

# EAST PETERSBURG BOROUGH

6040 MAIN STREET EAST PETERSBURG PA 17520

(717) 569-9282

APPLICATION FOR GROUND SOURCE HEAT PUMP PERMIT

ALL REQUIREMENTS MUST BE MET BEFORE USE AND OCCUPANCY CERTIFICATEIS SSUED BY THE BOROUGH PROPERTY OWNER TAX MAP/LOT NO. \_ PROPERTY ADDRESS \_

OWNER'S ADDRESS \_ (IF DIFFERENT)

PHONE NUMBER------------

PERMJT FEE \_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE OF PAYMENT \_

LOCATIONOF GSHP WELL OR TRENCH- ATTACH SCALE DRAWING WITH TRIANGULATION FROM LOT CORNERS

GROUND SOURCE HEAT PUMP TYPE -TRENCH. WELL \_

TYPE OF HEAT TRANSFER FLU D \_

TRANSFER PIPE SPECIFICATIONS \_

NAME, ADDRESS AND PHONE NUMBER OF WELL DRILLER------------------

NAME, ADDRESS AND PHONE NUMBER OF SYSTEM INSTALLER----------------

**FOR WELL SYSTEMS**

DIAMETER--- DEPTH \_

GROUTING MATERIAL \_

**FOR TRENCH SYSTEMS** LENGTH \_ DEPTH \_

BEDDING MATERIAL \_ INSTALLATION -HORIZONTAL. SLINKY \_

# LIST OF REQUIRED INSPECTIONS

**NOTE: ALL INSPECTIONS REQUIRE 24 HOURS NOTICE**

**APPROVAL/INSPECTIONS**

### D DRILLING INSPECTION

D DRILLING LOG REVIEW

(MUST BE COMPLETED PRIOR TO GROUTING)

D TRANSFER PIPE PRESSURE TESTING

(MUST BE COMPLETED PRIOR TO GROUTING)

D GROUTING INSPECTION -TREMIE TUPE METHOD ONLY D FINAL PRESSURE TEST INSPECTION

DATE \_ DATE \_

DATE. \_

DATE. \_

DATE \_

GSHP PERMIT ISSUED PERMIT NUMBER------ FINAL INSPECTION AND APPROVAL TO OPERATE SYSTEM DATE. \_ SIGNATURE OF INSPECTOR DATE \_

EAST PETERSBURG BOROUGH GROUND SOURCE HEAT PUMP SPECIFICATIONS

APPENDIX !

1. HEAT TRANSFER FLUIDS

FLUIDS APPROVED FOR USE:

Water

Potassium acetate

1. TRANSFER PIPE

TRANSFER PIPE APPROVED FOR USE:

Polybutylene PE 2110, SOR 13.5

Polybutylene PE 2110, SOR 17

1. GROUTING MATERIAL

GROUTING MATERIALS APPROVED FOR USE:

Neat cement {no more than six (6) gallons of water per ninety-four (94) pound bag of cement}. High solids clay bentonite grout (NOT BENTONITE GEL)

1. GROUTING METHOD

APPROVED PROCEDURE

Approved grout materials must be pumped into the annular space through a tremie pipe suspended in the annular space. The grout pipe must be composed of materials of sufficient strength to withstand grout-pumping pressures. The inside diameter of the tremie pipe must be no less than one inch. The borehole must be of sufficient diameter to simultaneously accommodate the tremie pipe and ground heat exchanger loop. The annular space must be grouted from bottom to top, in that order, and the bottom end of the tremie pipe must remain in the grout and be kept full of grout as the grout is placed. The grout must be discharged through either the bottom of the tremie pipe or through side ports located within 3 feet of the bottom of the tremie pipe. As the annulus if filled during grout pumping, the tremie pipe may be progressively extracted from the borehole provided the bottom of the tremie pipe remains submerged in the grout. Grout must be pumped until it appears at the top of the borehole.

If grouting must be interrupted prior to the complete grouting of the annulus, the bottom of the tremie pipe may be raised above the level of the grout and flushed with potable water. After pumping resumes and any air or water is flushed from the tremie pipe by fresh grout, the bottom of the tremie pipe must be replaced in the fresh grout.

1. PRESSURE TESTING

The ground heat exchange loop of each ground source heat pump system shall be pressure tested at two (2) times the normal operating pressure but not at more than 100 psi. The test pressure shall be maintained at +/- one (1) psi for a duration of one ( 1) hour without the addition of air or water to the system being tested. Pressure testing must be conducted prior to well grouting or trench backfill.

1. ALL OTHER REQUIREMENTS

All other installation procedures not specifically addressed above will conform to the International Ground Source Heat Pump Association (IGSHPA) installation standards, as same may be amended and updated from time-to-time, and currently found in appendix 1 of the GSHP Manual of the DEP.

1. PERMITS MUST BE POSTED AT ALL TIMES AT A LOCATION VISIBLE TO THE TRAVELING PUBLIC.
2. PERMITS WILL EXPIRE ONE YEAR FROM ISSUE DATE.