand beds are used.
- c) Land area is based on loading sand beds at a conservative 1.0 gpd/sf.

- 5.
- a) One foot of drainrock is shown on the Drawings.
  - b) Drawings indicate only "sand beds" where required for clarity. The type of sand, ASTM C-33, is specified in C-018H-C9.
  - c) Vertical control is in feet and based on as-built surveys of the area. System is level where appropriate; each lateral is level within 1/4."
  - d) This is shown in the Drawings.
  - e) Valve vault is depicted similar to previous approved designs; it features 9 valves.
  - f)
    - 1) New tank will be correctly installed level to utilize built-in drop. Submitted standard drawing from Yakima Precast shows existing 3000 gallon's tank's drop but does not dimension that drop; it is not a scale drawing, but in proportion to the rest of the dimensioned features, the drop is 3." From the as-built survey, the bottom of the tank from end to end is level within 0.02 feet. Elevation of inlet and outlet pipes WILL BE confirmed; if drop is inadequate, the effluent line can be lowered. The drawings also note that a minimum 0.1' drop will be maintained between the two tanks.
    - 2) Risers will be extended to grade.
    - 3) Drawing is modified to reflect requirement.
    - 4) Drawing is modified to reflect requirement.
    - 5) Drawing is modified to reflect requirement.
  - g) Item "g" was inadvertantly not included in original letter
  - h) Test locations are shown; they are approximate as they were never surveyed.

Enclosure 2

9413275-0136

# CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
J. D. Bauer, RL (K. A. Giese, WHC)	G. B. Schlender, DOH	Incoming:9400862 Xref:9451423D

Subject: REVISED ENGINEERING REPORT FOR THE SEPTIC SYSTEM TO SUPPORT  
PROJECT C-018H, "EFFLUENT TREATMENT FACILITY" PURSUANT TO THE  
WASHINGTON ADMINISTRATIVE CODE 246-272, ONSITE SEWAGE SYSTEMS

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\* Already submitted by others