Petroleum Remediation Program
Minnesota Pollution Control Agency
http://www.pca.state.mn.us/programs/lust_p.html

Corrective Action Design
Installation Notification Worksheet

Guidance Document 4-11

This worksheet serves three purposes: 1) Notify the Minnesota Pollution Control Agency (MPCA) of system startup, as required by U.S. Environmental Protection Agency; 2) verify system construction, and 3) document initial system emissions and operating parameters. **Submit this worksheet within thirty (30) days of system startup.**

All common remedial technologies are listed on this worksheet. Please complete only those portions that apply to your site. If you are using a remedial technology that is not included on this worksheet, discuss reporting requirements with the MPCA staff assigned to your project. If an item is not applicable to your site, fill in the line with N/A. Where attachments are requested, please check off those items attached.

For several remedial technologies, you are asked to provide contaminant mass removal rates in terms of gallons/day. To aid you in calculating these values, we provide a standard equation and have calculated the gallons/kilogram (gal/kg) values for various petroleum products. Please use these values in your calculations:

Product	gal/kg
gasoline	0.37
kerosene, JP4	0.33
fuel oil #1, diesel	0.31
fuel oil #2	0.30
fuel oil #4	0.29

MPCA Site ID: Leak 000 14698
Date Form Completed: January 29, 2007 Reporting period: January 29, 2007

Responsible Party: North American State Bank RP Phone: 320-254-8271
Consultant: Coteau Environmental Consultant phone: 320-846-4668

Site Name: Former K-C Kwik Stop
Facility Name: Former K-C Kwik Stop
Facility Address: 230 1st Street, Brooten, MN

GENERAL SYSTEM INFORMATION

Date corrective action system installed: November 8 and 9, 2006
Date system activated: November 9, 2006
System (was)/was not **(circle one)** constructed as per MPCA approved corrective action design (CAD) report dated May 17, 2006.

X If system design or construction varied from approved design, attach construction diagrams and an explanation of why an alternative design was selected.
Four (4) inch PVC pipe was utilized in the installation of the radon-type system. Three (3) inch PVC was proposed.

☐ Attach a site map showing the location of all system elements.

☐ Attach a table showing uptime and downtime for system along with an explanation of any downtime that occurred during the reporting period.

Table 1

Radon System	System startup Date	System Shut Down Date	Reason for System Shut Down
110 Western Ave	11/9/06	N/A	N/A

FREE PRODUCT RECOVERY SYSTEMS

Product thickness in all monitoring and recovery wells (to 0.1 feet):

Well No.	Before system startup	14 days after system startup

Free product recovery rate: gal/day
Total product recovered to date: gallons
If using a depression pump or total fluids pump:
Amount of drawdown: feet

Pumping rate: gallons per minute (gpm)
Radius of influence: feet
Discharge point and type of treatment:

GROUND WATER PUMP-OUT SYSTEMS

Discharge authorizations

Has a National Pollutant Discharge Elimination System (NPDES) permit authorization been obtained from the MPCA? ☐Yes ☐No

Has a water appropriation permit authorization been obtained from the Minnesota Department of Natural Resources? ☐Yes ☐No

If "No" to either of these questions, do not discharge until these authorizations are obtained.

Effluent concentrations

Ground water discharge concentrations at system startup (in ug/L):

Compound	Influent	Effluent
Benzene		
Ethylbenzene		
Toluene		
Xylenes		
GRO		
DRO		
MTBE		
Lead		
Others:		

Operating parameters

☐ Attach a map of the calculated ground water capture zone.
☐ Attach capture zone calculations and/or ground water modeling results.

Pumping rate: gpm
Water table drawdown: feet
Pump depth: feet

Contaminant mass removal

Estimated contaminant mass removal rate: gal/day

Treatment system emissions

☐ If your system discharge requires treatment that results in air emissions, please attach completed emission rate calculation tables for the initial, 7 day, and 14 day samples from Guidance Document 4-15 *Air Emission Controls for Soil Venting Systems and Air Strippers.*

Do the 7-day or 14 day emission rates exceed the Screening Emission Rates (SERs)?
(☐yes ☐ no)
If yes, was an emission treatment system installed? (☐yes ☐ no)
If yes, describe:
If no, explain why:

SOIL VENTING SYSTEMS

Emissions

Attach completed emission rate calculation tables for the initial, 7-day, and 14 day samples from Guidance Document 4-15 *Air Emission Controls for Soil Venting Systems and Air Strippers*.

Do the 7-day or 14 day emission rates exceed the SERs? (☐yes ☐ no)
If yes, was an emission treatment system installed? (☐yes ☐ no)
If yes, describe:
If no, explain:

Contaminant mass removal

Estimated contaminant mass removal rate: kg/day x gal/kg = gal/day

Operating parameters

Airflow rate: standard cubic feet/minute (scfm)

Vacuum: attach a table of vacuum data from vent points and monitoring points.

Radius of influence of vent points: feet

Explain how radius of influence was determined:

SOIL VENTING/AIR SPARGING SYSTEMS

(Complete the soil venting systems section above for all air sparge/soil vent combination systems.)

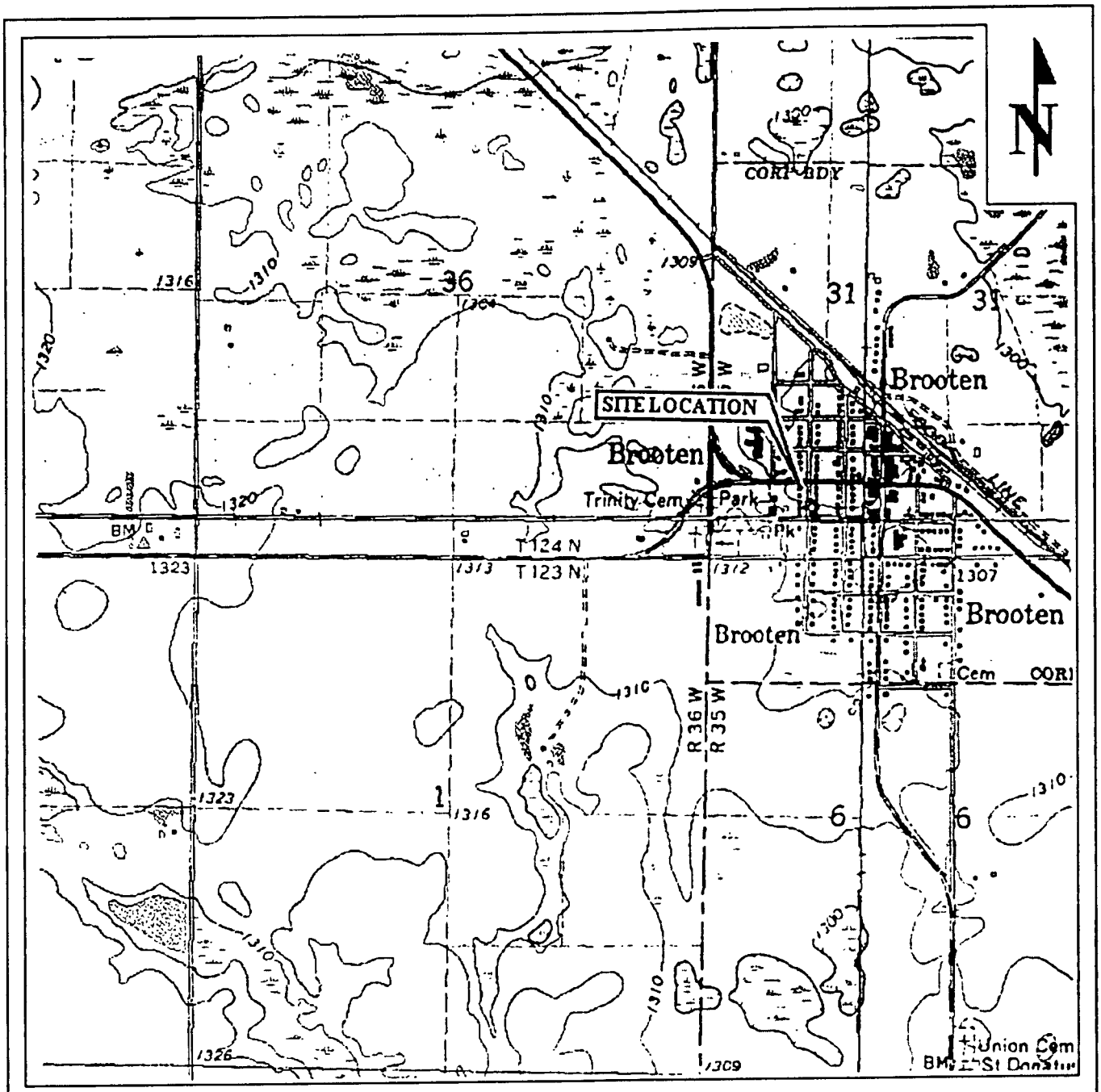
Operating parameters

Attach a table of air injection rates for each sparge point.

Total air injection rate: scfm
Total air removal rate: scfm
Radius of influence of sparge points: feet
Explain how radius of influence was determined:

Attach the following tables:

☐ Table of vacuum measurements from venting and monitoring points
☐ Table of pressure measurements from sparge and monitoring points



SCALE

0 0.5 MILES

TOPOGRAPHIC MAP
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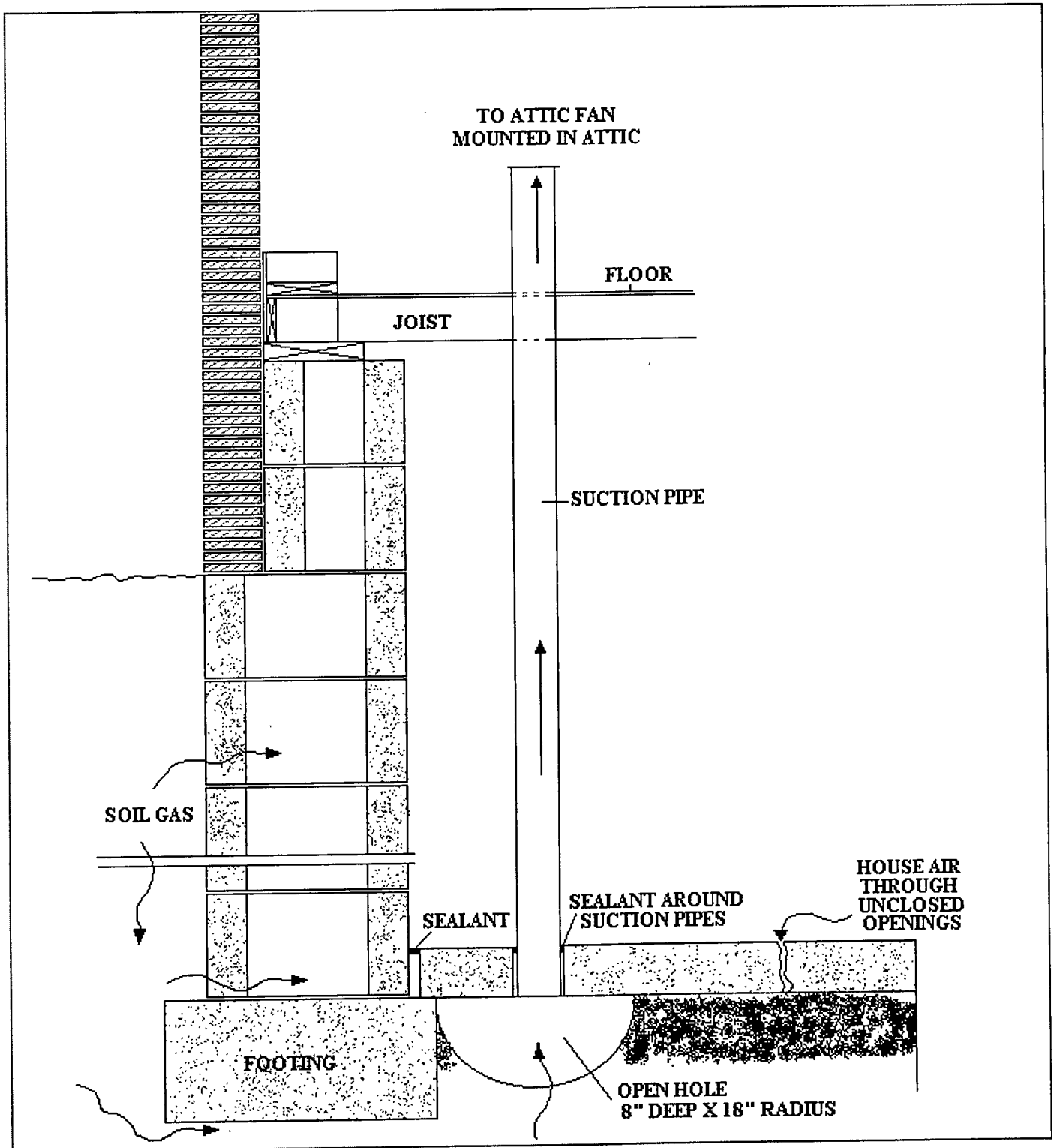
FORMER K-C KWIK STOP
BROOTEN, MINNESOTA

AREA LOCATION MAP

DATE	REVISED	COTEAU ENVIRONMENTAL 312 9TH AVE. SE, SUITE C WATERTOWN, SD 57201 (605) 886-4009
DRAWN BY:		DATE: AUG 03 — FIGURE: 1



FROM: EPA, 1993

NOT TO SCALE

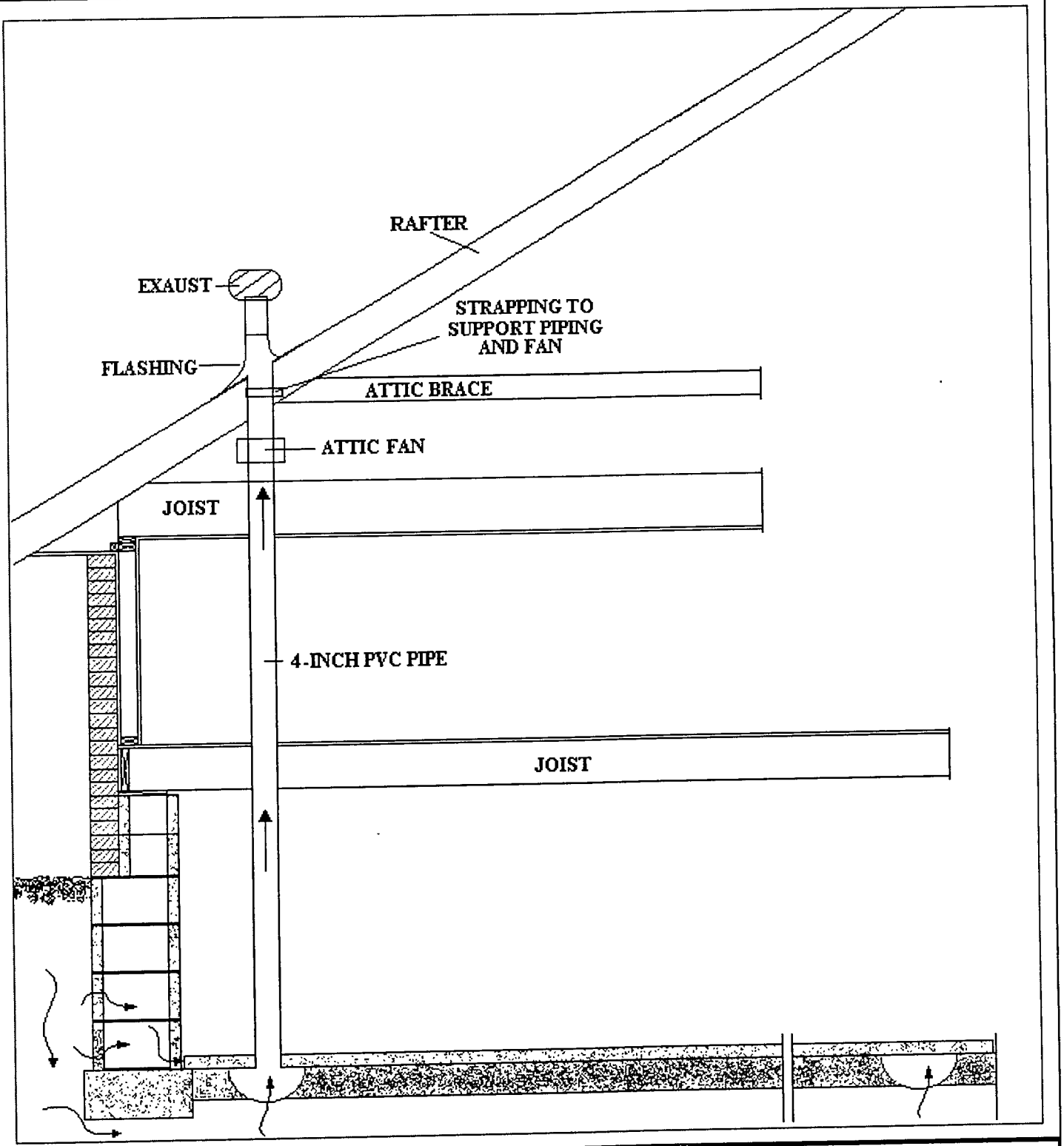
FORMER K-C KWIK STOP
BROOTEN, MINNESOTA

SSD SYSTEM INDOOR INSTALLATION
110 SOUTH WESTERN AVENUE
BROOTEN, MINNESOTA

DATE	REVISED

COTEAU ENVIRONMENTAL
728 JANES CIRCLE DRIVE
ALEXANDRIA, MN 56308
(320) 846-4668

DRAWN BY:	DATE: FEB 07	FIGURE: 2A



FROM: EPA, 1993

NOT TO SCALE

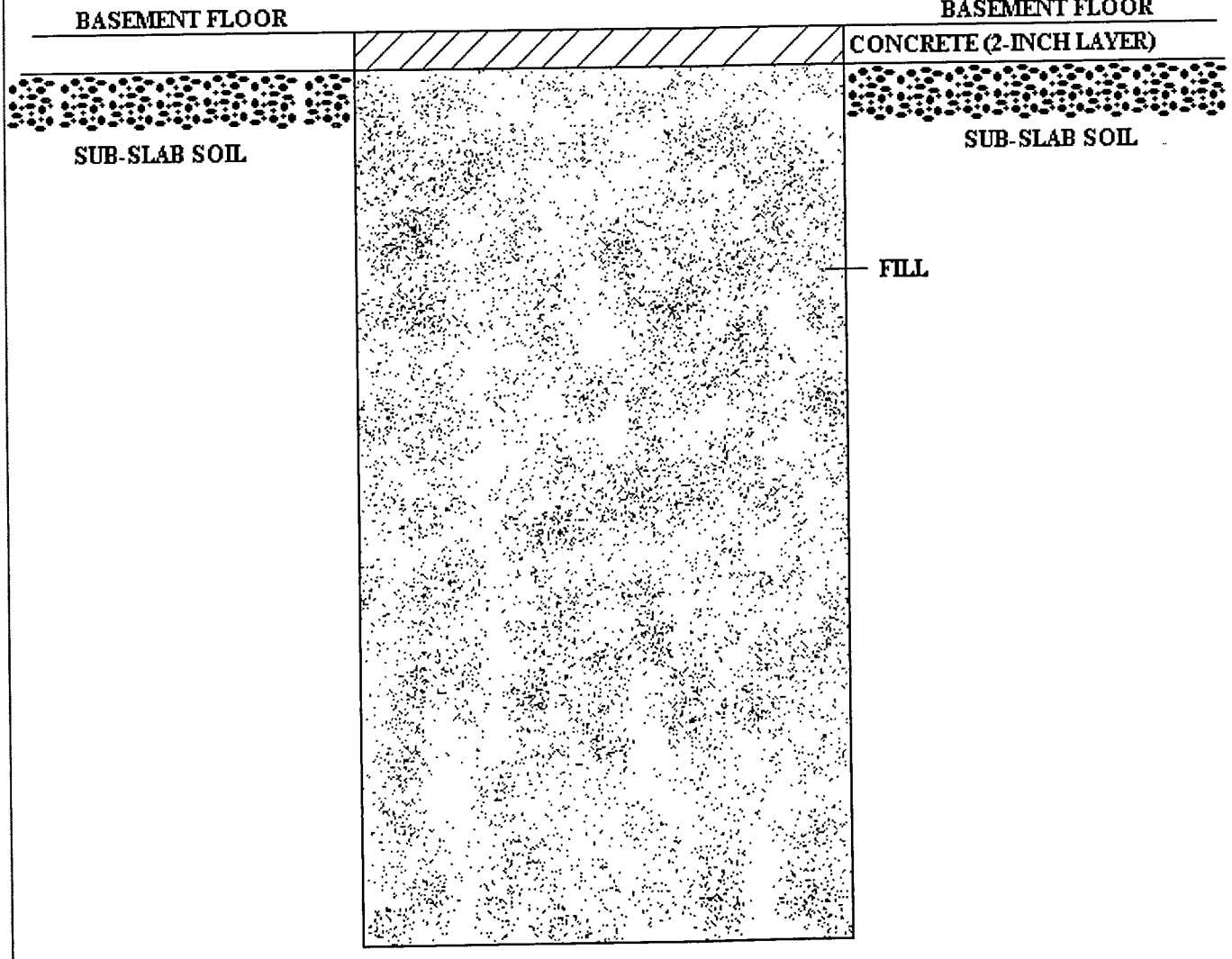
FORMER K-C KWIK STOP
BROOTEN, MINNESOTA

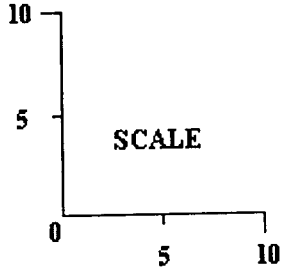
SSD SYSTEM CONFIGURATION
110 SOUTH WESTERN AVE.
BROOTEN, MINNESOTA

DATE	REVISED

COTEAU ENVIRONMENTAL
728 JANES CIRCLE DRIVE
ALEXANDRIA, MN 56308
(320) 846-4668

DRAWN BY:	DATE: FEB 07	FIGURE: 2B





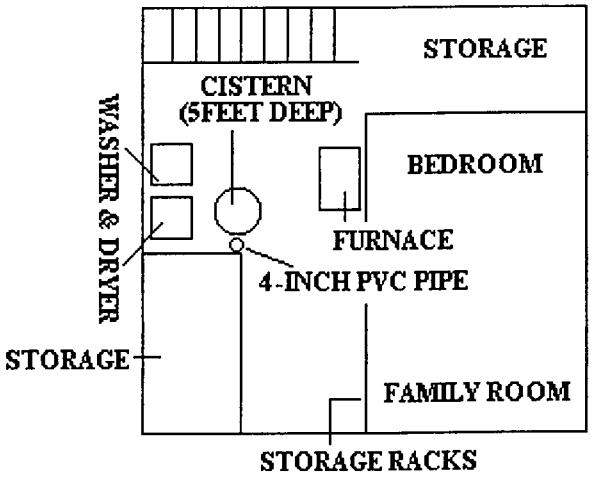
FORMER K-C KWIK STOP
BROOTEN, MINNESOTA

CISTERN SEALING
110 SOUTH WESTERN AVE.
BROOTEN, MINNESOTA

DATE	REVISED

COTEAU ENVIRONMENTAL
728 JANES CIRCLE DRIVE
ALEXANDRIA, MN 56308
(320) 846-4668

DRAWN BY:	DATE: FEB 07	FIGURE: 2C



SCALE

0 5 10 FEET

FORMER K-C KWIK STOP
BROOTEN, MINNESOTA

BASEMENT - 110 WESTERN AVENUE
BROOTEN, MINNESOTA

DATE	REVISED	COTEAU ENVIRONMENTAL 728 JANES CIRCLE DRIVE ALEXANDRIA, MN 56308 (320) 846-4668

DRAWN BY:	DATE: FEB 07	FIGURE: 2D