

502

# ZONING PERMIT APPLICATION

FULL NAME BOB SAUERER TELE # 218-820-7019  
 MAIL ADDRESS 45049 350<sup>th</sup> ST  
AITKIN STATE MN ZIP 56431  
 911 ADDRESS OF PROPERTY T.B.D.  
 CITY AITKIN STATE MN ZIP 56431  
 TOWNSHIP AITKIN TWP  
 LEGAL DESCRIPTION SEE ATTACHED 4.31 AC of Gov Lot 1  
 SECTION 31 TOWNSHIP 47 RANGE 27 1<sup>st</sup> Doc 290122  
 (circle) RESIDENTIAL COMMERCIAL ACCESSORY NEW BUILDING ALTERATION  
 BUILDING CONTRACTOR AND LICENSE NUMBER: NOR-SON INC 0001969

OFFICE USE ONLY	
DATE	<u>8-29-05</u> APPROVE / DENY <u>(M)</u>
PERMIT #	<u>33316</u>
PARCEL #	<u>01-0-075502</u>
RECEIPT #	<u>8788</u>
CONFORMING SEPTIC	YES P# NO <u>(NEW)</u>

SIZE OF ALL BUILDINGS COVERED BY THIS APPLICATION  
 ① HOUSE + GARAGE 40' X 67'-8" = 2706 SF 29' 34' X 16' PATIO  
 ② SHED (garage) 40' X 30' = 1200 SF 150  
 ③ GAZEBO 20' X 20' = 400 SF 150  
 COMMENTS: ④ "Other" septic (sand filter) = 300  
PROPERTY WILL BE PURCHASED BY JIM + KRISTIN HARRIS ON  
AUG 31<sup>ST</sup>, 2005  
34322 442ND PLACE  
AITKIN, MN 56431 218-927-7024  
 DESIGNER: DENNIS SLAYTON + JOHN WALSH  
 DATA FOR SEWER CONSTRUCTION: INSTALLER TOM ANTONSEN #BEDROOMS/GPD 5 Bedroom / 750

The undersigned hereby makes application for permit to construct as herein specified, agreeing to do all such work in strict accordance with the Ordinances of the County of Aitkin, Minnesota; Minnesota dual Sewage Disposal Code Minimum Standards set forth by Minnesota Department of Health; and Shoreland Management Standards set forth by Minnesota Department of Natural Resources. Applicant agrees that plot plan, sketches and specifications submitted herewith and which are approved by the Zoning Official, shall become a part of the permit. **APPLICANT FURTHER AGREES THAT NO PART OF THE SEWAGE SYSTEM SHALL BE COVERED UNTIL IT HAS BEEN INSPECTED AND ACCEPTED.** It shall be the responsibility of the applicant for the permit to notify the Zoning Office (at least 24 hours in advance) that the Septic System is ready for inspection.

X Cu Musc - NOR-SON INC  
 SIGNATURE APPLICANT/AGENT

## DO NOT WRITE BELOW THIS LINE

**ZONING DISTRICT & FLOOD PLAIN**  
 ZONING DISTRICT S/L  
 LAKE/STREAM/RIVER NAME Cedar Lake  
 LAKE/RIVER ID NUMBER 1-0209  
 LAKE/RIVER/STREAM CLASSIF. RD  
 PARCEL LOCATED IN FLOOD PLAIN? Y X N  
 10/100-YR. FLOOD ELEVATION 1202.4  
 LOWEST FLOOR ELEVATION 1203.4  
 ELEV. CERTIFICATE REQUIRED Y X N  
 BEFORE CONSTRUCTION Y X N  
 AFTER CONSTRUCTION Y X N

**STRUCTURE SETBACK DISTANCE REQUIREMENTS**  
 (Measure from eaves or overhang)  
 OHW TO LAKE/RIVER/STREAM 100  
 PROPERTY LINE SETBACK (10-ft. / 20-ft.)  
 SETBACK TO ROAD R-O-W (30-ft. Twp. / 50-ft. Co., State, Fed.)  
 SETBACK TO BLUFF (30-ft.)  
**SEPTIC SYSTEM SETBACK DISTANCES**  
 SETBACK TO STRUCTURES (10-ft. Tank / 20-ft. Drainfield)  
 OHW TO LAKE/RIVER 75  
 PROPERTY LINE SETBACK (10-ft.)  
 SETBACK TO ROAD R-O-W (10-ft.)

**\*\*ATTACH COPY OF ELEVATION CERTIFICATES\*\***  
 SOIL BORINGS \_\_\_\_\_ SEPTIC DESIGN Other GARBAGE DISP/HOT TUB  
 SSF \_\_\_\_\_ DEPTH TO RESTRICTING LAYER \_\_\_\_\_ YES \_\_\_\_\_ NO \_\_\_\_\_  
 MIN. SIZE SEPTIC TANK \_\_\_\_\_ MIN. SIZE PUMP TANK \_\_\_\_\_  
 DRAINFIELD: MINIMUM SQ.FT. \_\_\_\_\_ WITH \_\_\_\_\_ INCHES ROCK BELOW PIPE  
 MOUND: MINIMUM ROCK BED SQ.FT. \_\_\_\_\_ WITH 9 INCHES ROCK BELOW PIPE  
 MIN. UPSLOPE SAND WIDTH \_\_\_\_\_ MIN. DOWNSLOPE SAND WIDTH \_\_\_\_\_ END SAND WIDTHS \_\_\_\_\_  
 RECOMMENDATIONS: \_\_\_\_\_

**EXPIRES IN ONE YEAR • Aitkin County Zoning**  
 Courthouse - 209 2nd St. NW. Room 118 • Aitkin, Minnesota 56431  
 Telephone 218/927-7342

\$ 850 FEE  
 RECEIVED BY RPC DATE 08-15-05

**FIELD EVALUATION SHEET**

NAME Bob Sauerer PERMIT # 33316  
 PARCEL # 01-0-075502 TWP A1K11 SECTION \_\_\_\_\_

**CHECK THE FOLLOWING PRIOR TO INSPECTION**

\_\_\_\_\_  
 \_\_\_\_\_ NAME OF SITE EVALUATOR  
 \_\_\_\_\_ NAME OF DESIGNER  
 \_\_\_\_\_ NAME OF INSTALLER

No LOT OF RECORD BEFORE 1-21-92 (SL) IR 1-10-95 (NSL), IF NO, ALT. SITE? yes  
yes SITE PLAN WITH SETBACK DISTANCES AND DIMENSIONS  
yes ARE ISTS SITES PROTECTED FROM DAMAGE? IF NOT, WHEN \_\_\_\_\_  
other DESIGN \_\_\_\_\_ PERC TESTS \_\_\_\_\_ SOIL BORINGS, 2 PER SITE  
5 NUMBER OF BEDROOMS (INCLUDE POTENTIAL)  
x CROSS SECTION SHEET \_\_\_\_\_ TRENCH DESIGN SHEET  
no MOUND DESIGN SHEET \_\_\_\_\_ x OTHER OR PERFORM.  
x PRESSURE DISTRIBUTION SHEET \_\_\_\_\_ PUMP CALC. TEST  
 \_\_\_\_\_ WATER USE CALCULATIONS \_\_\_\_\_  
NO GARBAGE DISPOSAL NO HOT TUB  
 \_\_\_\_\_ EASEMENTS ON LOT, IS ROAD PUBLIC OR PRIVATE SEE DEED/PLAT  
 \_\_\_\_\_ NATURAL LANDSCAPE PROTECTION PLAN

STAKING: BUILDINGS x, DRAINFIELD x, BORINGS \_\_\_\_\_, WELL \_\_\_\_\_  
 BUILDING SETBACKS: ROAD \_\_\_\_\_, SIDE \_\_\_\_\_, REAR \_\_\_\_\_, BLUFF \_\_\_\_\_,  
 LAKE/RIVER \_\_\_\_\_

COMPLETE DURING SITE EVALUATION  
 \_\_\_\_\_ BUILDINGS STAKED \_\_\_\_\_ DRAINFIELD STAKED \_\_\_\_\_ BORINGS STAKED  
 \_\_\_\_\_ WELL STAKED

**SETBACKS (MEASURE DISTANCE)**

	<u>DRAINFIELD</u>	<u>HOUSE</u>
FLOOD PLAIN	YES/NO	YES/NO
WETLANDS	YES/NO	YES/NO
LAKE, RIVER, PROTECTED WATERS	_____	<u>7140'</u>
ROAD RIGHT OF WAY	_____	<u>740'</u>
BLUFF	_____	<u>NO</u>
SIDE LOT LINE	_____	<u>610'</u> - GARAGE IF NO RAKES OR
REAR LOT LINE	_____	<u>OK</u> OVERHANG
HOUSE OR OTHER STRUCTURE	_____	_____
WELL	_____	<u>NONE</u>
EASEMENTS	_____	_____
NEIGHBORING WELL (S) TO ISTS	(1) _____ (2) _____ (3) _____ (4) _____	_____
DRAINFIELD AREA DISTURBED	_____	_____

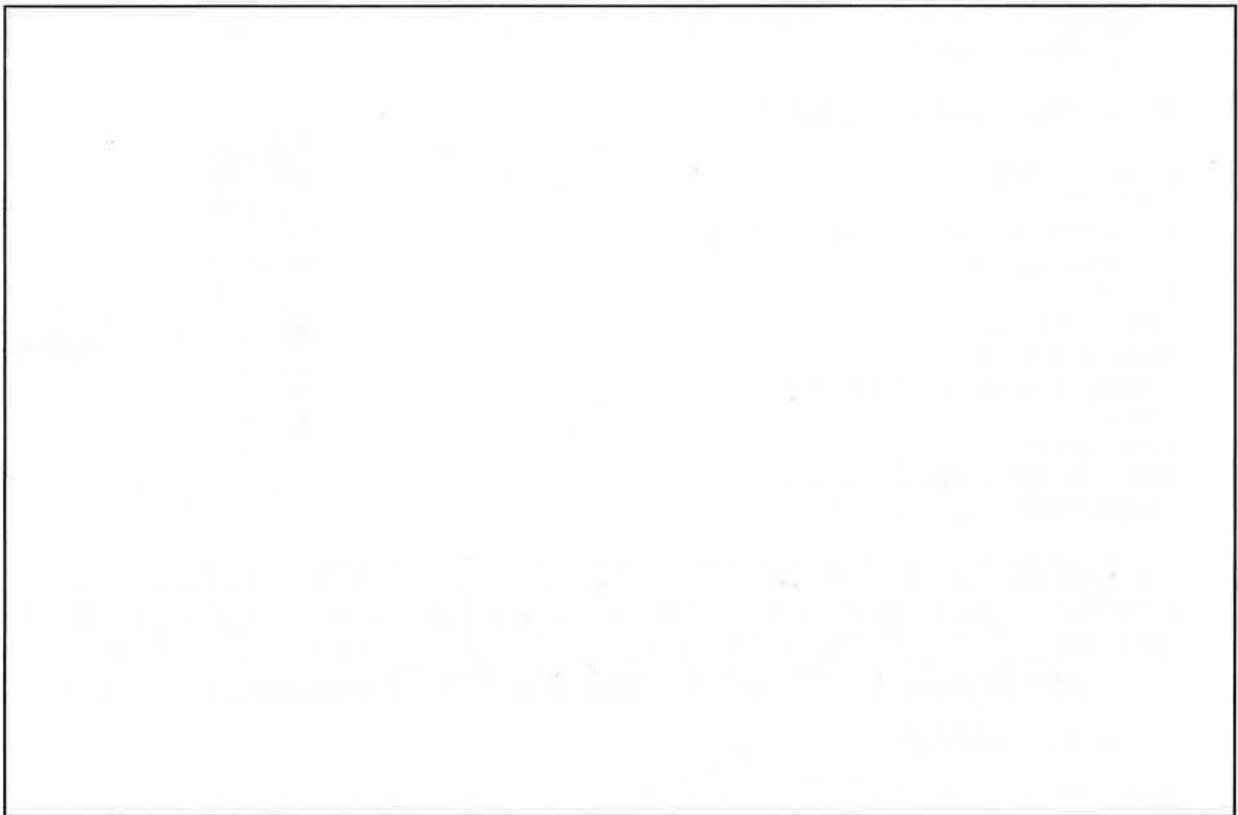
CONFORMING SEPTIC SYSTEM: \_\_\_\_\_ YES x NO If no, list reasons below.  
 COMMENTS OR PROBLEMS (drainage, swales, wetlands, need gutters, etc.) TO BE INSTALLED  
NO RUGAR - THE ATTACHED GARAGE WILL BE A LUC C OSE TO  
THE PROPERTY IF THE HAVE ANY OVERHANG

APPROVED: YES OR NO  
 INSPECTORS NAME M. K. [Signature] DATE 9-29-05 # PICTURES \_\_\_\_\_

**SOIL BORING LOGS AND SKETCH PLAN ON REVERSE SIDE**

SOIL BORING LOG #1			SOIL BORING LOG #2		
DEPTH	TEXTURE	COLOR	DEPTH	TEXTURE	COLOR

**IDENTIFY LOCATIONS OF: (BORINGS, NEIGHBORING STRUCTURES, WELLS, DRAINFIELDS, DRAINAGE PATTERNS, OR OTHER FEATURES THAT MAY IMPACT THE SITE).**



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Dennis P. Slayton

Phone: 218-765-3356

**PROPERTY DATA RESEARCH**27405 Timber Drive  
Merrifield, MN 56465sala@brainerd.net  
Fax: 218-765-3356

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**FAX MEMO****DATE:** August 19, 2005**TO:** AITKIN COUNTY  
PLANNING & ZONING ATTN: RICH**FAX #:** 218 927-4372 **TOTAL # OF PAGES:** 6**RE:** Jim & Kristin Harris (Buyer)**FROM:** Dennis P. Slayton **FROM FAX NUMBER:** 218-765-3356**COMMENTS:**

Please find attached Site Evaluation & Septic Design for Jim & Kristin Harris (Buyer)

Just talked with John Walsh, MN Onsite Specialists, he suggested some minor changes which have been completed.

If you have any questions, kindly contact me.

Dennis

fc: Nor Son; Chad  
MN Onsite Specialists; John

PDR308-17117 F-1 Aitkin Cty P&Z

VEGETATION TYPES \_\_\_\_\_

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 \_\_\_\_\_, 1A \_\_\_\_\_, 2 \_\_\_\_\_, 2A \_\_\_\_\_

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 \_\_\_\_\_ FT., #2 \_\_\_\_\_ FT.

SOIL SIZING FACTOR: SITE # 1 \_\_\_\_\_, SITE #2 \_\_\_\_\_

CONSTRUCTION RELATED ISSUES: SEE ATTACHED

LIC# 1271 SITE EVALUATOR SIGNATURE: *[Signature]*

SITE EVALUATOR NAME: Dennis P. Slayton TELEPHONE# 218 765-3356

LUG REVIEW \_\_\_\_\_ DATE \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SOIL BORING LOGS ON REVERSE SIDE



TRENCH DESIGN SHEET

27405 Timber Drive  
Merrifield, MN 56465

Phone/fax: 218 765-3356  
e-mail: SALA@brainerd.net

PROPERTY OWNER J & K HARRIS (BUYER) TOWNSHIP Aitkin FIRE# \_\_\_\_\_  
PERMIT# \_\_\_\_\_ PIN# 01-0-075502 *Swatow Exchange* DATE 8/19/05  
DESIGNER NAME Dennis P. Slayton LICENSE# 1271  
SIGNATURE: *[Signature]* DATE: *8/19/05* SITE EVALUATION # 1271

WATER USE APPLIANCES (CHECK ALL THAT APPLY)

CLOTHES WASHER \_\_\_\_\_ WATER SOFTNER \_\_\_\_\_ DISHWASHER \_\_\_\_\_ WHIRLPOOL \_\_\_\_\_ HUMIDIFIER \_\_\_\_\_  
NUMBER OF BEDROOMS 5 TYPE: I GARBAGE DISPOSAL: YES \_\_\_\_\_ NO \_\_\_\_\_ AIR TEST: YES \_\_\_\_\_ NO \_\_\_\_\_  
WELL: DEEP (50'+) \_\_\_\_\_ SHALLOW \_\_\_\_\_ SETBACKS: TANK 95 DRAINFIELD 195 SEWER LINE 90

*PROPOSED*  
FLOW  
A. ESTIMATED 110 GPD OR MEASURED GPD  
B. SEPTIC TANK VOLUME 1500 GALLONS COMPARTMENT  
C. MINIMUM PUMP TANK VOLUME 1000 GALLONS  
D. ALARM TYPE ELECTRICAL VISUAL/AUDIBLE

SOILS

D. DEPTH TO RESTRICTING LAYER \_\_\_\_\_ FEET  
E. MAXIMUM SYSTEM DEPTH (D-3) \_\_\_\_\_ FT OR \_\_\_\_\_ ELEV  
F. PERCOLATION RATE \_\_\_\_\_ MPI  
G. SOIL SIZING FACTOR \_\_\_\_\_ SQ FT/GPD

TRENCH BOTTOM AREA

1. 6 IN. OF ROCK OR GRAVELLESS: A x B = \_\_\_\_\_ SQ. FT.

EST. FLOW IN GALLONS/ DAY (GPD)			
NUMBER OF BEDROOMS	TYPE I	TYPE II	TYPE III
2	300	225	180
3	450	300	218
4	600	375	256
<u>5</u>	<u>750</u>	450	294
6	900	525	332
7	1050	600	370
8	1200	675	408

SEPTIC TANK CAPACITY		
NUMBER	MINIMUM	MINIMUM

1. 12 IN. OF ROCK:  $A \times G \times 0.8 = \underline{\quad} \times \underline{\quad} \times 0.8 = \underline{\quad}$  SQ.FT.  
 2. 18 IN. OF ROCK:  $A \times G \times 0.66 = \underline{\quad} \times \underline{\quad} \times 0.66 = \underline{\quad}$  SQ.FT.  
 3. 24 IN. OF ROCK:  $A \times G \times 0.6 = \underline{\quad} \times \underline{\quad} \times 0.6 = \underline{\quad}$  SQ.FT.

**BED BOTTOM AREA (6 OR 12 INCHES OF ROCK)**

4. SEEPAGE BEDS:  $1.5 \times A \times G = 1.5 \times \underline{\quad} \times \underline{\quad} = \underline{\quad}$  SQ. FT.  
 5. PRESSURE BEDS:  $A \times G = \underline{\quad} \times \underline{\quad} = \underline{\quad}$  SQ. FT.

**ROCK VOLUME IN CU FT**

6. ROCK DEPTH BELOW PIPE + 0.5 FT  $\times (H, I, J, K, L, M) = \underline{\quad}$  CU FT.

**ROCK VOLUME IN CU YDS**

7. N.  $\underline{\quad} + 27 = \underline{\quad}$  CUYDS

**ROCK WEIGHT**

P.O.  $\times 1.4 = \underline{\quad}$  TONS

**SYSTEM LENGTH**

8. BOTTOM AREA (H-K)  $\underline{\quad} +$  TRENCH WIDTH  $\underline{\quad} = \underline{\quad}$  LINEAL FT

**LAWN AREA**

9. SELECT TRENCH SPACING, CENTER TO CENTER =  $\underline{\quad}$  FT.  
 10. MULTIPLY TRENCH SPACING BY LINEAL FEET R  $\underline{\quad} \times \underline{\quad} Q = \underline{\quad}$  SQ FT OF LAWN AREA

11. UG APPROVAL:  $\underline{\quad}$  DATE:  $\underline{\quad}$

12. COMMENTS:

UP- BEDROOMS	TANK CAPACITY GALLONS	CAPACITY GARBAGE DISPOSAL
2 OR LESS	1000	1500
3 OR 4	1000	1500
5 OR 6	1500	2250
7 OR 8	2000	3000
OVER 9	SEE FIG C-8	(x 1.5)

SIZING FACTORS			
PERC RATE PI	SOIL TEXTURE	SQFT. GALLONS /DAY	GALLONS /DAY /SQFT
< THAN 0.1	COARSE SAND	—	—
0.1 TO 5	SAND	0.83	1.20
0.1 TO 5	FINE SAND	1.87	0.80
6 TO 15	SANDY LOAM	1.27	0.79
16 TO 30	LOAM	1.87	0.60
31 TO 45	SILT LOAM	2.00	0.50
46 TO 60	CLAY LOAM	2.20	0.45
> THAN 60	CLAY	—	(0.24)

**PUMP SELECTION PROCEDURE**

**A. Determine pump capacity**

**Gravity distribution**

1. Minimum is 10 GPM
2. Maximum is 45 GPM

**Pressure Distribution**

3. a. Select number of perforated laterals \_\_\_\_\_
- b. Select perforation spacing = \_\_\_\_\_ ft.
- c. Subtract 2 ft from rock layer length:  
\_\_\_\_\_ - 2 = \_\_\_\_\_ feet.

**ROCK LAYER LENGTH**

- d. Determine the number of spaces between perfs:  
 $\frac{\text{(length of lateral)}}{\text{(perf. spacing)}} = \text{_____ spaces}$

e. \_\_\_\_\_ spaces + 1 = \_\_\_\_\_ perforations per lateral

f. Multiply perforations per lateral by number of laterals to get total number of perforations:

$\frac{\text{(perfs/lateral)} \times \text{(laterals)}}{\text{(Perforations)} \times \text{(gpm/perfs)}} = \text{(perforations)} \text{ GPM}$

**SELECTED PUMP CAPACITY** 25 GPM

**B. Determine head requirements:**

1. Elevation difference between pump & point of discharge:  
6 feet

2. If pumping to a pressure distribution system, add 5 feet; for gravity add zero: \_\_\_\_\_ feet

**3. Friction Loss**

- a. Enter friction loss table with GPM and pipe diameter. Read friction loss in feet per 100 ft in table.  
F.L. = 3.73 ft/100 of pipe

- b. Determine total pipe length from pump to discharge point. Add 25% to pipe length for fitting loss.  
70 length x 1.25 = 87.5 feet.

- c. Calculate total friction loss by multiplying friction loss in 100 ft. of pipe by equivalent pipe length (B):

Total friction loss =  $\frac{87.5 \times 3.73}{100} = 3.26$  (4)

4. Total head required is the sum of the elevation difference, special head requirements and total friction loss:

$\frac{6}{(1)} + \frac{-}{(2)} + \frac{4}{(3c)} \text{ TOTAL HEAD } 10$

**SELECT A PUMP TO DELIVER AT LEAST 25 GPM WITH AT LEAST 10 FEET OF TOTAL HEAD.**

If laterals are connected to a header pipe in a pressure system, select the minimum size lateral diameter; enter the table with perforation spacing and the number of perforations per lateral.

Select minimum size of lateral \_\_\_\_\_

For a center manifold system the values will be 1/2 of above.

**Perforation Discharges in GPM**

Head (feet)	Perforation diameter (inches)	
1.0a	7/32	1/4
	0.56	0.74
1.5	0.69	0.90
2.0b	0.80	1.04

- a. Use 1.0 foot single homes
- b. Use 2.0 feet for anything else

**FRICITION LOSS IN PLASTIC PIPE**

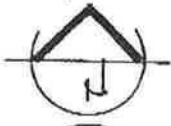
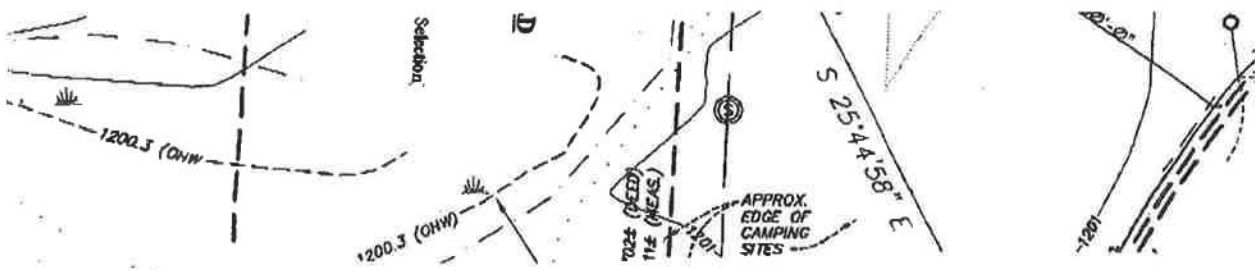
Flow Rate GPM	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

**Max. No. of 1/4" perfs per lateral. (10% var)**

Perforation spacing (feet)	Perforation spacing		
	1/4"	1/2"	2"
2.5 feet	14	18	28
3.0 feet	13	17	26
3.3 feet	12	16	25
4.0 feet	11	15	23
5.0 feet	10	14	22

Pipe diameter (inches)	Gallons per 100 feet
1	4.49
1.25	7.77
1.5	10.58
2	17.43
2.5	24.87
3	38.4
4	66.1

7.4 GAC  
DRAIN BACK

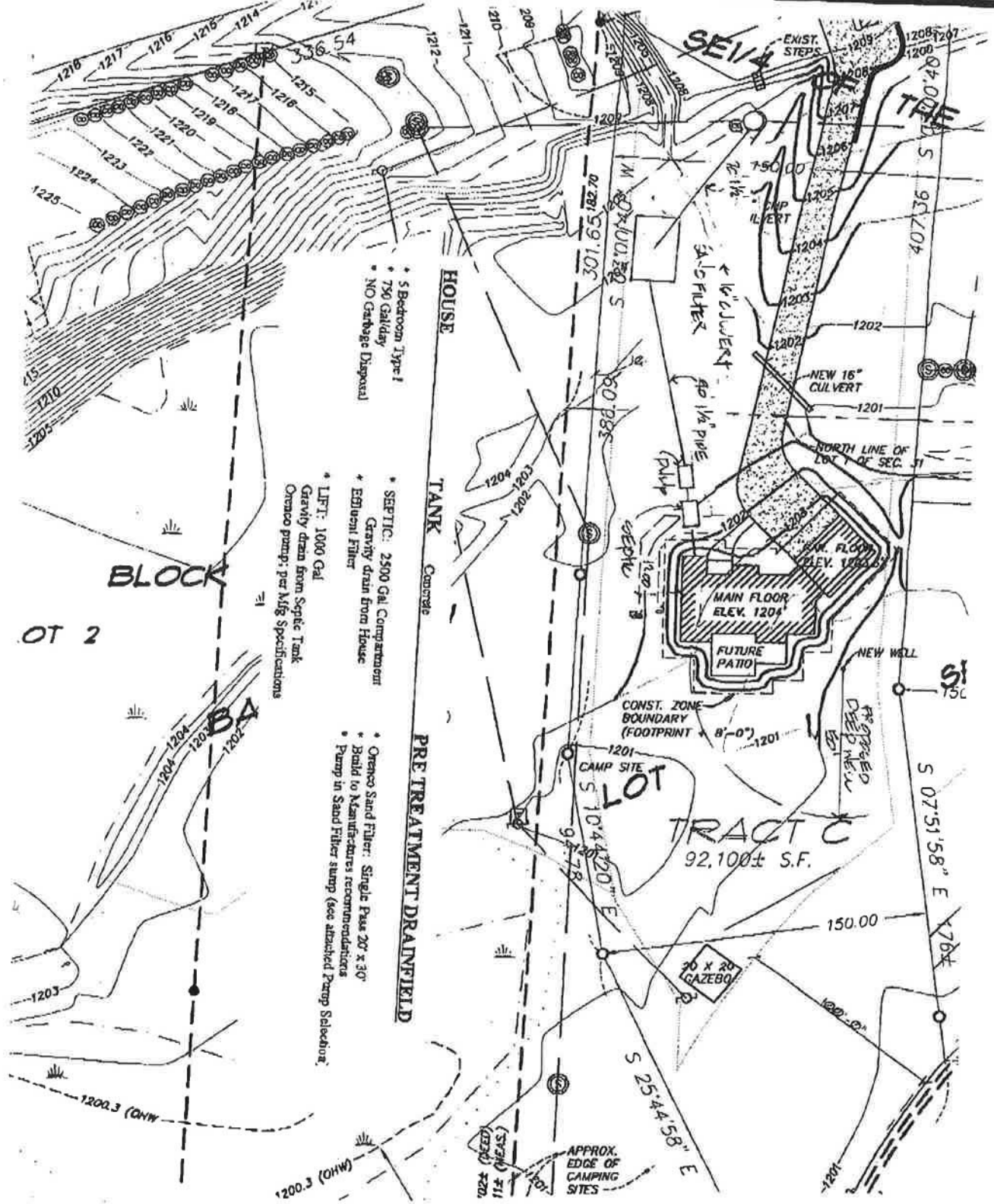


SCALE: 1" = 40'  
 DATE: 8/10/05 J/K HARRIS

Pin # 01-0-075502 (MAY CHANGE)  
 SEPTIC PLAN

PROPERTY DATA RESEARCH  
 DEAN IS. GUYTON #1271  
 MERRIFIELD, WY 80405  
 DDR 500-1717

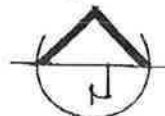




- \* 5 Bedroom Type 1
- \* 750 Gal/day
- \* NO Garbage Disposal

- \* SEPTIC: 2500 Gal Compartment
- \* Gravity drain from House
- \* Effluent Filter
- \* LIFT: 1000 Gal
- \* Gravity drain from Septic Tank
- \* Oranco pump; per Mfg Specifications

- \* Oranco Sand Filter: Single Pass 20' x 30'
- \* Build to Manufacturers recommendations
- \* Pump in Sand Filter sump (see attached Pump Selection)



SCALE: 1" = 40'  
 DATE: 8/18/05  
 J/K HARRIS  
 PIN # 01-0-075502 (MAY CHANGE)  
 SEPTIC PLAN

PROPERTY DATA RESEARCH  
 DEAN ISIDOR GLAYTON #1271  
 MERRIFIELD, MN 56065

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Dennis P. Slayton

Phone: 218-765-3356

27405 Timber Drive  
Merrifield, MN 56465

## PROPERTY DATA RESEARCH

sala@brainerd.net  
Fax: 218-765-3356

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### FAX MEMO

**DATE:** August 19, 2005

**TO:** AITKIN COUNTY  
PLANNING & ZONING    **ATTN: RICH**

**FAX #:** 218 927-4372                      **TOTAL # OF PAGES: 6**

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**FROM:** Dennis P. Slayton    **FROM FAX NUMBER: 218-765-3356**

**COMMENTS:**

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Just talked with John Walsh, MN Onsite Specialists, he suggested some minor changes which have been completed.

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Dennis

fc: Nor Son; Chad  
MN Onsite Specialists; John

PDRJ08-17117F-1 Aitkin Cty P&Z



506-17117  
27405 Timber Drive  
Merrifield, MN 56465

Phone/fax: 218 765-3356  
e-mail: SALA@brainerd.net

**FIELD EVALUATION SHEET**

PRELIMINARY EVALUATION DATE \_\_\_\_\_, FIELD EVALUATION DATE \_\_\_\_\_  
PROPERTY OWNER: JIM & KRISTIN HARRIS (BUYER) PHONE \_\_\_\_\_  
ADDRESS: 34322 442nd Place CITY, STATE, ZIP: Aitkin, MN 56431  
LEGAL DESCRIPTION: TRACT C Edgewater Beach (PIN # subject to change)  
PIN# 01-0-075502 ~~subject to change~~ SEC 31 T 047R 27 TWP NAME Aitkin  
FIRE# \_\_\_\_\_ LAKE/RIVER Cedar LAKE CLASS GD OHWL \_\_\_\_\_ FT.

**DESCRIPTION OF SOIL TREATMENT AREAS**

	<b>AREA #1</b>	<b>AREA #2</b>	REFERENCE BM ELEV. _____ FT.
DISTURBED AREAS	YES ___ NO ___	YES ___ NO ___	REFERENCE BM DESCRIPTION _____
COMPACTED AREAS	YES ___ NO ___	YES ___ NO ___	_____
FLOODING	YES ___ NO ___	YES ___ NO ___	_____
RUN ON POTENTIAL	YES ___ NO ___	YES ___ NO ___	_____
SLOPE %	_____	_____	_____
DIRECTION OF SLOPE	_____	_____	_____
LANDSCAPE POSITION	_____	_____	_____
VEGETATION TYPES	_____	_____	_____

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 \_\_\_\_\_, 1A \_\_\_\_\_, 2 \_\_\_\_\_, 2A \_\_\_\_\_

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 \_\_\_\_\_ FT., #2 \_\_\_\_\_ FT.

SOIL SIZING FACTOR: SITE # 1 \_\_\_\_\_, SITE #2 \_\_\_\_\_

CONSTRUCTION RELATED ISSUES: SEE ATTACHED

LIC# 1271 SITE EVALUATOR SIGNATURE:

SITE EVALUATOR NAME: Dennis P. Slayton TELEPHONE# 218 765-3356

LUG REVIEW \_\_\_\_\_ DATE \_\_\_\_\_

Comments: \_\_\_\_\_

**SOIL BORING LOGS ON REVERSE SIDE**



# TRENCH DESIGN SHEET

27405 Timber Drive  
Merrifield, MN 56465

Phone/fax: 218 765-3356  
e-mail: SALA@brainerd.net

PROPERTY OWNER J & K HARRIS (BUYER) TOWNSHIP Aitkin FIRE# \_\_\_\_\_  
 PERMIT# \_\_\_\_\_ PIN# 01-0-075502 Swack 8/19/05 DATE 8/19/05  
 DESIGNER NAME Dennis P. Slayton LICENSE# 1271  
 SIGNATURE: [Signature] DATE: 8/19/05 SITE EVALUATION # 1271

### WATER USE APPLIANCES (CHECK ALL THAT APPLY)

CLOTHES WASHER \_\_\_\_\_ WATER SOFTNER \_\_\_\_\_ DISHWASHER \_\_\_\_\_ WHIRLPOOL \_\_\_\_\_ HUMIDIFIER \_\_\_\_\_  
 NUMBER OF BEDROOMS 5 TYPE: I GARBAGE DISPOSAL: YES \_\_\_\_\_ NO \_\_\_\_\_ AIR TEST: YES \_\_\_\_\_ NO \_\_\_\_\_  
 WELL: DEEP (50'+) \_\_\_\_\_ SHALLOW \_\_\_\_\_ SETBACKS: TANK X DRAINFIELD 195 SEWER LINE 96

PROPOSED

### FLOW

- 1. ESTIMATED NO GPD OR MEASURED GPD
- 3. SEPTIC TANK VOLUME 1500 GALLONS COMPARTMENT
- 2. MINIMUM PUMP TANK VOLUME 1000 GALLONS
- 21. ALARM TYPE ELECTRICAL VISUAL/AUDIBLE

### SOILS

- 1. DEPTH TO RESTRICTING LAYER \_\_\_\_\_ FEET
- 2. MAXIMUM SYSTEM DEPTH (D-3) \_\_\_\_\_ FT OR \_\_\_\_\_ ELEV
- 3. PERCOLATION RATE \_\_\_\_\_ MPI
- 4. SOIL SIZING FACTOR \_\_\_\_\_ SQ FT/GPD

### TRENCH BOTTOM AREA

- 1. 6 IN. OF ROCK OR GRAVELLESS:  $A \times X = \text{SQ. FT.}$
- 2. 12 IN. OF ROCK:  $A \times G \times 0.8 = \text{SQ. FT.}$
- 3. 18 IN. OF ROCK:  $A \times G \times 0.66 = \text{SQ. FT.}$
- 4. 24 IN. OF ROCK:  $A \times G \times 0.6 = \text{SQ. FT.}$

### BED BOTTOM AREA (6 OR 12 INCHES OF ROCK)

- 1. SEEPAGE BEDS:  $1.5 \times A \times G = \text{SQ. FT.}$
- 2. PRESSURE BEDS:  $A \times G = \text{SQ. FT.}$

### ROCK VOLUME IN CU FT

- 1. ROCK DEPTH BELOW PIPE + 0.5 FT  $\times (H, I, J, K, L, M) = \text{CU FT.}$

### ROCK VOLUME IN CU YDS

- 1.  $N \div 27 = \text{CU YDS}$

### ROCK WEIGHT

- 1.  $P \times 1.4 = \text{TONS}$

### SYSTEM LENGTH

- 1. BOTTOM AREA (H-K) + TRENCH WIDTH = \_\_\_\_\_ NEAL FT

### LAWN AREA

- 1. SELECT TRENCH SPACING, CENTER TO CENTER = \_\_\_\_\_ FT.
- 2. MULTIPLY TRENCH SPACING BY LINEAL FEET  $R \times Q = \text{SQ FT OF LAWN AREA}$

JG APPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS:

EST. FLOW IN GALLONS/ DAY (GPD)				
NUMBER OF BEDROOMS	TYPE I	TYPE II	TYPE III	
2	300	225	180	
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

SEPTIC TANK CAPACITY			
NUMBER OF BEDROOMS	MINIMUM TANK CAPACITY GALLONS	MINIMUM CAPACITY GARBAGE DISPOSAL	
2 OR LESS	1000	1500	
3 OR 4	1000	1500	
5 OR 6	1500	2250	
7 OR 8	2000	3000	
OVER 9	SEE FIG C-8	(x 1.5)	

SIZING FACTORS			
PERC RATE PI	SOIL TEXTURE	SQFT. GALLONS /DAY	GALLONS /SQFT
< THAN 0.1	COARSE SAND	---	---
0.1 TO 5	SAND	0.83	1.20
0.1 TO 5	FINE SAND	1.67	0.60
6 TO 15	SANDY LOAM	1.27	0.76
16 TO 30	LOAM	1.67	0.80
31 TO 45	SILT LOAM	2.00	0.50
46 TO 60	CLAY LOAM	2.20	0.45
> THAN 60	CLAY	---	(0.24)

**PUMP SELECTION PROCEDURE**

**A. Determine pump capacity**

**Gravity distribution**

1. Minimum is 10 GPM
2. Maximum is 45 GPM

**Pressure Distribution**

3. a. Select number of perforated laterals \_\_\_\_\_
- b. Select perforation spacing = \_\_\_\_\_ ft.
- c. Subtract 2 ft from rock layer length:  
\_\_\_\_\_ - 2 = \_\_\_\_\_ feet.

**ROCK LAYER LENGTH**

- d. Determine the number of spaces between perfs:

(length of lateral) / (perf. spacing) = \_\_\_\_\_ spaces

e. \_\_\_\_\_ spaces + 1 = \_\_\_\_\_ perforations per lateral

f. Multiply perforations per lateral by number of laterals to get total number of perforations:

(perfs/lateral) x (laterals) = (perforations)

g. (Perforations) x (gpm/perfs) = \_\_\_\_\_ GPM

**SELECTED PUMP CAPACITY** 25 GPM

**B. Determine head requirements:**

1. Elevation difference between pump & point of discharge:  
6 feet

2. If pumping to a pressure distribution system, add 5 feet; for gravity add zero: \_\_\_\_\_ feet

**3. Friction Loss**

- a. Enter friction loss table with GPM and pipe diameter. Read friction loss in feet per 100 ft in table.

F.L. = 3.73 ft/100 of pipe

- b. Determine total pipe length from pump to discharge point. Add 25% to pipe length for fitting loss.

70 length x 1.25 = 87.5 feet.

- c. Calculate total friction loss by multiplying friction loss in 100 ft. of pipe by equivalent pipe length (B):

Total friction loss = 87.5 x 3.73 / 100 = 3.26 (4)

4. Total head required is the sum of the elevation difference, special head requirements and total friction loss:

6 + - + 4 **TOTAL HEAD** 10  
(1) (2) (3c)

**SELECT A PUMP TO DELIVER AT LEAST 25 GPM WITH AT LEAST 10 FEET OF TOTAL HEAD.**

If laterals are connected to a header pipe in a pressure system, select the minimum size lateral diameter; enter the table with perforation spacing and the number of perforations per lateral.

Select minimum size of lateral \_\_\_\_\_

For a center manifold system the values will be 1/2 of above.

**Perforation Discharges in GPM**

Head (feet)	Perforation diameter (inches)	
1.0a	7/32 0.56	1/4 0.74
1.5	0.69	0.90
2.0b	0.80	1.04

- a. Use 1.0 foot single homes
- b. Use 2.0 feet for anything else

**FRICITION LOSS IN PLASTIC PIPE**

Flow Rate GPM	1.5"	2"	3"
20	2.47	0.73	0.11
<u>25</u>	<u>3.73</u>	1.11	0.16
30	5.23	1.55	0.23
35	6.96	2.06	0.30
40	8.91	2.64	0.39
45	11.07	3.28	0.48
50	13.46	3.99	0.58
55		4.76	0.70
60		5.60	0.82
65		6.48	0.95
70		7.44	1.09

**Max. No. of 1/4" perfs per lateral. (10%var)**

Perforation spacing (feet)	1 1/4" spacing		
	1 1/4"	1 1/2"	2"
2.5 feet	14	18	28
3.0 feet	13	17	26
3.3 feet	12	16	25
4.0 feet	11	15	23
5.0 feet	10	14	22

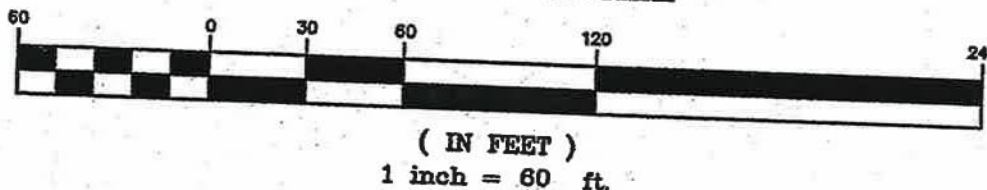
Perforation (inches)	Gallons per 100 feet
1.25	4.39
→ 1.5	7.77
2	10.58
	17.43
2.5	24.87

7.4 GAC  
DRAIN BACK

**CONSTRUCTION RELATED ISSUES**

- \* TOP OF SAND FILTER TO BE AT 1204.00
  - \* VERIFY COMMON LIFT TANK FOR WATERTIGHTNESS
  - \* VERIFY COMMON LIFT TANK ELEVATION
  - \* LOCATION OF SAND FILTER MAY SHIFT DEPENDING UPON WATER TABLE IN PROPOSED LOCATION
  - \* INSTALLATION & ALL MATERIALS SHALL CONFORM TO ORENCO MANUFACTURES SPECIFACIONS
  - \* MN ONSITE SPECIALISTS SHALL APPROVE ALL INSTALLATION LOCATIONS AND MATERIALS PRIOR TO USE/INSTALLATION  
PHONE: 218 729-8805
  - \* ALL TANKS SHALL BE WATERTIGHT AND HAVE STATIC WATER TEST
  - \* USE SIM-TEC EFFLUENT FILTER STF-110
  - \* INSTALL COLD WEATHER CERAMIC HEATER WITH THERMO STATIC CONTROLS (REFER TO MN ONSITE SPECIALISTS)
  - \* OTHER SPECIFICATIONS MAY APPLY
-

GRAPHIC SCALE



BEARINGS BASED ON ASSUMED DATUM

TOTAL AREA: 12.22± ACRES

- Denotes iron monument found in place
- Denotes iron pipe set and marked  
R.L.S. No. 17253

BENCH MARKS:

BM#1 - 60D SPIKE IN THE SOUTHEAST SIDE OF A 10 INCH POPLAR  
ELEV.=1201.86 FT.

BM#2 - 60D SPIKE IN THE SOUTHWEST SIDE OF A LIGHT POLE ON THE  
WEST SIDE OF THE HARBOR ELEV.=1202.84 FT.

BM#3 - 60D SPIKE IN THE EAST SIDE OF A TRANSFORMER POLE 85±  
FEET SOUTH OF 350TH STREET ELEV.=1208.31 FT.

LEGAL DESCRIPTION FOR TRACT A:

That part of Outlot A, EDGEWATER BAY, Aitkin County, Minnesota according to the record plat thereof, and that part of the Southeast Quarter of Section 30 and that part of Government Lot 1, Section 31 all in Township 47 West, said Aitkin County, Minnesota that lies easterly of the following described line:  
Commencing at the northeast corner of said Outlot A; thence South 70 degrees 58 minutes 15 seconds West, assumed, 40 seconds West 395 feet, more or less, to the shoreline of Cedar Lake and said line there terminating. Subject to a permanent easement for ingress and egress purposes over and across that part thereof described as beginning at the northeast corner of said Outlot A; thence South 70 degrees 58 minutes 15 seconds West, assumed, along the north line of said Outlot A; thence South 03 degrees 00 minutes 40 seconds West 420.69 feet; thence minutes 20 seconds East 33.00 feet to the east line of said Government lot 1 Section 31, thence North 03 degrees 00 minutes 40 seconds East 420.69 feet to the northeast corner of said Outlot A.

DSPPRCL1

Display Parcel Description

8/18/05 14:12:07

Notes: No

Parcel number/Tax year: 01-0-075502  
Owner(s): 93246  
SAUERER, ROBERT G & TAMMY L  
45049 350TH ST  
AITKIN MN 56431

2006 Reference parcel: 00-2-010000  
Parcel type : RE Hold tax stmt:  
Com district: 1 Misc1/2:  
Escrow agent:  
Mortgage hld:  
UTA: Twp/City School AMBU \*\*\*\* \*  
001 0001 00 00 00 00  
TIF district: 000 000  
Lake#/name : 1-0209 CEDAR LAKE (AITKIN/F  
Property adr: 45049 350TH ST  
AITKIN MN

Taxpayer: 93246 FALCO: 1 F.O.  
SAUERER, ROBERT G & TAMMY L  
45049 350TH ST  
AITKIN MN 56431

Emergency# : 56431 -  
Twp/City Plt: AITKIN TWP  
Sec/twp/rge : 31 47.0 27 Acres: 4.31  
Plat:  
Description: Lot/Block . :  
4.31 ACS OF GOVT LOT 1 IN DOC 290122

Alternate taxpayer:

Press Enter to continue or enter new parcel/tax year. 01-0-075502 2006  
F1=Full desc F2=Trans hist F3=Exit F6=Prcl hist F7=Backward F9=Escrow hist  
F12=Cancel F14=Phy Addr F17=Dsply Note



**LEGAL DESCRIPTION FOR TRACT C:**

That part of Outlot A, EDGEWATER BAY, Aitkin County, Minnesota according to the record plat thereof, and that part of the Southeast Quarter of the Southeast Quarter of Section 30 and that part of Government Lot 1, Section 31 all in Township 47 North, Range 27 West, said Aitkin County, Minnesota described as follows:

Commencing at the northeast corner of said Outlot A; thence South 70 degrees 58 minutes 15 seconds West, assumed bearing, 323.66 feet along the north line of said Outlot A; thence South 03 degrees 00 minutes 40 seconds West 407.36 feet to the point of beginning of the tract to be described; thence return North 03 degrees 00 minutes 40 seconds East 407.36 feet to said north line of Outlot A; thence South 70 degrees 58 minutes 15 seconds West 161.83 feet along said north line of Outlot A; thence South 03 degrees 00 minutes 40 seconds West 386.09 feet; thence South 10 degrees 44 minutes 20 seconds East 94.78 feet; thence South 25 degrees 44 minutes 58 seconds East 202 feet, more or less, to the shoreline of Cedar Lake; thence northeasterly along said shoreline to its intersection with the line which bears South 07 degrees 51 minutes 58 seconds East from the point of beginning; thence North 07 degrees 51 minutes 58 seconds West 176 feet, more or less, to the point of beginning. Subject to easements, reservations and restrictions of record, if any.

825-0253

AITKIN COUNTY SOIL AND WATER CONSERVATION DISTRICT  
SHORELAND SITE REVIEW AITKIN COUNTY SWCD  
130 SOUTHGATE DRIVE  
AITKIN, MN 56431  
(218) 927-6565

SHORELAND SITE REVIEW

SITE REVIEW NUMBER: S05-54  
SITE REVIEW DATE: August 4, 2005  
LANDOWNER'S NAME: Nor-Son Construction at Cedar Lake (Harris property)  
ADDRESS: c/o Amy Falk 7900 Hastings Road, Baxter, MN 56425  
PHONE: (218) 828-1722  
LOCATION OF WORK SITE: SEC: 31 TWSP: 47 RANGE: 27  
LOT #, PLAT NAME, 1/4 SECTION, ETC.  
LAKE OR RIVER AFFECTED: Cedar Lake

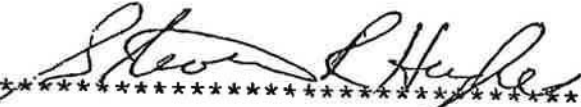
\*\*\*\*\*  
WORK TO BE PERFORMED & SITE EVALUATION

The construction company has submitted plans for a home, garage and driveway to be constructed at the former Edgewater Beach Resort on Cedar Lake. (plans on file at SWCD). The plans show a fill estimate of 1200 cubic yards for the building site to meet floodplain requirements and for the structure footprint. Additional fill of 500 cubic yards is planned for the remainder of the property. Cuts and fills of 200 cubic yards or less are encouraged. These quantities are for earth-moving activities outside an 8' perimeter of the building. Given existing site characteristics, the designs show a reasonable effort to minimize grading and filling.

Erosion and runoff must be addressed during and after construction. Temporary silt fence must be installed where needed to control erosion. Silt fence must remain in place until vegetative cover is established that is adequate to control erosion. All disturbed soil areas must be stabilized with seed and mulch or sod immediately after this project is completed.

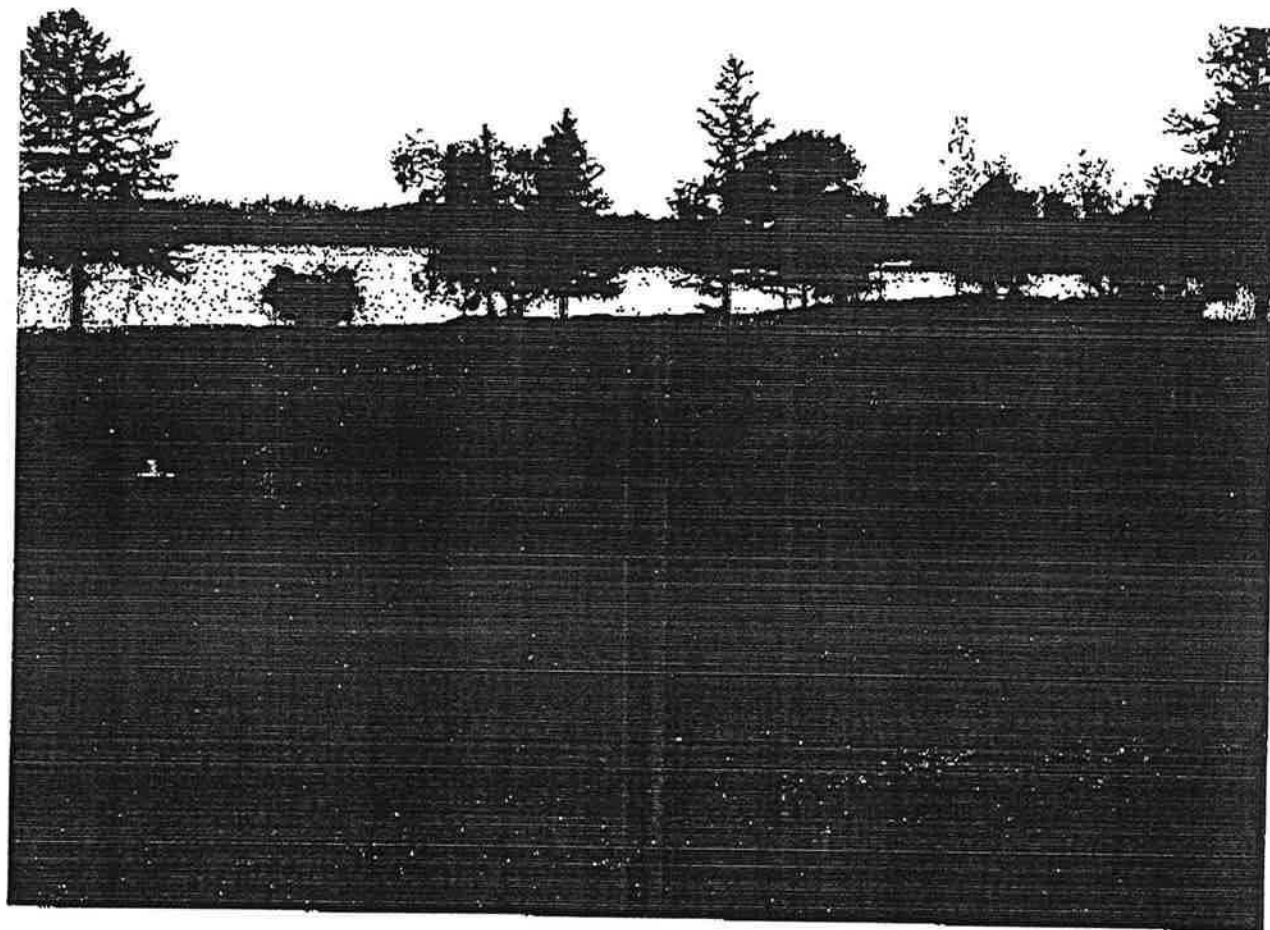
Questions regarding this site review should be directed to Aitkin County SWCD at (218) 927-6565.

Date: August 15, 2005  
SWCD AUTHORIZED SIGNATURE:



\*\*\*\*\*  
NOTES & PHOTOS:

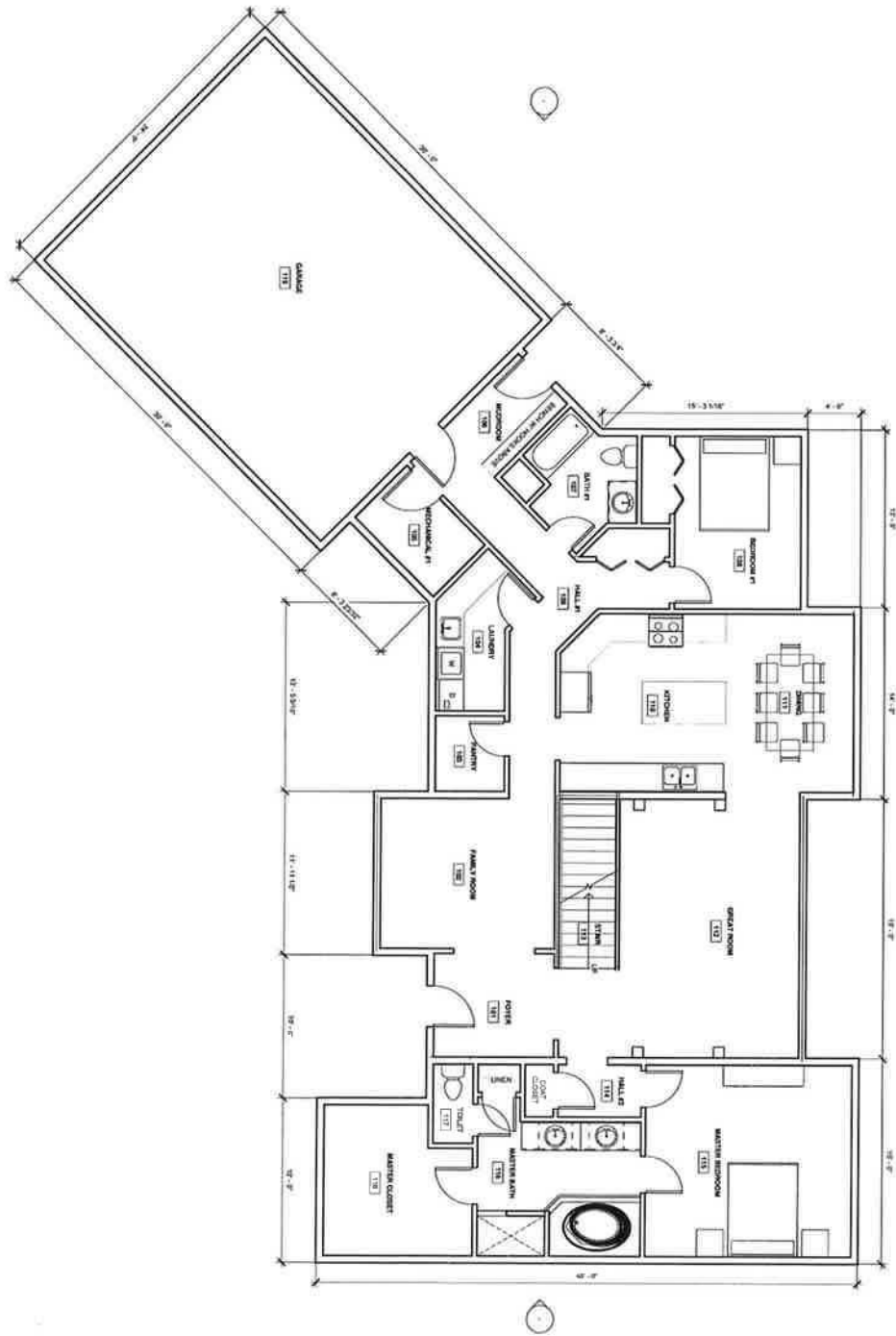
CALL AITKIN COUNTY PLANNING & ZONING (927-7342) FOR SHORELAND ALTERATION or other necessary PERMITS. DNR, ARMY CORPS OF ENGINEERS, MPCA, MISSISSIPPI HEADWATERS BOARD OR OTHER APPROVALS MAY BE REQUIRED. IT IS THE LANDOWNER'S RESPONSIBILITY TO MEET ALL APPLICABLE SETBACKS AND RESTRICTIONS. THIS SITE REVIEW IS VALID FOR ONE YEAR FROM THE DATE OF THE SITE REVIEW.



PROJECT APPEARS TO COMPLY:  
COMMENTS:  
SIGNATURE:

PROJECT DOES NOT COMPLY:

11 HARRIS RESIDENCE FLOOR PLAN  
 1/2" = 1'-0"



1/2" = 1'-0"

**HARRIS RESIDENCE**  
**CEDAR LAKE, MINNESOTA**  
 MAIN LEVEL FLOOR PLAN

DATE: 08/08/08  
 NAME: ROYAL  
 DRAWN BY: JH  
 CHECKED BY: JH  
 ARCH NO: 0808

NO.	REVISION	DESCRIPTION	BY

LABORER CERTIFY THAT YOU HAVE STUDIED THIS BLUE PRINT AND THAT YOU UNDERSTAND THE WORK TO BE DONE AND THAT YOU WILL BE RESPONSIBLE FOR THE WORK TO BE DONE IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS.

DATE: 08/08/08 10:00 AM

PLEASE PRINT AND SIGNATURE THE ARCHITECT AND THE ARCHITECT'S FIRM. THE ARCHITECT'S FIRM SHALL BE RESPONSIBLE FOR THE WORK TO BE DONE IN ACCORDANCE WITH THE PLAN AND SPECIFICATIONS.

**NOR-SON**  
 Architects • Construction Services  
 215.626.1722  
 7500 HASTINGS ROAD • BAXTER, MN 56412





01-0-093402

01-0-072900

01-0-070400

01-0-070500

House  
01-0-074901

01-0-079702

01-0-079701

01-0-075502

-168000

01-1-167901

01-1-167800

032



**A. M. & Associates, Inc.**

RR 2, Box 2468  
Palisade, MN 56469  
(218) 768-4430

Michael D. O'Keeffe  
Annette M. O'Keeffe  
SEPTIC SYSTEMS  
DESIGNS & INSPECTIONS  
MPCA #1357

**FIRST YEAR  
MAINTENANCE, MONITORING AND INSPECTION SERVICE CONTRACT  
FOR INDIVIDUAL SEWAGE TREATMENT SYSTEM**

It is hereby agreed this 24<sup>th</sup> day of August, 20 05 by and between A.M. & Associates, Inc. and

Property Owner(s):	<u>SAUERER</u> <u>ROBERT SUETZER</u>	Parcel Code:	(which Parcel #s pertain to just this dwelling?) <u>01-1-167800, 01-0-074901, 01-1-167901 (01-0-075502)</u>
Home Address:	<u>45049 350<sup>TH</sup> STREET</u> <u>AITKIN, MN 56431</u>	Site Address:	<u>SAME</u> <u>01-0-075502</u> <u>EDGEWATER RESORT, CEDAR LAKE, AITKIN</u>
Phone (home)	_____	Township	<u>AITKIN</u>
(work)	_____	Phone:	_____
(cell)	<u>(218) 820-7019</u>		
(fax)	_____		

DESCRIPTION OF INDIVIDUAL SEWAGE TREATMENT SYSTEM

(size) 20x30 OSI SAND FILTER DISPERSING INTO EXISTING 17 trench (drainfield)

(description of entire septic system process -from house to size Tank(s) to Sandfilter to Drainfield)

house will have septic tank + Individual S.F.  
that will gravity to a central lift tank to  
be dispersed into existing D.F.

Installation Date: \_\_\_\_\_ Installer: \_\_\_\_\_ Phone#: \_\_\_\_\_

That A.M. & Associates, Inc. will provide the services to perform Preventative Maintenance, Monitoring and Inspection of the parameters and frequency described herein as your Operating Permit requires for your Individual Sewage Treatment System (ISTS).

Each inspection includes an examination of the ISTS followed by a written report to the Property Owner. This inspection report shall contain recommendations for operation and maintenance for failure-preventative measures, if any are deemed appropriate by the inspector, and a list of recommended corrective measures or replacement parts. A.M. & Associates, Inc. is authorized to submit a copy of the report to the pertaining County's Environmental Services Department.



This contract shall remain in force for a period of one year, beginning on date of installation and ending December 31<sup>st</sup> of the following year.

**FEES**

<b>Maintenance, Monitoring &amp; Inspection Service Contract</b>	<b>\$200.00</b>	<b>Due at time of signing Contract</b>
<b>Sample Analysis Fees &amp; Supplies</b>	(approx) <b>N/A</b>	<b>Due at time of sampling</b>
<b>*Time &amp; Mileage to Deliver Samples for Analysis</b>	<b>N/A</b>	<b>Due at time of sampling</b>

NOTE: SAMPLING OF FECAL COLIFORM, BOD, TSS, AND FATS OIL AND GREASE IS NOT REQUIRED AT THIS TIME. IF SAMPLING IS FOUND TO BE NECESSARY DURING THE DURATION OF THE USE OF THIS SEPTIC SYSTEM, THE PROPERTY OWNER(S) IS RESPONSIBLE FOR ALL COSTS INVOLVED, AND IS DUE AT TIME THE SAMPLES ARE TO BE TAKEN.

\*If at time of sampling, the Property Owner(s) wishes to transport the samples to Brainerd himself for analysis, within the *required time limit*, A.M. & Associates, Inc. will wave the time, mileage delivery fees of \$100.00.

A.M. & Associates, Inc. agrees to provide inspection, monitoring and routine maintenance service only under this contract.

I hereby certify with my signature as the Property Owner(s) that I understand the provisions, requirements and responsibilities of this Maintenance, Monitoring and Inspection Service Contract. I also understand failure to comply with the requirements outlined in my Operating Permit, this Contract, along with any future requirements that may arise, set forth by Aitkin County Environmental Services, Orenco Systems, Inc. (OSI) or A.M. & Associates, Inc., could result in the condemning of my septic system, removal of the use of the drainfield, and require the use of Holding Tanks with a pumping Contract.

**Property Owner(s):**


Name: ROBERT SAUETZER *Saverer*   
(please print) (signature)

Date: 8/24/05

Spouse: TAMMY SAUETZER *Saverer*   
(please print) (signature)

Date: 8/24/05

**A.M. & Associates, Inc.:**

Name: Michael D. O'Keeffe   
(please print) (signature)

Date: 8-24-05

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE Robert Savenen PARCEL NUMBER 01-0-07550 2

ADDRESS 45049 - 350<sup>th</sup> Street

LEGAL DESCRIPTION \_\_\_\_\_

TELEPHONE # 218 820 7019 GIS LOCATION \_\_\_\_\_

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM:**  
(Attach ISTS site evaluation and design; estimated cost of system construction, operation, monitoring, service, component replacement, and management; anticipated system life, hydraulic and organic loading rates)

house will have septic tank + for 30 S.F. gravity to a central lift tank and pump into 17 pressureize trenches of existing D.F.

**B. MONITORING PLAN AND REPORTING FREQUENCY:**

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
FLOW	750	S.F.	Month	Record	Annual
5-DAY BOD					
TOTAL NITROGEN					
TOTAL PHOSPHORUS					
TSS					
FATS, OILS AND GREASE					
FECAL COLIFORM					
SEPARATION DISTANCE	3	vert			annu

21 credit through soil media

Atm & Associates will perform the monitoring of this septic system.

**C. MAINTENANCE PLANS**

PARAMETER	LOCATION	FREQUENCY
Flow		
Solids		
Pump		
dispersal (veg)		
dispersal (surf)		

**D. MITIGATION PLAN:**

holding tank would be the last resort if the SIF should fail

I hereby certify with my signature as the designer, that all data for the operating permit application is true and correct to the best of my knowledge. I agree to indemnify and hold Aitkin County harmless from loses, damages, costs and charges that may be incurred by the County because of the information submitted with this application.

Michael D. O'Keefe  
Signature

1130  
License Number

8-24-05  
Date

Michael D. O'Keefe  
Name (please print)

19465-44th lane  
Address

218 768 4130  
Telephone #

# SUPPLEMENTAL DATA FOR LAND USE PERMITS

Page 1 of 2

\*\*\* COMPLETE BOTH SIDES \*\*\*

## A. PLANNING CHECKLIST (required for all permits):

- |  | YES                                 | NO                                  | ???                      |
|--|-------------------------------------|-------------------------------------|--------------------------|
| 1. Are you aware of setback requirements and will your project meet them? <i>Note: Setback distances are taken from ..... any projection of the building (i.e. overhangs, eaves, decks, etc.)</i>      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 2. Are you aware of impervious surface requirements and will your project meet them? <i>Note: In the Shoreland District, Buildings can not exceed 15% of total lot area and lot coverage 25% .....</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 3. Have you taken in consideration locations for future buildings, septic systems, decks, driveways, etc? .....  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 4. Is there a steep slope or bluff on or near the site? .....<br>(If yes, complete Section D)  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Are you constructing a walkout basement in the shoreland district of a lake, river, or stream (If yes, complete Section D) .....  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Are there any lowlands or wetlands on or near the site project? .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Will the project involve the clearing of trees or shrubs within the Shore Impact Zone of a lake or river? (If yes, complete Section D) ...  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Will the project involve grading, filling or landscaping within the shoreland district of a lake or river? (If yes, complete Section D).....  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| 9. Is your property in a floodplain? .....   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
- If it is, the lowest floor (which includes basement or crawl space, regardless of a dirt floor) must be one foot (1') above the 100-year flood elevation. A benchmark established by a registered surveyor or licensed engineer may be required before granting a land use permit.*

## B. PRE-EVALUATION INSPECTION REQUEST (required for all permits):

Defining and staking the property lines, road right-of-ways, septic sites, and wells are the responsibility of the property owner. In some cases, a registered survey may be required to verify setbacks before granting a permit.

**ALL PROPOSED DEVELOPMENT REQUESTS MUST BE CLEARLY STAKED AT ALL FOUR CORNERS IF APPLICABLE, IF STAKES ARE NOT PRESENT OR VISIBLE IT MAY RESULT IN ADDITIONAL FEES OR A DELAY IN THE PERMIT PROCESS.**

The undersigned hereby makes application for a pre-evaluation permit inspection, agreeing that all setback information and delineation of property lines, well location, road setbacks, and development corners have been properly marked in accordance with the standards and requirements of the Aitkin County Ordinances.

Telephone Number between the hours of 8:00 A.M. and 4:00 P.M. 218-851-0184

Landowner: BOB SAJERER Date: 8/17/05

Address: 45049 350<sup>TH</sup> ST  
AITKIN MN 56431

LANDOWNER SIGNATURE: X [Signature]  
AGENTS

If you have any questions please contact the Planning and Zoning office at (218) 927-7342  
Ordinances and Publications are available **FREE** online at: [www.co.aitkin.mn.us](http://www.co.aitkin.mn.us)

WE LOOK FORWARD TO WORKING WITH YOU

\*\*\* COMPLETE BOTH SIDES \*\*\*

**C. Directions to your Property From Aitkin! (required for all permits):**

From a major intersection: \_\_\_\_\_

HWY 210 WEST FROM AITKIN  
SOUTH ON 350TH ST. TO SITE  
TRACT "C" OF EDGEWATER BAY

**D. NATURAL LANDSCAPE PROTECTION PLAN:**

Complete this section only if you were directed to in Section A OR if you are working near a lake or stream.

1. Description of proposed construction: CONSTRUCT A NEW 2706 SF HOUSE,  
1200 SF SHED, 400 SF GARAGE, ON SINE SEPTIC SYSTEM
2. Existing vegetative cover (e.g., forested, grass, shrub, lawn, etc.)? LAWN + GRASS
3. Setback from the Ordinary High Water Level (OHW) for proposed construction? 200  
FEET
4. How much excavation or fill work is being done inside the Shore Impact Zone (SIZ)? NONE  
*(If excavation or fill work greater than 10 cu yds is being done, supply copy of Site review from SWCD\*)*  
*(The SIZ: Mississippi River & NE Lakes =75 feet, RD & GD lakes =50 feet, other waters-see ordinance)*
5. How much excavation or fill work is being done outside the Shore Impact Zone (SIZ)? 1700  
CU  
*(If excavation or fill work greater than 50 cu yds is being done, supply copy of Site review from SWCD\*)*
6. What percent slope of the land currently exists on the construction site? 0% TO 3%  
*(If the percent slope is greater than 20%, supply copy of Site review from SWCD\*)*
7. How much clearing of trees and shrubs will be done inside the Shore Impact Zone (SIZ)? NONE  
*(If vegetation will be cleared in the SIZ, supply copy of Site review from SWCD\*)*
8. How will erosion be controlled during construction? SILT FENCE BETWEEN  
CONSTRUCTION SITE + SIZ
9. What will be done after construction to control erosion? APPLY GRASS SEEDS +  
MULCH ON DISTURBED AREAS - SPRING 2006

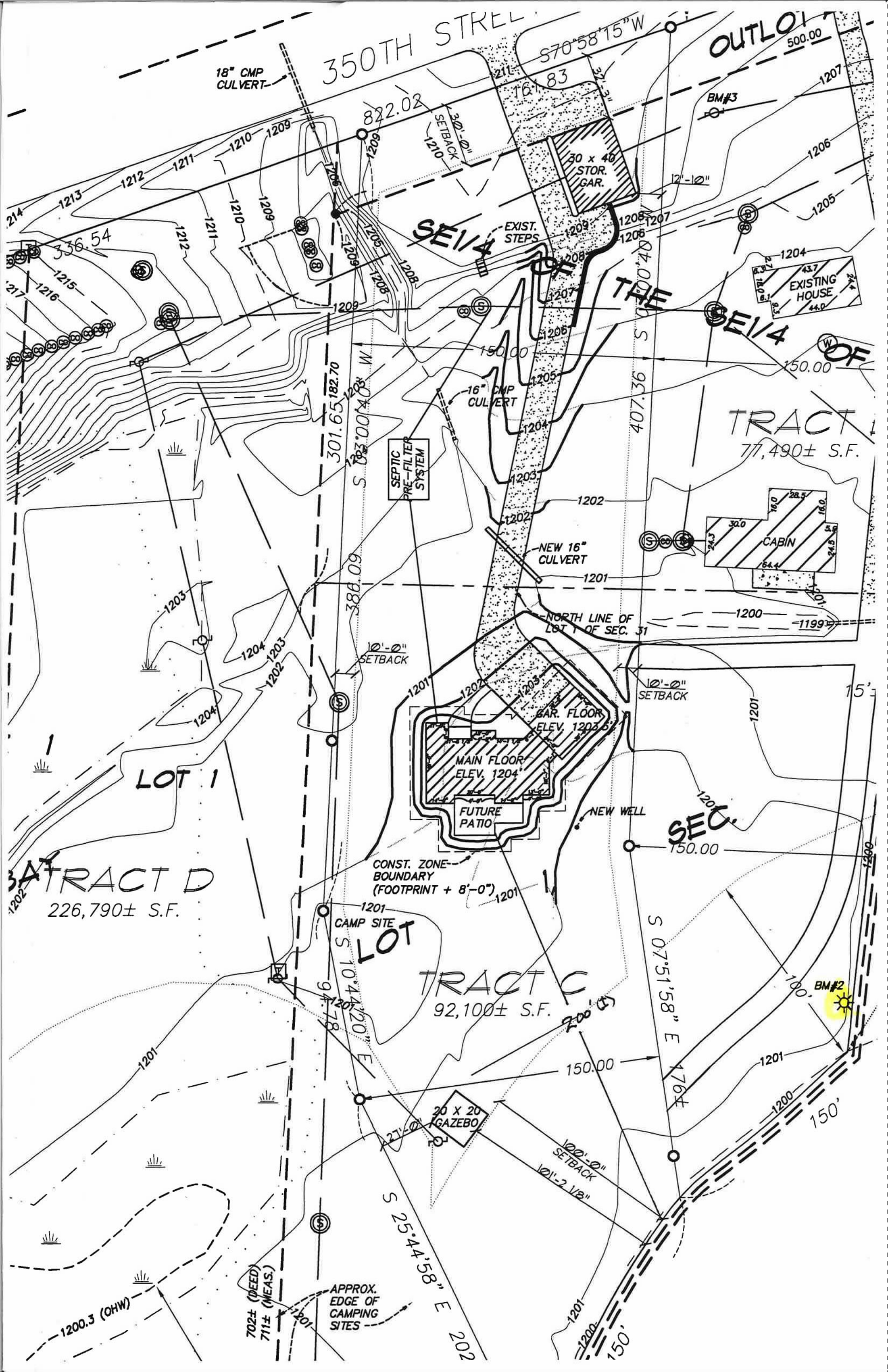
I have read the above and I understand the Natural Landscape Protection Plan as prepared. I hereby agree to implement this plan as part of the Land Use Permit.

X [Signature]  
Landowner Signature  
AGENT

8/17/05  
Date

\_\_\_\_\_  
Zoning Official

\_\_\_\_\_  
Date



350TH STREET

OUTLOOK

LOT 1

TRACT D  
226,790± S.F.

TRACT C  
92,100± S.F.

TRACT  
77,490± S.F.

SE 1/4

THE

SE 1/4 OF

SEC.

20 X 20  
GAZEBO

EXISTING HOUSE  
43.7  
24.4  
44.0

CABIN  
30.0  
16.0  
24.5  
5.9  
16.0

MAIN FLOOR  
ELEV. 1204'

GAR. FLOOR  
ELEV. 1203.6'

FUTURE PATIO

SEPTIC  
PRE-FILTER  
SYSTEM

18" CMP  
CULVERT

16" CMP  
CULVERT

NEW 16"  
CULVERT

NEW WELL

CAMP SITE

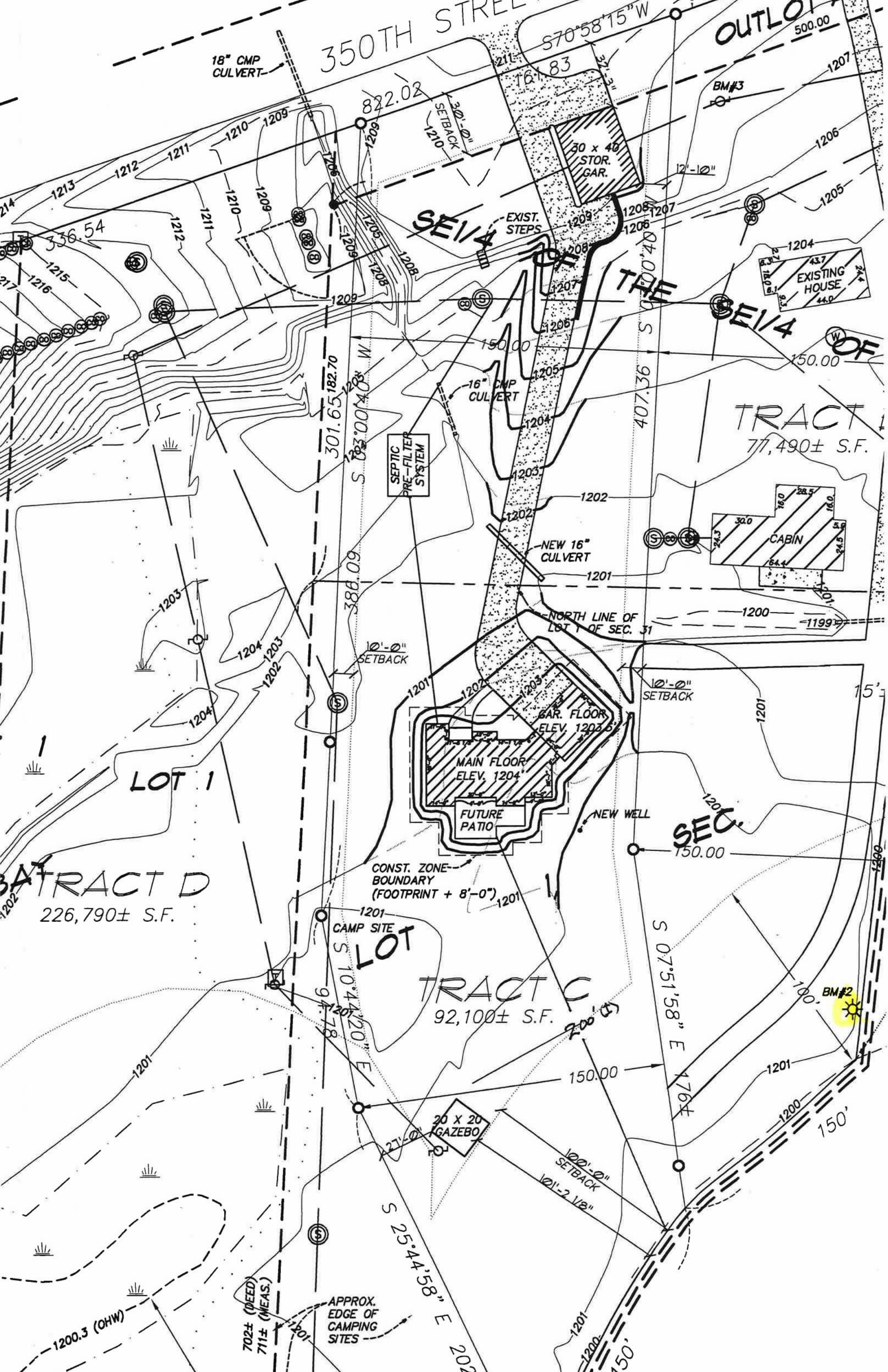
APPROX.  
EDGE OF  
CAMPING  
SITES

1200.3 (OHW)

702± (PEED)  
711± (MEAS.)

BM #2

BM #3



**A. M. & Associates, Inc.**

RR 2, Box 2468  
Palisade, MN 56469  
(218) 768-4430

33316

01-0-075502

Michael D. O'Keefe

Annette M. O'Keefe

SEPTIC SYSTEMS  
DESIGNS & INSPECTIONS  
MPCA #1357

502

**FIRST YEAR  
MAINTENANCE, MONITORING AND INSPECTION SERVICE CONTRACT  
FOR INDIVIDUAL SEWAGE TREATMENT SYSTEM**

It is hereby agreed this 24<sup>th</sup> day of August, 20 05 by and between A.M. & Associates, Inc. and

Property Owner(s):	<u>ROBERT SAUERER</u>	Parcel Code:	<u>01-0-075502 (TRACT C)</u>
Home Address:	<u>45049 350<sup>TH</sup> STREET</u> <u>AITKIN, MN 56431</u>	Site Address:	<u>SAME</u> <u>EDGEWATER RESORT, CEDAR LAKE, AITKIN</u>
Phone (home)	_____	Township	<u>AITKIN</u>
(work)	_____	Phone:	_____
(cell)	<u>(218) 820-7019</u>		
(fax)	_____		

DESCRIPTION OF INDIVIDUAL SEWAGE TREATMENT SYSTEM

**20'x 30' OSI SAND FILTER DISPERSING INTO EXISTING 17 TRENCHES**

**5 Bedroom House will have it own 1600 Gallon Combination Tank and individual 20' x 30' OSI Sand Filter that will gravity into a central Lift Tank, to be dispersed into existing Trenches.  
(5 Bedrooms = 750 gpd (Type 1) but Sized as a Type 2 = 450 gpd for Drainfield)**

Installation Date: \_\_\_\_\_ Installer: \_\_\_\_\_ Phone#: \_\_\_\_\_

That A.M. & Associates, Inc. will provide the services to perform Preventative Maintenance, Monitoring and Inspection of the parameters and frequency described herein as your Operating Permit requires for your Individual Sewage Treatment System (ISTS).

Each inspection includes an examination of the ISTS followed by a written report to the Property Owner. This inspection report shall contain recommendations for operation and maintenance for failure-preventative measures, if any are deemed appropriate by the inspector, and a list of recommended corrective measures or replacement parts. A.M. & Associates, Inc. is authorized to submit a copy of the report to the pertaining County's Environmental Services Department.

This contract does not assume any responsibilities or obligations, which are normally the responsibilities of the Property Owner, or as related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

A.M. & Associates, Inc. can only contract or subcontract for parts or labor after authorization by you. Billings for service calls shall be made on a case by case basis. This contract **only** covers maintenance, monitoring and inspection services per current pertaining County Operating Permit and **does not** cover alarm calls of any kind.

On-site Service Calls cost of a minimum of \$50.00 plus \$50.00 per hour for time and labor required from A.M. & Associates, due to alarms, misuse or abuse of any portion of this System, is the responsibility of the Property Owner(s), payable at time of Service. Minnesota Onsite Specialties fees for Service calls are separate.

All cost for parts time and labor, required to analyze, fix or replace any portion of this system, for damages caused by winter freezing, is the responsibility of the Property Owner(s).

All additional cost, time and labor required from A.M. & Associates, Inc. and/or Minnesota Onsite Specialties due to modifications made by the pertaining County's Environmental Services Department, is the responsibility of the Property Owner(s), and is payable within 20 days of billing.

In no event shall A.M. & Associates, Inc., Minnesota Onsite Specialties, or the Inspector be responsible for special or consequential damages, including but not limited to, loss of time, injury to personal property or any other consequential damages or incidental or economic loss due to equipment failure or for any other reason.

A.M. & Associates, Inc. shall be provided access to the site and the system in order to perform the following services that are marked:

**CONTROL/ALARM PANEL (Annually)**

- 1. Check pump operations in manual mode
- 2. Check timer settings
- 3. Record elapsed time meter and counter readings
- 4. Confirm operation of audible and visual alarms

**LIFT PUMPING STATION (Annually)**

- 1. Verify no leaks in riser
- 2. Inspect splice box for moisture and secure connections
- 3. Verify condition of and correct operation of all floats
- 4. Verify neat wrap of float cords
- 5. Visually inspect recirculating splitter valve (if applicable) and liquid level
- 6. Check general appearance

**EFFLUENT FILTERS/PUMP SCREENS (Annually)**

- 1. Check effluent filter for buildup of biomat growth
- 2. Clean (if needed)

**SEPTIC TANK (Annually)**

- 1. Measure sludge and scum level
- 2. Tank(s) should be pumped if the sludge layer is closer than 12" to the bottom of the inlet baffel or whenever the scum is closer than 3" to the bottom of the outlet baffel  
\* (If the test results determine a need for solids removal, the Property Owner will bear the cost and responsibility for doing so)
- 3. Check general appearance



**PRETREATMENT DEVICE (Annually)**

- 1. Inspect for ponding; assess character and color of biomat
- 2. Test pressurization of laterals (squirt test)
- 3. Verify proper orifice position, equal spray under orifices, no clogged orifices
- 4. Check for odors: adjust recirculating time (if necessary)
- 5. Clean and flush manifold (if necessary)
- 6. Re-check squirt height (if necessary)
- 7. Inspect the appearance of the wastewater inside the unit for color and turbidity.

**DISPERSAL FIELD (Annually)**

- 1. Inspect for visible signs of failure (surface discharge, soggy ground, wet spots, settling, etc.)
- 2. If liquid level monitors are installed, levels will be observed and recorded.
- 3. Flush filters and clean cartridges, if applicable
- 4. Check field control unit solenoid operations or manual control, if applicable
- 5. Check for required separation

**SAMPLING (As Deemed Necessary)**

- 1. Acquire and deliver samples for analysis of BODs, TSS, Fats Oils and Grease, and Fecal Coliform (cost of sampling analysis plus delivery charges is the responsibility of the Property Owner. If more than one analysis is recommended and required within the duration of this contract, the additional labor costs acquired by A.M. & Associates, Inc. along with sampling analysis fees and delivery charges is the responsibility of the Property Owner).

**MISCELLANEOUS (Annually)**

- 1. Review water usage from water meter records kept by the Property Owner.

**\*\*\* PROPERTY OWNER'S RESPONSIBILITIES (Monthly and/or as Required)**

During the term hereof, I/we as the current Property Owner(s) understand that I/we;

- 1. Will provide A.M. & Associates, Inc. with access to the System. Access includes electrical controls & disconnects, hose hookup water supply and sufficient workspace to perform the necessary maintenance services
- 2. Will be responsible for recording water meter readings on a *monthly* basis.
- 3. Must *notify* A.M. & Associates, Inc. *immediately* when signs of weeping problems, sewage smell or any other indication that the system may not be functioning properly.
- 4. Will provide A.M. & Associates, Inc. copies of the water meter records, upon request.
- 5. Must acquire pre-authorization from A.M. & Associates, Inc., *prior* to the Property Owner or any other individual performing or attempts to:
  - a. make alterations or modifications to the System, or
  - b. misuse the System, or
  - c. attach devices to it , or
  - d. execute any type of Maintenance services to the system or any portion thereof
- 6. Will notify A.M. & Associates, Inc. of new ownership of property if within the duration of this contract.
- 7. Will accept all responsibility and risks involved with the installation and hydraulic performance of this Septic System and hold A.M. & Associates, Inc. harmless from all liability for this Sewage Treatment System whatsoever.
- 8. May be required to perform additional maintenance responsibilities as deemed necessary by A.M. & Associates, Inc.

This contract shall remain in force for a period of one year, beginning on date of installation and ending December 31<sup>st</sup> of the following year.

### FEES

<b>Maintenance, Monitoring &amp; Inspection Service Contract</b>	<b>\$200.00</b>	<b>Due at time of signing Contract</b>
<b>Sample Analysis Fees &amp; Supplies</b>	(approx) <b>N/A</b>	<b>Due at time of sampling</b>
<b>*Time &amp; Mileage to Deliver Samples for Analysis</b>	<b>N/A</b>	<b>Due at time of sampling</b>

NOTE: SAMPLING OF FECAL COLIFORM, BOD, TSS, AND FATS OIL AND GREASE IS NOT REQUIRED AT THIS TIME. IF SAMPLING IS FOUND TO BE NECESSARY DURING THE DURATION OF THE USE OF THIS SEPTIC SYSTEM, THE PROPERTY OWNER(S) IS RESPONSIBLE FOR ALL COSTS INVOLVED, AND IS DUE AT TIME THE SAMPLES ARE TO BE TAKEN.

\*If at time of sampling, the Property Owner(s) wishes to transport the samples to Brainerd himself for analysis, within the *required time limit*, A.M. & Associates, Inc. will wave the time, mileage delivery fees of \$100.00.

A.M. & Associates, Inc. agrees to provide inspection, monitoring and routine maintenance service only under this contract.

I hereby certify with my signature as the Property Owner(s) that I understand the provisions, requirements and responsibilities of this Maintenance, Monitoring and Inspection Service Contract. I also understand failure to comply with the requirements outlined in my Operating Permit, this Contract, along with any future requirements that may arise, set forth by Aitkin County Environmental Services, Orenco Systems, Inc. (OSI) or A.M. & Associates, Inc., could result in the condemning of my septic system, removal of the use of the drainfield, and require the use of Holding Tanks with a pumping Contract.

**Property Owner(s):**

Name: Robert Sautzer *Robert Sautzer*  
(please print) (signature)

Date: 8/24/05

Spouse: Tammy Sautzer *Tammy Sautzer*  
(please print) (signature)

Date: 8/24/05

**A.M. & Associates, Inc.:**

Name: Michael D. O'Keeffe *Michael O'Keeffe*  
(please print) (signature)

Date: 8-24-05

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE (Edgewater Resort) Robert Sauerer PARCEL NUMBER 01-0-075502  
ADDRESS 45049 350<sup>th</sup> Street CITY Aitkin STATE MN ZIP 56469  
SEC 31 TWP 47 RGE 25 BLOCK \_\_\_\_\_ LOT C ACRES \_\_\_\_\_  
TELEPHONE (218) 820-7019 (cell) GIS LOCATION \_\_\_\_\_  
SITE LOCATION Same (Cedar Lake)

### A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM:

#### 20' x 30' OSI SAND FILTER DISPERSING INTO EXISTING 17 TRENCHES

**5 Bedroom House will have it own 1600 Gallon Combination Tank and individual 20' x 30' OSI Sand Filter that will gravity into a central Lift Tank, to be dispersed into existing Trenches.  
(5 Bedrooms = 750 gpd (Type 1) but Sized as a Type 2 = 450 gpd for Drainfield)**

Number of Bedrooms 5

Flow = 750/450 gpd

Hydraulic Loading Rate = 1.0 - 1.2 gpd/ft<sup>2</sup>

Organic Loading Rate = 0.00015 BOD/sqft

$$\text{Flow} \times \text{BOD}(\text{mg}/1) \times 8.35 \div 1,000,000 = \# \text{BOD}$$
$$(450 \times 15 \times 8.35 \div 1,000,000 = .056 \text{ BOD})$$

$$\text{System Loading} = \text{organic loading} \div \text{area} = \text{BOD}/\text{sqft}$$
$$(.056 \div 360 = 0.00015 \text{ BOD}/\text{sqft})$$

Anticipated System Life = 20 - 30 years

#### Estimated Cost of:

System Construction = \$10,000.00 (±)  
Operation = \$10.00 per month  
Monitoring, Testing & Service = \$150.00 per year

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the date of the Operating Permit and lasting until the Permit's expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted.

The discharge from the wastewater treatment unit shall be limited by the Permittee as specified below:

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
Flow	750 gpd	Water Meter	Monthly	Record on Log Sheet	At time of Operating Permit Renewal
5-Day BOD	15/220 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Total Nitrogen					
Total Phosphorus					
TSS	15/65 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Fats, Oils, Grease (FOG)	30 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Fecal Coliform	Less than 1,000 cfu / 100 ml	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Separation Distance	2 Foot Credit on Soil Media	Trenches			

**C. MAINTENANCE REQUIREMENTS**

PARAMETER	LOCATION	FREQUENCY
Daily Flow	Water Meter	Monthly (record on log sheet)
Sludge & Scum Level	Septic Tank	Annually
Pump, Timers, Alarm, Floats, etc	Lift Tank, Pump Vault	Annually
Pressurization of Laterals in Sand Filter (squirt test)	Sand Filter	Annually
Overall visual of entire system for landscaping, drainage and cover material	Sand Filter & Tanks	Annually

**D. MONITORING AND REPORTING REQUIREMENTS:**

1. Monitoring results obtained during each calendar year shall be submitted no later than December 31<sup>st</sup> of each year to:  

Aitkin County Environmental Services  
209 2<sup>nd</sup> St NW  
Aitkin, MN 56431
2. The monitoring reports shall be signed by the Permittee. Copies are to be retained for your records.
3. The Permittee or designated agent shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of the Operating Permit.
4. Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.
5. Sampling and laboratory testing procedures shall be performed in accordance with Standard Methods and the testing shall be performed by a Minnesota Department of Health approved laboratory.

**E. MITIGATION PLAN:**

1. If weeping problems should occur; lower dosing rate, lower water usage.
2. If OSI Sand Filter experiences problems, fix or repair at recommendations of Manufacturer, or replace.
3. A different or another Performance or Other System may be installed at the owner's expense.
4. If in the event that this system should fail and if there is no other ISTS option available, then Holding Tanks must be installed, to be pumped by Licensed Pumper. A contract must be entered into with a Licensed Pumper.

**F. SPECIAL REQUIREMENTS:**

1. A.M. & ASSOCIATES , a licensed ISTS firm, has agreed to perform all monitoring responsibilities, as outlined within this Operating Permit Application, for a period of 1 Year(s).

I hereby certify with my signature as the designer, that all data for the operating permit application is true and correct to the best of my knowledge.

MICHAEL O'KEEFFE  
(Name)

  
(Signature)

1357  
(License #)

08/24/2005  
(Date)

A.M. & ASSOCIATES, INC.  
(Company Name)

29465 442<sup>nd</sup> LANE PALISADE, MN 56469  
(Address)

(218) 768-4430  
(Telephone)

53316



33316



33316





New → 01-0-07490Z

INDIVIDUAL SEWAGE TREATMENT SYSTEM INSPECTION FORM  
AITKIN COUNTY, MINNESOTA

Township Aitkin Date of Inspection 1-25-06 Permit Number 33316  
Owner Jim Harris (formerly Bob Saurer) Parcel Number 01-0-075502  
Project Address \_\_\_\_\_ Installer Mark Ritter  
City \_\_\_\_\_ Zip Code \_\_\_\_\_ New  Repair \_\_\_\_\_

**SETBACKS:**  
Buildings to tank(s) 47'  
Buildings to drainfield \_\_\_\_\_  
Well(s) 50' or 100' \_\_\_\_\_  
Lake/Creek/Wetland \_\_\_\_\_

**SEPTIC TANKS:**  
Liquid capacity Wieser  
Manufacturer & type 1600 gal combo concrete  
Type of baffle Plastic  
Inspection pipes 2 @ 4"  
Manholes access 2 @ 23 1/2"  
No. & height of risers 2 @ 24"

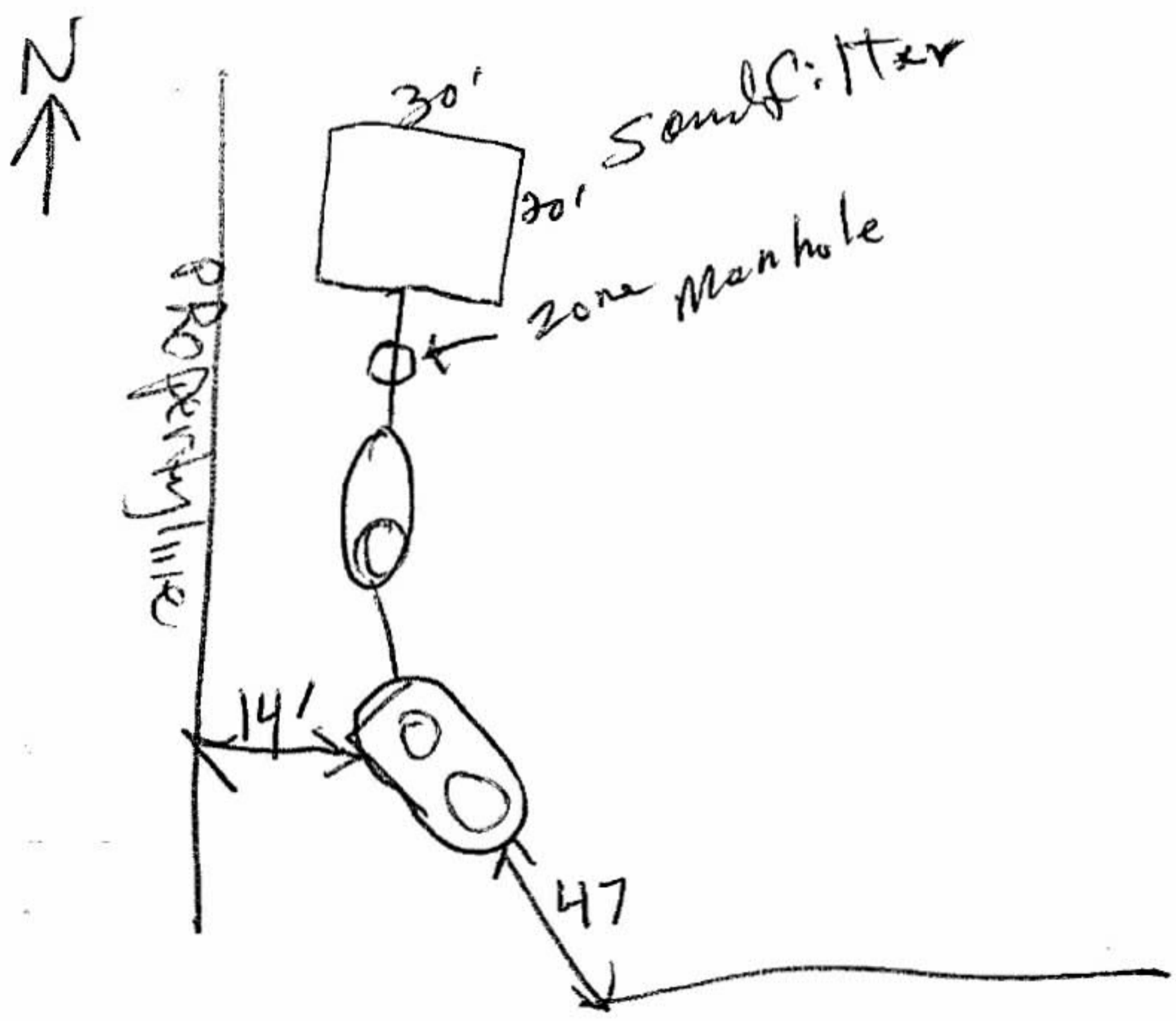
**MOUNDS:**  
Percent slope \_\_\_\_\_  
Upslope dike width \_\_\_\_\_  
Downslope dike width \_\_\_\_\_  
Sideslope dike width \_\_\_\_\_  
Drainfield rock below pipe \_\_\_\_\_  
Depth of sand below rock \_\_\_\_\_  
Perforation size & spacing \_\_\_\_\_  
Pipe size & spacing \_\_\_\_\_  
Dimensions of rock bed \_\_\_\_\_  
Dimensions of sand base \_\_\_\_\_  
Final cover \_\_\_\_\_

**DIST. or DROP BOX & TYPE** \_\_\_\_\_

**TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:**  
Trench depth \_\_\_\_\_  
Trench length \_\_\_\_\_  
Trench bottom width \_\_\_\_\_  
Trench bottom level \_\_\_\_\_  
Trench spacing \_\_\_\_\_  
Drainfield rock below pipe \_\_\_\_\_  
Size of gravelless pipe \_\_\_\_\_  
Depth of backfill \_\_\_\_\_  
Absorption area: square feet \_\_\_\_\_  
lineal feet \_\_\_\_\_

**PUMPS:**  
Tank capacity 1000  
Tank manufacturer & type Wieser, concrete  
No. & height of risers 1 @ 24"  
Pump manufacturer & model# Zoller 98  
Horsepower & GPM 1/2 - -  
Feet of head 8  
Cycles per day Time Dosed  
Gallons per cycle \_\_\_\_\_  
Size of discharge line \_\_\_\_\_  
Type of electrical hookup post  
Type & location of alarm Time dosed  
Cycle counter (commercial) \_\_\_\_\_

**DRAWING OF SYSTEM**



Inspector's Comments Tank cover on backward, insp pipes not over the divide, sides and covers insulated w/ pink foam. water in the hole 16" from pipe (RP tanks only)

Corrective Action Required add crest for Bob Saurer

Inspector's Signature [Signature] & Rich C. Installer's Signature [Signature]  
White-County Yellow-Applicant Pink-Installer

**INDIVIDUAL SEWAGE TREATMENT SYSTEM INSPECTION FORM  
AITKIN COUNTY, MINNESOTA**

Township Aitkin Date of Inspection 6/21/06 Permit Number 33316  
 Owner (Bob Saveren) Jim Harris Parcel Number 01-0-075503  
 Project Address 4.31 Ac. of Gov Lot 1 In Doc 290122 Installer Mark Ritter  
 City \_\_\_\_\_ Zip Code \_\_\_\_\_ New \_\_\_\_\_ Repair

**SETBACKS:**

Buildings to tank(s) 20  
 Buildings to drainfield 100'  
 Well(s) 50' or 100' \_\_\_\_\_  
 Lake/Creek/Wetland 100'

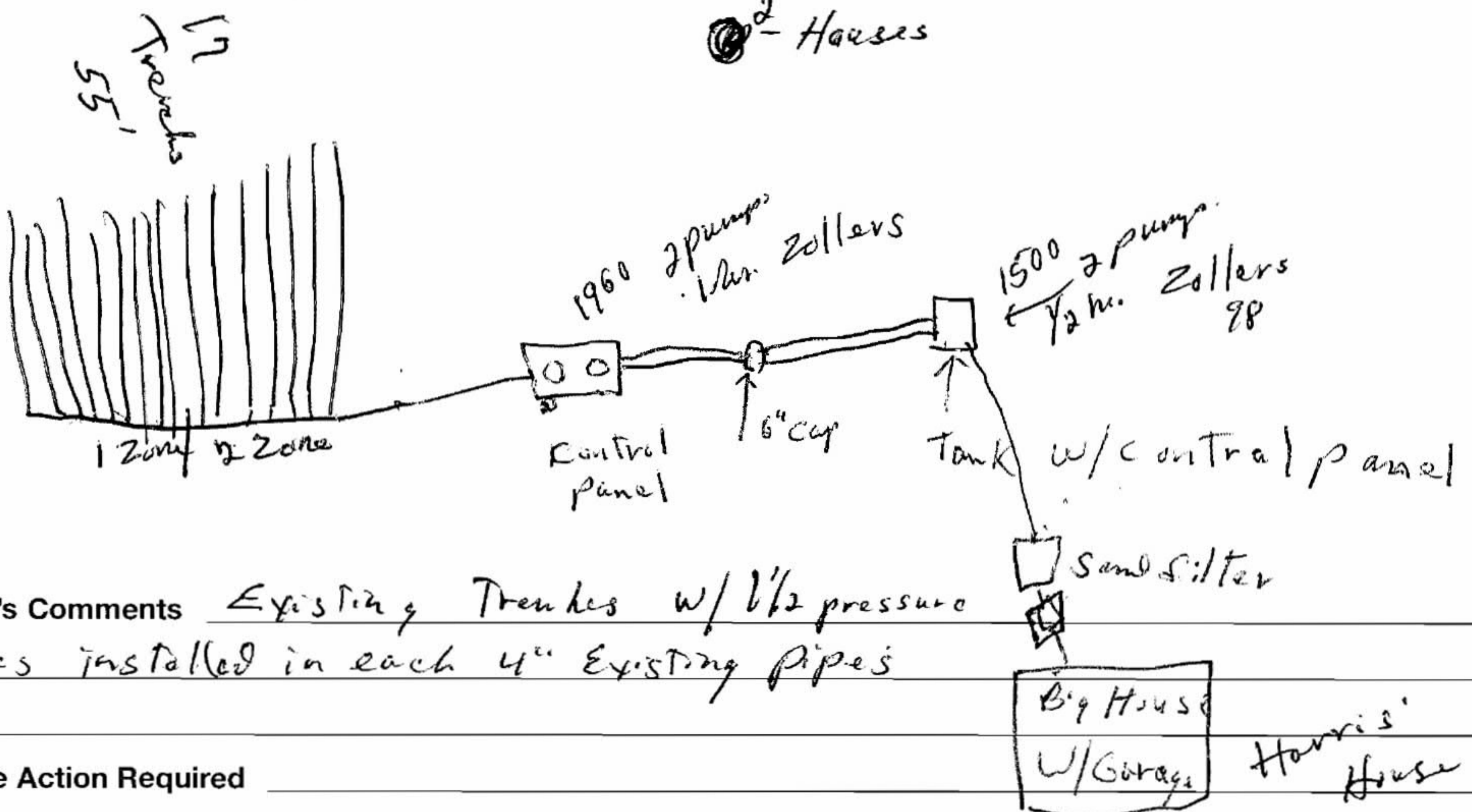
**SEPTIC TANKS:**

Liquid capacity 1860 Combo  
 Manufacturer & type Jac pre-cast  
 Type of baffle plastic  
 Inspection pipes 1-4" 1-6"  
 Manholes access 2  
 No. & height of risers 12"

**MOUNDS:**

Percent slope Sand filter  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing 1/4"  
 Pipe size & spacing 2" 55' lines  
 Dimensions of rock bed \_\_\_\_\_  
 Dimensions of sand base \_\_\_\_\_  
 Final cover \_\_\_\_\_

**DRAWING OF SYSTEM  
(Include Soils)**



**DIST. or DROP BOX & TYPE** \_\_\_\_\_

**TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:**

Trench depth Existing Trenches  
 Trench length 55' X 17  
 Trench bottom width 3'  
 Trench bottom level yes  
 Trench spacing 6'  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of gravelless pipe All Trenches None  
 Depth of backfill 4" w/ 2" pressure lines  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**PUMPS:**

Tank capacity 1960 & 1500  
 Tank manufacturer & type Jac pre-cast  
 No. & height of risers 3- 12"  
 Pump manufacturer & model # 2- 1 horse + 2- 1/2 Zollers  
 Horsepower & GPM 2- 1 horse 2- 1/2 horse  
 Feet of head 28  
 Cycles per day Time Dosed  
 Gallons per cycle \_\_\_\_\_  
 Size of discharge line 2"  
 Type of electrical hookup post  
 Type & location of alarm elec.  
 Cycle counter (commercial) \_\_\_\_\_

*This is a repair for 9 Bed  
2-Horses*

Inspector's Comments Existing Trenches w/ 1/2 pressure pipes installed in each 4" Existing pipes

Corrective Action Required \_\_\_\_\_

Inspector's Signature [Signature] Installer's Signature \_\_\_\_\_  
 White-County Yellow-Applicant Pink-Installer

**AITKIN COUNTY**  
**CERTIFICATE OF COMPLIANCE/NOTICE OF NONCOMPLIANCE**

This certificate of compliance/notice of noncompliance has been issued this \_\_\_\_\_ day of 10/12/06 to certify compliance/noncompliance with Aitkin County's Individual Sewage Treatment System and Wastewater Ordinance No.

1. The premises covered by this certificate are legally described as: \_\_\_\_\_

4.3 Ac. of Gov. Lot 1 In Dec 290122 01-0-075303

Section 31 Township 47 Range 27 Lake Cedar

PERMIT NO. 33316 Owner Name Jim Harris

Address 45049 350<sup>th</sup> ST. Aitkin, mn 56431

Installer Name Mark Ritter

Type of System Inspected Sand filter w/1860 pumped to 1500 then to 1260 then to shared drainfield

The ~~certificate of compliance~~/notice of noncompliance was based on, No 1 of the following:

1) Inspection of the installation or construction as in accordance with the above referenced permit and application design.

2) Review of as-built plans submitted in accordance with Subdivision 4.21 C. Of Aitkin County's Individual Sewage Treatment System and Wastewater Ordinance No. 1.

If the above permitted individual sewage treatment system is in noncompliance with Aitkin County's Individual Sewage Treatment System and Wastewater Ordinance No. 1, then the following shall serve as a Notice of Violation:

1) Statement of the findings of fact through inspections or investigations: \_\_\_\_\_

2) List of specific violations of Ordinance: \_\_\_\_\_

3) Requirements for correction or removal of violations: \_\_\_\_\_

4) Time schedule for compliance: \_\_\_\_\_

Failure to correct or remove the above violations will result in this matter being turned over to the Aitkin County Attorney's Office for further legal action which may result in revocation of licenses or registrations, fine's and/or imprisonment.

INSPECTOR SIGNATURE 

# Original System

## INDIVIDUAL SEWAGE TREATMENT SYSTEM INSPECTION FORM AITKIN COUNTY, MINNESOTA

Township Aitkin Date of Inspection 6/21/06 Permit Number 33316  
 Owner (Bob Saveren) Jim Harris Parcel Number 01-0-075503  
 Project Address 4.31 Ac. off Gov 101 In Dec 270122 Installer Mark Ritter  
 City \_\_\_\_\_ Zip Code \_\_\_\_\_ New \_\_\_\_\_ Repair

**SETBACKS:**

Buildings to tank(s) 20  
 Buildings to drainfield 100'  
 Well(s) 50' or 100' \_\_\_\_\_  
 Lake/Creek/Wetland 100'

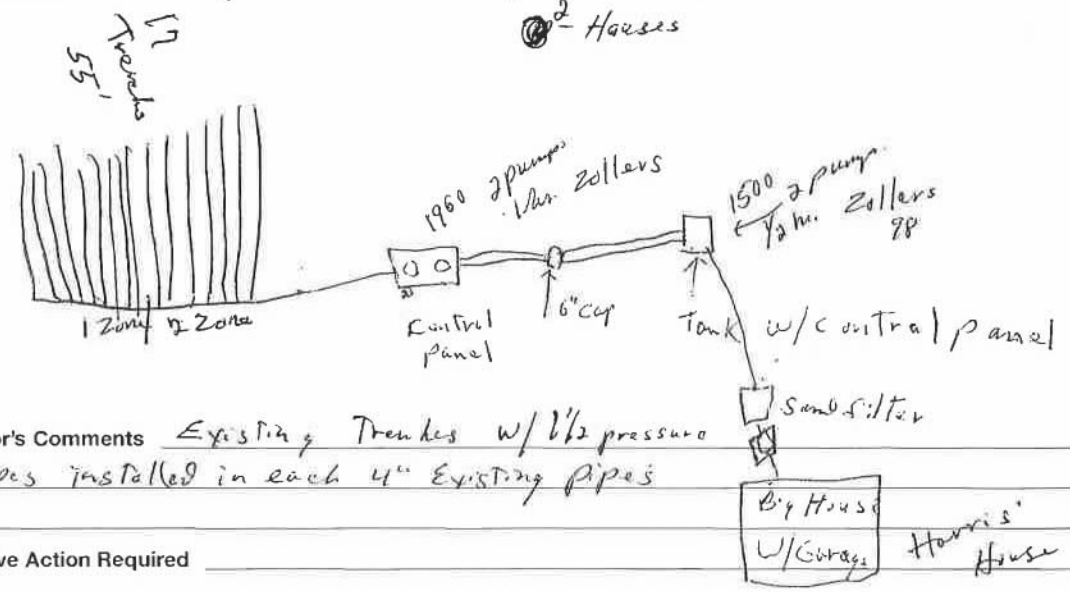
**SEPTIC TANKS:**

Liquid capacity 1860 Combo  
 Manufacturer & type Jac pre-cast  
 Type of baffle plastic  
 Inspection pipes 1-4" 1-6"  
 Manholes access 2  
 No. & height of risers 12"

**MOUNDS:**

Percent slope Sand filter  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing 1/4  
 Pipe size & spacing 2" 55' lines  
 Dimensions of rock bed \_\_\_\_\_  
 Dimensions of sand base \_\_\_\_\_  
 Final cover \_\_\_\_\_

**DRAWING OF SYSTEM**  
(Include Soils)



**DIST. or DROP BOX & TYPE** \_\_\_\_\_

**TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:**

Trench depth Existing Trenches  
 Trench length 55' X 17  
 Trench bottom width 3'  
 Trench bottom level yes  
 Trench spacing 6'  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of gravelless pipe All Trenches have  
 Depth of backfill 6" w/ 3" pressure lines  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**PUMPS:**

Tank capacity 1960 + 1500  
 Tank manufacturer & type Jac pre-cast  
 No. & height of risers 3- 12"  
 Pump manufacturer & model # 2 - 1 horse + 2 1/2 Zollers  
 Horsepower & GPM 2 - 1 horse 2 - 1/2 horse  
 Feet of head 28  
 Cycles per day Time Dosed  
 Gallons per cycle \_\_\_\_\_  
 Size of discharge line 2"  
 Type of electrical hookup post  
 Type & location of alarm elec.  
 Cycle counter (commercial) \_\_\_\_\_

Inspector's Comments Existing Trenches w/ 1/2 pressure pipes installed in each 4" Existing pipes

Corrective Action Required \_\_\_\_\_

Inspector's Signature [Signature] Installer's Signature \_\_\_\_\_

# AITKIN COUNTY AS-BUILT FORM FOR AN ISTS

OWNER Jim Harris / David Taylor

PERMIT NUMBER 38973

INSTALLER Mark Pittel

DATE OF INSTALLATION June 28, 2012

**SETBACKS:**

Buildings to tank(s) 100' +  
 Building to drainfield 100' +  
 Well(s) 50' or 100' 100' +  
 Lake/Creek/Wetland 100' +  
 Property lines (drainfield/tanks) 10' +

**TRENCHES, BEDS OR AT-GRADE SYSTEMS:**

Drop box or Dist. Box and Type \_\_\_\_\_  
 Trench depth(s) \_\_\_\_\_  
 Trench length(s) \_\_\_\_\_  
 Trench bottom width \_\_\_\_\_  
 trench spacing \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of graveless pipe \_\_\_\_\_  
 Depth of backfill \_\_\_\_\_  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**SEPTIC TANKS:**

Lift tank  
 Liquid Capacity 1,500  
 Manufacturer & Type Scrubber  
 Type of baffle(s) plastic  
 Inspection pipes (#, size & height) 6" 18"  
 Manhole access (size) 24"  
 # and height of risers on manhole 18"

NUMBER OF PICTURES TAKEN: 0

**MOUNDS:**

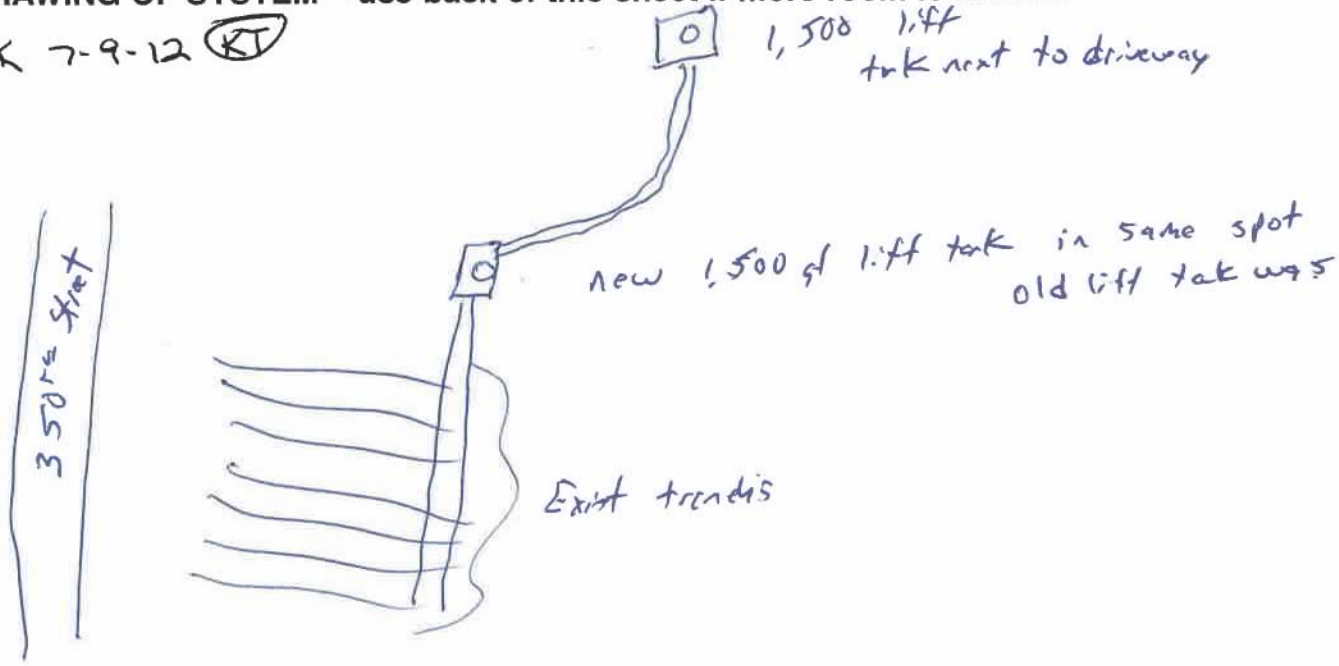
Percent slope \_\_\_\_\_  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing \_\_\_\_\_  
 Pipe size & spacing \_\_\_\_\_  
 Dimensions of rockbed \_\_\_\_\_  
 Dimensions of sandbase \_\_\_\_\_  
 Depth of final cover \_\_\_\_\_

**PUMPS:**

Tank capacity \_\_\_\_\_  
 Tank manufacturer & type \_\_\_\_\_  
 # and height of risers \_\_\_\_\_  
 Pump manufacturer and model # \_\_\_\_\_  
 Horsepower and GPM \_\_\_\_\_  
 Feet of head \_\_\_\_\_  
 Cycles/day & Gallons/cycle \_\_\_\_\_  
 Size of discharge line \_\_\_\_\_  
 Type of electrical hookup \_\_\_\_\_  
 Type and location of alarm \_\_\_\_\_  
 Cycle counter type & location \_\_\_\_\_

**DRAWING OF SYSTEM – use back of this sheet if more room is needed.**

OK 7-9-12 KT



\*\*\*Mark Pittel (installer signature) certify that the above work was installed in accordance with the submitted design and permit conditions and the system is free from defects.\*\*\*

*\* tank replacement \**  
**AITKIN COUNTY AS-BUILT FORM FOR AN ISTS**

Original P# 33316

**OWNER** Jim Hallis / David Taylor

**PERMIT NUMBER** 38973

**INSTALLER** Mok Pittel

**DATE OF INSTALLATION** June 28, 2012

**SETBACKS:**

Buildings to tank(s) 100' +  
 Building to drainfield 100' +  
 Well(s) 50' or 100' 100' +  
 Lake/Creek/Wetland 100' +  
 Property lines (drainfield/tanks) 10' +

**TRENCHES, BEDS OR AT-GRADE SYSTEMS:**

Drop box or Dist. Box and Type \_\_\_\_\_  
 Trench depth(s) \_\_\_\_\_  
 Trench length(s) \_\_\_\_\_  
 Trench bottom width \_\_\_\_\_  
 trench spacing \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of graveless pipe \_\_\_\_\_  
 Depth of backfill \_\_\_\_\_  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**SEPTIC TANKS:**

*Lift tank*  
 Liquid Capacity 1,500  
 Manufacturer & Type Scrubber  
 Type of baffle(s) plastic  
 Inspection pipes (#, size & height) 6" 18"  
 Manhole access (size) 24"  
 # and height of risers on manhole 18"

**NUMBER OF PICTURES TAKEN:** 0

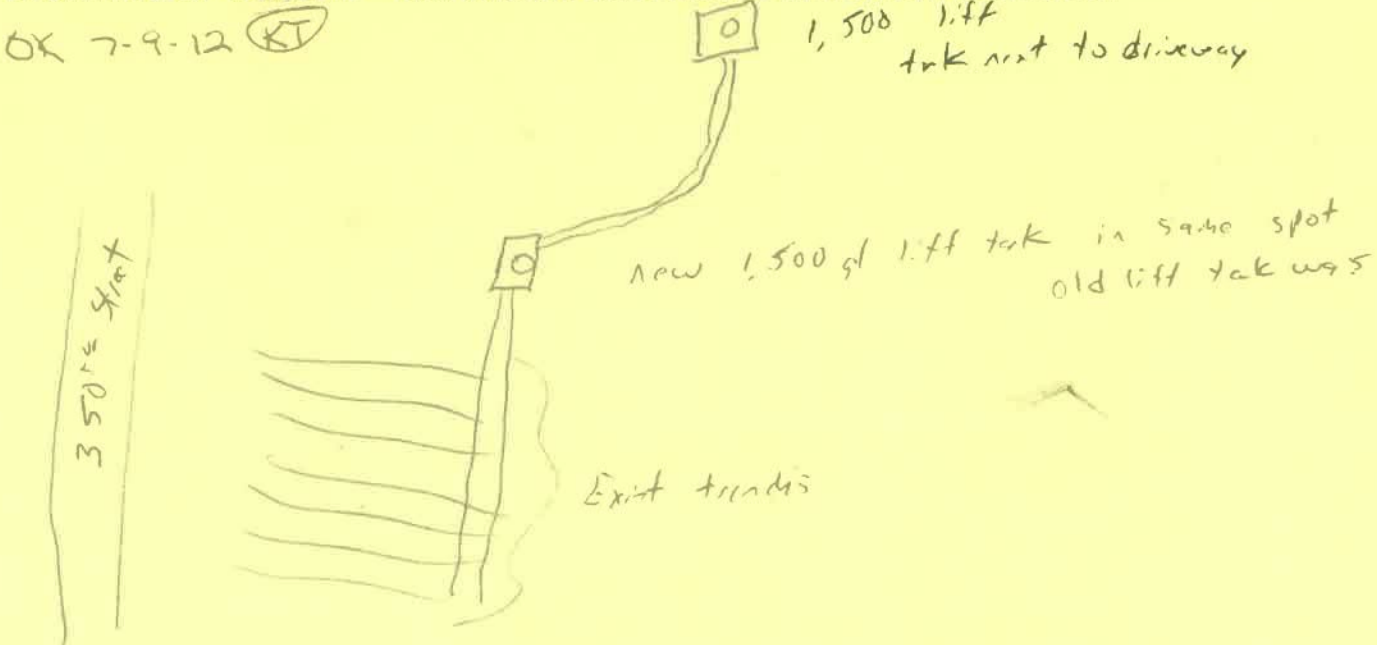
**PUMPS:**

Tank capacity \_\_\_\_\_  
 Tank manufacturer & type \_\_\_\_\_  
 # and height of risers \_\_\_\_\_  
 Pump manufacturer and model # \_\_\_\_\_  
 Horsepower and GPM \_\_\_\_\_  
 Feet of head \_\_\_\_\_  
 Cycles/day & Gallons/cycle \_\_\_\_\_  
 Size of discharge line \_\_\_\_\_  
 Type of electrical hookup \_\_\_\_\_  
 Type and location of alarm \_\_\_\_\_  
 Cycle counter type & location \_\_\_\_\_

**MOUNDS:**

Percent slope \_\_\_\_\_  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing \_\_\_\_\_  
 Pipe size & spacing \_\_\_\_\_  
 Dimensions of rockbed \_\_\_\_\_  
 Dimensions of sandbase \_\_\_\_\_  
 Depth of final cover \_\_\_\_\_

**DRAWING OF SYSTEM – use back of this sheet if more room is needed.**



\*\*\*Mok Pittel (installer signature) certify that the above work was installed in accordance with the submitted design and permit conditions and the system is free from defects.\*\*\*

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

OPERATING PERMIT #: 228

FEE: \$50

PERMITTEE: Jim & Kristian Harris

PHONE: (218) 927-7024

ADDRESS: 34322 442nd Place  
Aitkin, MN 56431-

ZONING PERMIT # 33316

PARCEL #: 01-0-0<sup>5</sup>7502

ISSUE DATE: 9/13/2005

RENEW DATE: 5/31/2007


LEGALDESCRIPTION: 4.31 ac of govt lot 1 in Doc 290122

Aitkin County Environmental Services authorizes the Permittee to construct, install and operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the date of expiration. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

**I hereby certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.**

  
\_\_\_\_\_  
Signature of Permittee

9/13/05

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Signature of Permitting Authority

9-13-05

\_\_\_\_\_  
Date

If You have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM**

Adding sandfilter pretreatment to allow the longevity of the existing septic system

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the effective date (issuance date) of this permit and lasting until this permits expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the results must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENC
Flow	750 gal per day	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY
Separation	3 feet	Dispersal System	ANNUALLY	Measure in Field	ANNUALLY

**C. MAINTENANCE REQUIREMENTS:**

PARAMETER	LOCATION	FREQUENCY
Aerobic Tank Function	Aerobic Tank	ANNUAL
Flow	Water Meter	MONTHLY
Pumps, Floats & Alarms	Pump Chamber	ANNUAL
Solids Removal & Water Tightness	Septic tank(s)	ANNUAL
Surface Discharge	Dispersal System	ANNUAL
Vegetative Cover	Dispersal System	ANNUAL



**D. MONITORING AND REPORTING REQUIREMENTS:**

Monitoring results obtained during each calendar year shall be submitted no later than December 31st of that year to:

Aitkin County Environmental Services  
209 2nd Street NW  
Aitkin, MN 56431

The monitoring reports shall be signed by the Permittee. Copies are to be retained by the Permittee.

The Permittee shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of this permit.

Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.

Sampling and laboratory testing procedures shall be performed in accordance with Standard Methods and the testing shall be performed by a Minnesota Department of Health approved laboratory. All sampling and testing costs shall be the responsibility of the Permittee.

Monitoring will be done by John Walsh

**E. MITIGATION PLAN:**

- 1) If weeping occurs; lower dosing rate, lower water usage, or increase distribution area. Waste strength: if fecals exceed limit -reduce effluent strength, increase retention time or add disinfection.
- 2) A different or another Performance or Other System may be installed at the owner's expense.
- 3) If in the event that this system should fail and if there is no other ISTS option available, then Holding Tanks must be installed, to be pumped by a licensed Pumper with a contract.

**F. SPECIAL REQUIREMENTS:**

\*\*\* A WATER METER OR OTHER APPROVED WATER MEASURING DEVICE MUST BE INSTALLED AND READ ON A MONTHLY BASIS \*\*\*

**A. M. & Associates, Inc.**

RR 2, Box 2468  
Palisade, MN 56469  
(218) 768-4430

33316

01-0-075502

Michael B. O'Keeffe  
Annette M. O'Keeffe  
SEPTIC SYSTEMS  
DESIGNS & INSPECTIONS  
MPCA #1357

**FIRST YEAR  
MAINTENANCE, MONITORING AND INSPECTION SERVICE CONTRACT  
FOR INDIVIDUAL SEWAGE TREATMENT SYSTEM**

It is hereby agreed this 24<sup>th</sup> day of August, 20 05 by and between A.M. & Associates, Inc. and

Property Owner(s):	<u>ROBERT SAUERER</u>	Parcel Code:	<u>01-0-075502 (TRACT C)</u>
Home Address:	<u>45049 350<sup>TH</sup> STREET AITKIN, MN 56431</u>	Site Address:	<u>SAME EDGEWATER RESORT, CEDAR LAKE, AITKIN</u>
Phone (home)	_____	Township	<u>AITKIN</u>
(work)	_____	Phone:	_____
(cell)	<u>(218) 820-7019</u>		
(fax)	_____		

DESCRIPTION OF INDIVIDUAL SEWAGE TREATMENT SYSTEM

**20'x 30' OSI SAND FILTER DISPERSING INTO EXISTING 17 TRENCHES**

**5 Bedroom House will have it own 1600 Gallon Combination Tank and individual 20' x 30' OSI Sand Filter that will gravity into a central Lift Tank, to be dispersed into existing Trenches.  
(5 Bedrooms = 750 gpd (Type 1) but Sized as a Type 2 = 450 gpd for Drainfield)**

Installation Date: \_\_\_\_\_ Installer: \_\_\_\_\_ Phone#: \_\_\_\_\_

That A.M. & Associates, Inc. will provide the services to perform Preventative Maintenance, Monitoring and Inspection of the parameters and frequency described herein as your Operating Permit requires for your Individual Sewage Treatment System (ISTS).

Each inspection includes an examination of the ISTS followed by a written report to the Property Owner. This inspection report shall contain recommendations for operation and maintenance for failure-preventative measures, if any are deemed appropriate by the inspector, and a list of recommended corrective measures or replacement parts. A.M. & Associates, Inc. is authorized to submit a copy of the report to the pertaining County's Environmental Services Department.

This contract does not assume any responsibilities or obligations, which are normally the responsibilities of the Property Owner, or as related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

A.M. & Associates, Inc. can only contract or subcontract for parts or labor after authorization by you. Billings for service calls shall be made on a case by case basis. This contract **only** covers maintenance, monitoring and inspection services per current pertaining County Operating Permit and **does not** cover alarm calls of any kind.

On-site Service Calls cost of a minimum of \$50.00 plus \$50.00 per hour for time and labor required from A.M. & Associates, due to alarms, misuse or abuse of any portion of this System, is the responsibility of the Property Owner(s), payable at time of Service. Minnesota Onsite Specialties fees for Service calls are separate.

All cost for parts time and labor, required to analyze, fix or replace any portion of this system, for damages caused by winter freezing, is the responsibility of the Property Owner(s).

All additional cost, time and labor required from A.M. & Associates, Inc. and/or Minnesota Onsite Specialties due to modifications made by the pertaining County's Environmental Services Department, is the responsibility of the Property Owner(s), and is payable within 20 days of billing.

In no event shall A.M. & Associates, Inc., Minnesota Onsite Specialties, or the Inspector be responsible for special or consequential damages, including but not limited to, loss of time, injury to personal property or any other consequential damages or incidental or economic loss due to equipment failure or for any other reason.

A.M. & Associates, Inc. shall be provided access to the site and the system in order to perform the following services that are marked:

**CONTROL/ALARM PANEL (Annually)**

- 1. Check pump operations in manual mode
- 2. Check timer settings
- 3. Record elapsed time meter and counter readings
- 4. Confirm operation of audible and visual alarms

**LIFT PUMPING STATION (Annually)**

- 1. Verify no leaks in riser
- 2. Inspect splice box for moisture and secure connections
- 3. Verify condition of and correct operation of all floats
- 4. Verify neat wrap of float cords
- 5. Visually inspect recirculating splitter valve (if applicable) and liquid level
- 6. Check general appearance

**EFFLUENT FILTERS/PUMP SCREENS (Annually)**

- 1. Check effluent filter for buildup of biomass growth
- 2. Clean (if needed)

**SEPTIC TANK (Annually)**

- 1. Measure sludge and scum level
- 2. Tank(s) should be pumped if the sludge layer is closer than 12" to the bottom of the inlet baffel or whenever the scum is closer than 3" to the bottom of the outlet baffel  
\* (If the test results determine a need for solids removal, the Property Owner will bear the cost and responsibility for doing so)
- 3. Check general appearance

**PRETREATMENT DEVICE (Annually)**

- 1. Inspect for ponding; assess character and color of biomat
- 2. Test pressurization of laterals (squirt test)
- 3. Verify proper orifice position, equal spray under orifices, no clogged orifices
- 4. Check for odors: adjust recirculating time (if necessary)
- 5. Clean and flush manifold (if necessary)
- 6. Re-check squirt height (if necessary)
- 7. Inspect the appearance of the wastewater inside the unit for color and turbidity.

**DISPERSAL FIELD (Annually)**

- 1. Inspect for visible signs of failure (surface discharge, soggy ground, wet spots, settling, etc.)
- 2. If liquid level monitors are installed, levels will be observed and recorded.
- 3. Flush filters and clean cartridges, if applicable
- 4. Check field control unit solenoid operations or manual control, if applicable
- 5. Check for required separation

**SAMPLING (As Deemed Necessary)**

- 1. Acquire and deliver samples for analysis of BODs, TSS, Fats Oils and Grease, and Fecal Coliform (cost of sampling analysis plus delivery charges is the responsibility of the Property Owner. If more than one analysis is recommended and required within the duration of this contract, the additional labor costs acquired by A.M. & Associates, Inc. along with sampling analysis fees and delivery charges is the responsibility of the Property Owner).

**MISCELLANEOUS (Annually)**

- 1. Review water usage from water meter records kept by the Property Owner.

**\*\*\* PROPERTY OWNER'S RESPONSIBILITIES (Monthly and/or as Required)**

During the term hereof, I/we as the current Property Owner(s) understand that I/we;

- 1. Will provide A.M. & Associates, Inc. with access to the System. Access includes electrical controls & disconnects, hose hookup water supply and sufficient workspace to perform the necessary maintenance services
- 2. Will be responsible for recording water meter readings on a *monthly* basis.
- 3. Must *notify* A.M. & Associates, Inc. *immediately* when signs of weeping problems, sewage smell or any other indication that the system may not be functioning properly.
- 4. Will provide A.M. & Associates, Inc. copies of the water meter records, upon request.
- 5. Must acquire pre-authorization from A.M. & Associates, Inc., *prior* to the Property Owner or any other individual performing or attempts to:
  - a. make alterations or modifications to the System, or
  - b. misuse the System, or
  - c. attach devices to it , or
  - d. execute any type of Maintenance services to the system or any portion thereof
- 6. Will notify A.M. & Associates, Inc. of new ownership of property if within the duration of this contract.
- 7. Will accept all responsibility and risks involved with the installation and hydraulic performance of this Septic System and hold A.M. & Associates, Inc. harmless from all liability for this Sewage Treatment System whatsoever.
- 8. May be required to perform additional maintenance responsibilities as deemed necessary by A.M. & Associates, Inc.

This contract shall remain in force for a period of one year, beginning on date of installation and ending December 31<sup>st</sup> of the following year.

**FEES**

<b>Maintenance, Monitoring &amp; Inspection Service Contract</b>	<b>\$200.00</b>	<b>Due at time of signing Contract</b>
<b>Sample Analysis Fees &amp; Supplies</b>	(approx) <b>N/A</b>	<b>Due at time of sampling</b>
<b>*Time &amp; Mileage to Deliver Samples for Analysis</b>	<b>N/A</b>	<b>Due at time of sampling</b>

NOTE: SAMPLING OF FECAL COLIFORM, BOD, TSS, AND FATS OIL AND GREASE IS NOT REQUIRED AT THIS TIME. IF SAMPLING IS FOUND TO BE NECESSARY DURING THE DURATION OF THE USE OF THIS SEPTIC SYSTEM, THE PROPERTY OWNER(S) IS RESPONSIBLE FOR ALL COSTS INVOLVED, AND IS DUE AT TIME THE SAMPLES ARE TO BE TAKEN.

\*If at time of sampling, the Property Owner(s) wishes to transport the samples to Brainerd himself for analysis, within the *required time limit*, A.M. & Associates, Inc. will wave the time, mileage delivery fees of \$100.00.

A.M. & Associates, Inc. agrees to provide inspection, monitoring and routine maintenance service only under this contract.

I hereby certify with my signature as the Property Owner(s) that I understand the provisions, requirements and responsibilities of this Maintenance, Monitoring and Inspection Service Contract. I also understand failure to comply with the requirements outlined in my Operating Permit, this Contract, along with any future requirements that may arise, set forth by Aitkin County Environmental Services, Orenco Systems, Inc. (OSI) or A.M. & Associates, Inc., could result in the condemning of my septic system, removal of the use of the drainfield, and require the use of Holding Tanks with a pumping Contract.

*Property Owner(s):*

Name: ROBERT SAUETZER *Saverre* *Robert Sauer*  
(please print) (signature)

Date: 8/24/05

Spouse: TAMMY SAUETZER *Saverre* *Tammy Sauer*  
(please print) (signature)

Date: 8/24/05

*A.M. & Associates, Inc.:*

Name: Michael D. O'Keeffe *Michael O'Keeffe*  
(please print) (signature)

Date: 8-21-05

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE (Edgewater Resort) Robert Sauerer PARCEL NUMBER 01-0-075502  
ADDRESS 45049 350<sup>th</sup> Street CITY Aitkin STATE MN ZIP 56469  
SEC 31 TWP 47 RGE 25 BLOCK \_\_\_\_\_ LOT C ACRES \_\_\_\_\_  
TELEPHONE (218) 820-7019 (cell) GIS LOCATION \_\_\_\_\_  
SITE LOCATION Same (Cedar Lake)

### A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM:

#### 20' x 30' OSI SAND FILTER DISPERSING INTO EXISTING 17 TRENCHES

**5 Bedroom House will have it own 1600 Gallon Combination Tank and individual 20' x 30' OSI Sand Filter that will gravity into a central Lift Tank, to be dispersed into existing Trenches.  
(5 Bedrooms = 750 gpd (Type 1) but Sized as a Type 2 = 450 gpd for Drainfield)**

Number of Bedrooms 5

Flow = 750/450 gpd

Hydraulic Loading Rate = 1.0 - 1.2 gpd/ft<sup>2</sup>

Organic Loading Rate = 0.00015 BOD/sqft

$$\text{Flow} \times \text{BOD}(\text{mg}/1) \times 8.35 \div 1,000,000 = \# \text{BOD}$$
$$(450 \times 15 \times 8.35 \div 1,000,000 = .056 \text{ BOD})$$

$$\text{System Loading} = \text{organic loading} \div \text{area} = \text{BOD}/\text{sqft}$$
$$(.056 \div 360 = 0.00015 \text{ BOD}/\text{sqft})$$

Anticipated System Life = 20 - 30 years

#### Estimated Cost of:

System Construction = \$10,000.00 (±)  
Operation = \$10.00 per month  
Monitoring, Testing & Service = \$150.00 per year

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the date of the Operating Permit and lasting until the Permit's expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted.

The discharge from the wastewater treatment unit shall be limited by the Permittee as specified below:

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
Flow	750 gpd	Water Meter	Monthly	Record on Log Sheet	At time of Operating Permit Renewal
5-Day BOD	15/220 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Total Nitrogen					
Total Phosphorus					
TSS	15/65 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Fats, Oils, Grease (FOG)	30 mg/l	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Fecal Coliform	Less than 1,000 cfu / 100 ml	Sand Filter	As Deemed Necessary	Take Sample for Testing	
Separation Distance	2 Foot Credit on Soil Media	Trenches			

**C. MAINTENANCE REQUIREMENTS**

PARAMETER	LOCATION	FREQUENCY
Daily Flow	Water Meter	Monthly (record on log sheet)
Sludge & Scum Level	Septic Tank	Annually
Pump, Timers, Alarm, Floats, etc	Lift Tank, Pump Vault	Annually
Pressurization of Laterals in Sand Filter (squirt test)	Sand Filter	Annually
Overall visual of entire system for landscaping, drainage and cover material	Sand Filter & Tanks	Annually

**D. MONITORING AND REPORTING REQUIREMENTS:**

1. Monitoring results obtained during each calendar year shall be submitted no later than December 31<sup>st</sup> of each year to:

Aitkin County Environmental Services  
209 2<sup>nd</sup> St NW  
Aitkin, MN 56431

2. The monitoring reports shall be signed by the Permittee. Copies are to be retained for your records.
3. The Permittee or designated agent shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of the Operating Permit.
4. Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.
5. Sampling and laboratory testing procedures shall be performed in accordance with Standard Methods and the testing shall be performed by a Minnesota Department of Health approved laboratory.

**E. MITIGATION PLAN:**

1. If weeping problems should occur; lower dosing rate, lower water usage.
2. If OSI Sand Filter experiences problems, fix or repair at recommendations of Manufacturer, or replace.
3. A different or another Performance or Other System may be installed at the owner's expense.
4. If in the event that this system should fail and if there is no other ISTS option available, then Holding Tanks must be installed, to be pumped by Licensed Pumper. A contract must be entered into with a Licensed Pumper.

**F. SPECIAL REQUIREMENTS:**

1. A.M. & ASSOCIATES, a licensed ISTS firm, has agreed to perform all monitoring responsibilities, as outlined within this Operating Permit Application, for a period of 1 Year(s).

I hereby certify with my signature as the designer, that all data for the operating permit application is true and correct to the best of my knowledge.

MICHAEL O'KEEFFE  
(Name)

  
(Signature)

1357  
(License #)

08/24/2005  
(Date)

A.M. & ASSOCIATES, INC.  
(Company Name)

29465 442<sup>nd</sup> LANE PALISADE, MN 56469  
(Address)

(218) 768-4430  
(Telephone)





Mark

Here's the septic agreement  
I talked to you about on  
the phone. We do have  
the water meter now, but  
it's only been in place  
for a couple weeks.

Thanks

Jim Harris

503

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

**OPERATING PERMIT #:** 228

**FEE:** \$50.00

**PERMITTEE:** Jim & Kristian Harris

**PHONE:** (218) 927-7024

**ADDRESS:** 34322 442nd Place  
Aitkin, MN 56431-

**ZONING PERMIT #** 33316

**PARCEL #:** 01-0-075503

**LEGAL DESCRIPTION:** PT GOVT LOT 1 IN DOC 368976 (PT TRACT C)

**ISSUE DATE** 5/31/2006

**EXPIRATION DATE** 5/31/2007

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the date of expiration. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

**I hereby certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.**

  
\_\_\_\_\_  
**Signature of Permittee**

6/15/07  
\_\_\_\_\_  
**Date**

  
\_\_\_\_\_  
**Signature of Permitting Authority**

2/10/07  
\_\_\_\_\_  
**Date**

If You have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM**

Adding sandfilter pretreatment to allow the longevity of the existing septic system

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the effective date (issuance date) of this permit and lasting until this permits expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the results must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENC
Flow	750 gal per day	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY
Separation	3 feet	Dispersal System	ANNUALLY	Measure in Field	ANNUALLY

**C. MAINTENANCE REQUIREMENTS:**

PARAMETER	LOCATION	FREQUENCY	STATUS	MARKS FILTER
Aerobic Tank Function	Aerobic Tank <i>Sand Filter</i>	ANNUAL	<i>good</i>	<input checked="" type="checkbox"/>
Flow	Water Meter <i>see attached sheet</i>	MONTHLY	<i>good</i>	<input checked="" type="checkbox"/>
Pumps, Floats & Alarms	Pump Chamber	ANNUAL	<i>good</i>	<input checked="" type="checkbox"/>
Solids Removal & Water Tightness	Septic tank(s)	ANNUAL	<i>YES</i>	<input checked="" type="checkbox"/>
Surface Discharge	Dispersal System	ANNUAL	<i>None</i>	<input checked="" type="checkbox"/>
Vegetative Cover	Dispersal System	ANNUAL	<i>good</i>	<input checked="" type="checkbox"/>

**D. MONITORING AND REPORTING REQUIREMENTS:**

Monitoring results obtained during each calendar year shall be submitted no later than December 31st of that year to:

Aitkin County Environmental Services  
209 2nd Street NW  
Aitkin, MN 56431

The monitoring reports shall be signed by the Permittee. Copies are to be retained by the Permittee.

The Permittee shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of this permit.

Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.

Sampling and laboratory testing procedures shall be performed in accordance with Standard Methods and the testing shall be performed by a Minnesota Department of Health approved laboratory. All sampling and testing costs shall be the responsibility of the Permittee.

Monitoring will be done by A.M. Associates Mark Ritter

**E. MITIGATION PLAN:**

- 1) If weeping occurs; lower dosing rate, lower water usage, or increase distribution area. Waste strength: if fecals exceed limit -reduce effluent strength, increase retention time or add disinfection.
- 2) A different or another Performance or Other System may be installed at the owner's expense.
- 3) If in the event that this system should fail and if there is no other ISTS option available, then Holding Tanks must be installed, to be pumped by a licensed Pumper with a contract.

**F. SPECIAL REQUIREMENTS:**

\*\*\* A WATER METER OR OTHER APPROVED WATER MEASURING DEVICE MUST BE INSTALLED AND READ ON A MONTHLY BASIS \*\*\*

# Harris Water Meter Readings

45079 350<sup>th</sup> St

MEMPHIS

<u>Month</u>	Per day (30)	<u>Reading</u>
June	81	0
July	158	2420
August	80	7160
September	149	9550
October	198	14020
November	128	19980
December	144	23820
<b>2008</b>		
January	118	28140
February	188	31680
March	97	37320
April	181	40250
May		45690
June		
July		
August		
September		
October		
November		
December		
<b>2009</b>		
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		
<b>2010</b>		
January		
February		
March		
April		
May		
June		

7-5-07

Septic ct = 2094  
 ETM = 1,346 min  
 Sand filter ct = 2,164  
 ETM = 2,400 min

7-26-08

Septic ct = 4,528  
 ETM = 2,911 min  
 Sand filter ct = 4,486  
 ETM = 5,177 min

Readings done on First of month

TOPS.  
FORM 46806

# RECEIPT

DATE 10-14-08

NO. 6810

RECEIVED FROM Jim Harrois

ADDRESS A. Hkin, MW

One hundred DOLLARS \$ 100

FOR RENT

FOR Operating Permit Renewal

ACCOUNT		HOW PAID	
AMT. OF ACCOUNT		CASH	
AMT. PAID		CHECK	<u>6606</u>
BALANCE DUE		MONEY ORDER	

#228 OP.

#

BY Pat

503

# AITKIN COUNTY ENVIRONMENTAL SERVICES

## OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

OPERATING PERMIT #: 228

FEE: \$100

PERMITTEE: Jim & Kristian Harris

PHONE: (218) 927-7024

ADDRESS: 34322 442nd Place  
Aitkin, MN 56431-

*Renew to a  
3 year operating  
permit out  
to 2012  
paid \$414,083 7/16/09*

ZONING PERMIT # 33316

PARCEL #: 01-0-075503

ISSUE DATE: 5/31/2009

RENEW DATE: 5/31/2010

LEGAL DESCRIPTION: PT GOVT LOT 1 IN DOC 368976 (PT TRACT C)

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the date of expiration. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

**SIGN**

I hereby **HERE** certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.

  
\_\_\_\_\_  
Signature of Permittee

6/23/09  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Signature of Permitting Authority

7/16/09  
\_\_\_\_\_  
Date

If You have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM**

Adding sandfilter pretreatment to allow the longevity of the existing septic system

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the effective date (issuance date) of this permit and lasting until this permits expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the reuslts must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENC
Flow	750 gal per day	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY
Separation	3 feet	Dispersal System	ANNUALLY	Measure in Field	ANNUALLY

✓ OK  
✓ OK

**C. MAINTENANCE REQUIREMENTS:**

PARAMETER	LOCATION	FREQUENCY
Aerobic Tank Function <i>Sand filter</i>	Aerobic Tank <i>Sand filter</i>	ANNUAL
Flow	Water Meter	MONTHLY
Pumps, Floats & Alarms	Pump Chamber	ANNUAL
Solids Removal & Water Tightness	Septic tank(s)	ANNUAL
Surface Discharge	Dispersal System	ANNUAL
Vegetative Cover	Dispersal System	ANNUAL

✓ OK  
✓ OK  
✓ OK  
✓ OK  
None ✓  
good ✓

I believe this system is working within the parameter set forth + we can have a three year permit in place.

Mark P Ritter  
July 15-2009



**D. MONITORING AND REPORTING REQUIREMENTS:**

Monitoring results obtained during each calendar year shall be submitted no later than December 31st of that year to:

Aitkin County Environmental Services  
209 2nd Street NW  
Aitkin, MN 56431

The monitoring reports shall be signed by the Permittee. Copies are to be retained by the Permittee.

The Permittee shall notify Aitkin County Environmental Services within thirty (30) days when monitoring results do not meet the monitoring plan requirements of this permit.

Monitoring plans may be modified as necessary and reapproved by Aitkin County Environmental Services.

Sampling and laboratory testing procedures shall be performed in accordance with Standard Methods and the testing shall be performed by a Minnesota Department of Health approved laboratory. All sampling and testing costs shall be the responsibility of the Permittee.

Monitoring will be done by A.M. Associates

**E. MITIGATION PLAN:**

- 1) If weeping occurs; lower dosing rate, lower water usage, or increase distribution area. Waste strength: if fecals exceed limit -reduce effluent strength, increase retention time or add disinfection.
- 2) A different or another Performance or Other System may be installed at the owner's expense.
- 3) If in the event that this system should fail and if there is no other ISTS option available, then Holding Tanks must be installed, to be pumped by a licensed Pumper with a contract.

**F. SPECIAL REQUIREMENTS:**

\*\*\* A WATER METER OR OTHER APPROVED WATER MEASURING DEVICE MUST BE INSTALLED AND READ ON A MONTHLY BASIS \*\*\*

Harris watermeter readings  
 45079 350<sup>th</sup> St.  
 AITKIN

<u>Month</u>	<u>Reading</u>
June	0
July	2420
August	7160
September	9550
October	14020
November	19980
December	23820
<b>2008</b>	
January	28140
February	31680
March	37320
April	40250
May	45690
June	51490
July	57130
August	62550
September	65340
October	70140
November	74830
December	80100
<b>2009</b>	
January	85140
February	87070
March	95140
April	100410
May	105680
June	111720
July	
August	
September	
October	
November	
December	
<b>2010</b>	
January	
February	
March	
April	
May	
June	

Readings done on First of month

# AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

209 Second Street, NW  
Aitkin, Minnesota 56431

PH: (218) 927-7342  
FX: (218) 927-4372



August 26, 2009

RE: Renewed Operating Permit

Dear Jim Harris:

This letter is to inform you that your Operating Permit (No. 228) has been renewed until May 31, 2012. You should note that all renewal dates that were formerly on December 31 have been moved forward to allow your Operation and Maintenance provider suitable time to complete the monitoring report.

Please adhere to your monitoring and maintenance contract including monitoring your water use. Failure to do so would violate the agreement to operate your system and could void the operating permit. You should contact your Operation and Maintenance provider directly with questions that you may have during the year.

Thank you for your good stewardship and we hope that your system continues to operate well, protecting groundwater for you and the environment.

Sincerely,

A handwritten signature in cursive script that reads "Pete Gansen".

Pete Gansen  
Aitkin County Planning & Zoning and  
Environmental Services

503



# AITKIN COUNTY ENVIRONMENTAL SERVICES

## OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

OPERATING PERMIT #: 228

FEE: 100

PERMITTEE: Jim & Kristian Harris

PHONE: (218) 831-5833

ADDRESS: 45079 350th Street  
Aitkin, MN 56431-

ZONING PERMIT # 33316

PARCEL #: 01-0-075503

ISSUE DATE: 5/31/2009

RENEW DATE: 5/31/2012

LEGALDESCRIPTION: PT GOVT LOT 1 IN DOC 368976 (PT TRACT C)

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the date of expiration. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

I hereby certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.

Jim Harris  
Signature of Permittee

6/25/12  
Date

K. Kurz  
Signature of Permitting Authority

7-19-12  
Date

If you have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

7-19-12 C# 7057 \$100 Receipt 374240

OK to move to 5yr based on M. Ritter's recommendation. per Pete G.

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM**

Adding sandfilter pretreatment to allow the longevity of the existing septic system

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the effective date (issuance date) of this permit and lasting until this permits expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the reuslts must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
Flow	750 gal per day	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY <i>OK ✓</i>
Separation	3 feet	Dispersal System	ANNUALLY	Measure in Field	ANNUALLY <i>OK ✓</i>

**C. MAINTENANCE REQUIREMENTS:**

PARAMETER	LOCATION	FREQUENCY	
<del>Aerobic Tank Function</del> <i>Sand filter</i>	Aerobic Tank	ANNUAL	<i>OK ✓</i>
Flow	Water Meter	MONTHLY	<i>OK ✓</i>
Pumps, Floats & Alarms	Pump Chamber	ANNUAL	<i>OK ✓</i>
Solids Removal & Water Tightness	Septic tank(s)	ANNUAL	<i>OK ✓</i>
Surface Discharge	Dispersal System	ANNUAL	<i>none ✓</i>
Vegetative Cover	Dispersal System	ANNUAL	<i>good ✓</i>

water meter shows 130 gpd to 150 gpd average  
 This system appears to be working within the grade lines.  
 I believe we can put this on a 5 year contract.  
 We do have a maintenance contract in place to look at  
 once a year!!

*emp mtl*  
 5-4-1-2012

# HARRIS WATER METER READINGS

45079 350<sup>th</sup> ST  
AITKIN

Month	Reading
<b>2009</b>	
May	105,680
June	111,720
July	117,040
August	121,800
September	125,794
October	
November	
December	139,230
<b>2010</b>	
January	144,050
February	148,790
March	152,760
April	
May	160,320
June	164,950
July	
August	
September	
October	
November	189,560
December	194,600
<b>2011</b>	
January	198,620
February	208,370
March	
April	
May	217,710
June	222,560
July	
August	
September	
November	
December	246,160
<b>2012</b>	
January	250,980
February	255,290
March	
April	
May	
June	284,180
July	

July 1-2012  
130 to 150 gpd

# AITKIN COUNTY AS-BUILT FORM FOR AN ISTS

OWNER Jim Harris / David Taylor

PERMIT NUMBER 38973

INSTALLER Mark Pitter

DATE OF INSTALLATION June 28, 2012

**SETBACKS:**

Buildings to tank(s) 100' +  
 Building to drainfield 100' +  
 Well(s) 50' or 100' 100' +  
 Lake/Creek/Wetland 100' +  
 Property lines (drainfield/tanks) 10' +

**TRENCHES, BEDS OR AT-GRADE SYSTEMS:**

Drop box or Dist. Box and Type \_\_\_\_\_  
 Trench depth(s) \_\_\_\_\_  
 Trench length(s) \_\_\_\_\_  
 Trench bottom width \_\_\_\_\_  
 trench spacing \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of graveless pipe \_\_\_\_\_  
 Depth of backfill \_\_\_\_\_  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**SEPTIC TANKS:**

Lift tank  
 Liquid Capacity 1,500  
 Manufacturer & Type Scrubber  
 Type of baffle(s) plastic  
 Inspection pipes (#, size & height) 6" 18"  
 Manhole access (size) 24"  
 # and height of risers on manhole 18"

NUMBER OF PICTURES TAKEN: 0

**MOUNDS:**

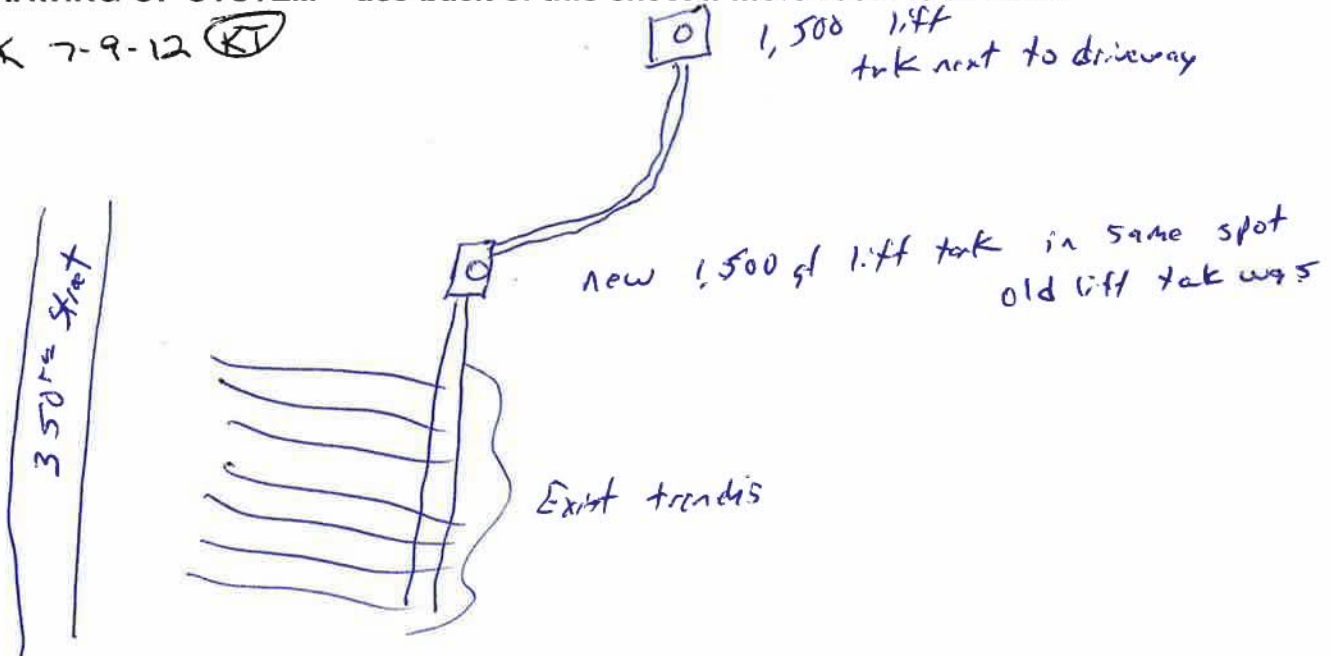
Percent slope \_\_\_\_\_  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing \_\_\_\_\_  
 Pipe size & spacing \_\_\_\_\_  
 Dimensions of rockbed \_\_\_\_\_  
 Dimensions of sandbase \_\_\_\_\_  
 Depth of final cover \_\_\_\_\_

**PUMPS:**

Tank capacity \_\_\_\_\_  
 Tank manufacturer & type \_\_\_\_\_  
 # and height of risers \_\_\_\_\_  
 Pump manufacturer and model # \_\_\_\_\_  
 Horsepower and GPM \_\_\_\_\_  
 Feet of head \_\_\_\_\_  
 Cycles/day & Gallons/cycle \_\_\_\_\_  
 Size of discharge line \_\_\_\_\_  
 Type of electrical hookup \_\_\_\_\_  
 Type and location of alarm \_\_\_\_\_  
 Cycle counter type & location \_\_\_\_\_

**DRAWING OF SYSTEM – use back of this sheet if more room is needed.**

OK 7-9-12 KT



\*\*\*I Mark Pitter (installer signature) certify that the above work was installed in accordance with the submitted design and permit conditions and the system is free from defects.\*\*\*



Mark

Here's the septic agreement  
I talked to you about on  
the phone. We do have  
the water meter now, but  
it's only been in place  
for a couple weeks.

Thanks

Jim Harris



# Original System

## INDIVIDUAL SEWAGE TREATMENT SYSTEM INSPECTION FORM

### AITKIN COUNTY, MINNESOTA

Township Aitkin Date of Inspection 6/21/06 Permit Number 33316  
 Owner (Bob Saveren) Jim Harris Parcel Number 01-0-075503  
 Project Address 4.31 Ac. off Gen Lot 1 In Dec 290<sup>122</sup> Installer Mark Ritter  
 City \_\_\_\_\_ Zip Code \_\_\_\_\_ New \_\_\_\_\_ Repair

**SETBACKS:**

Buildings to tank(s) 20  
 Buildings to drainfield 100'  
 Well(s) 50' or 100' \_\_\_\_\_  
 Lake/Creek/Wetland 100'

**SEPTIC TANKS:**

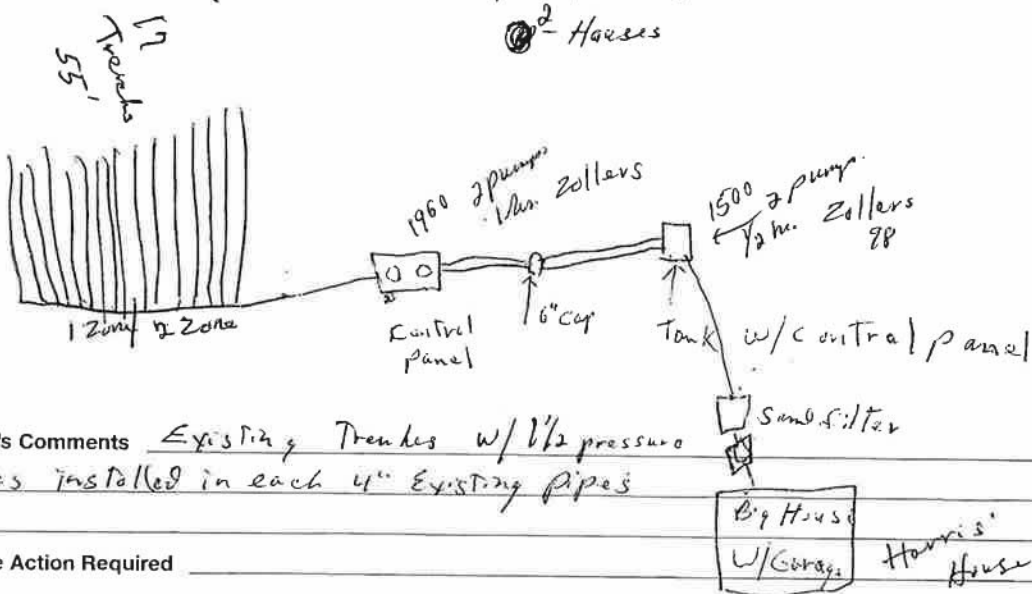
Liquid capacity 1860 Combo  
 Manufacturer & type Jac pre-cast  
 Type of baffle plus T.C.  
 Inspection pipes 1-4" 1-6"  
 Manholes access 2  
 No. & height of risers 12"

**MOUNDS:**

Percent slope Sand filter  
 Upslope dike width \_\_\_\_\_  
 Downslope dike width \_\_\_\_\_  
 Sideslope dike width \_\_\_\_\_  
 Drainfield rock below pipe \_\_\_\_\_  
 Depth of sand below rock \_\_\_\_\_  
 Perforation size & spacing 1/4  
 Pipe size & spacing 2" 55' lines  
 Dimensions of rock bed \_\_\_\_\_  
 Dimensions of sand base \_\_\_\_\_  
 Final cover \_\_\_\_\_

**DRAWING OF SYSTEM**

(Include Soils)



**DIST. or DROP BOX & TYPE** \_\_\_\_\_

**TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:**

Trench depth Existing Trenches  
 Trench length 55' X 17  
 Trench bottom width 3'  
 Trench bottom level yes  
 Trench spacing 6'  
 Drainfield rock below pipe \_\_\_\_\_  
 Size of gravelless pipe All Trenches None  
 Depth of backfill 4" w/ 2" pressure lines  
 Absorption area: square feet \_\_\_\_\_  
 lineal feet \_\_\_\_\_

**PUMPS:**

Tank capacity 1960 + 1500  
 Tank manufacturer & type Jac pre-cast  
 No. & height of risers 3- 12"  
 Pump manufacturer & model # 2- 1 horse 2- 1/2 Zellers  
 Horsepower & GPM 2- 1 horse 2- 1/2 horse  
 Feet of head 28  
 Cycles per day Time Dosed  
 Gallons per cycle \_\_\_\_\_  
 Size of discharge line 2"  
 Type of electrical hookup post  
 Type & location of alarm glcc.  
 Cycle counter (commercial) \_\_\_\_\_

*This is a repair for 9 Bed  
 2 Houses*

Inspector's Comments Existing Trenches w/ 1/2 pressure pipes installed in each 4" Existing pipes

Corrective Action Required \_\_\_\_\_

Inspector's Signature [Signature] Installer's Signature \_\_\_\_\_

White-County Yellow-Applicant Pink-Installer

June 29-2012

SEPTIC SYSTEM REVIEW FOR  
Jim Harris/David Taylor  
Parcel # 01-0-075503

Property located in Aitkin Township

The above mentioned property has a lift tank that they share up on the hillside by the base of the trenches. The lift tank collapsed during the high water /massive rain at the end of June 2012. We have installed a new 1,500 gallon precast concrete tank in the same area the pumps, floats and all settings on the time dosing panel are the same as they where. We have a Maintenance, Monitoring and Inspection Contract with said property owner.

Ritter Sewer & Excavating Inc



Mark P. Ritter  
ISTS # 1672

# AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

209 Second Street, NW  
Aitkin, Minnesota 56431

PH: (218) 927-7342  
FX: (218) 927-4372



July 19, 2012

RE: Renewed Operating Permit

To Jim & Kristin Harris:

This letter is to inform you that your Operating Permit (No. 228) has been renewed until May 31, 2017.

Please adhere to your monitoring and maintenance contract including monitoring your water use. Failure to do so would violate the agreement to operate your system and could void the operating permit. You should contact your Operation and Maintenance provider directly with questions that you may have during the year.

Thank you for your good stewardship and we hope that your system continues to operate well, protecting groundwater for you and the environment.

Sincerely,

Kristi K.

Aitkin County Planning & Zoning and  
Environmental Services

**AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING**

**209 Second Street, NW Room# 100**

**Aitkin, Minnesota 56431**

PH: (218) 927-7342

FX: (218) 927-4372



4/18/2017

Jim & Kristin Harris  
45079 350th Street  
Aitkin, MN 56431-

*Mark Ritter  
recommended  
5-year*

Re: Operating Permit # 228  
Zoning Permit #33316  
Parcel ID#01-0-075503

Dear Permittee:

This letter is to remind you that the Operating Permit for the septic system at the above mentioned parcel is due for renewal this year by May 31st . The enclosed Operating Permit was issued as part of the permit for your septic system and must be renewed.

The Operating Permit for the current renewal period has been enclosed. If there are no changes to the Operating Permit, please submit the following to the County Office:

- the signed Operating Permit Contract
- \$100 permit renewal fee (\$150 fee after May 31st)
- the results of performance and maintenance activities
- a table of your water usage

We have checked all boxes above for information we have received. Please note, only complete applications will be accepted.

If your designer finds the system is operating in conformance with the Operating Permit, please have him/her submit a letter requesting to have the Operating Permit renewed for a longer period or to request terminating the Operating Permit. Our Office will determine if this is possible.

The performance and life expectancy of this septic system is dependent on regular monitoring and maintenance of all parts of the system. Your compliance with the Operating Permit will ensure continued performance of the system. Failure to perform the monitoring and maintenance of this system could cause costly repairs and/or replacement of this system. In addition, failure to comply with the monitoring, maintenance and reporting of the septic system is a violation of the Aitkin County's Subsurface Sewage Treatment System Ordinance and could be prosecuted by the County Attorney's Office.

All information required must be submitted to this Office by the expiration date referenced on your Operating Permit. We are notifying you to give you sufficient time to contact your designer and make any necessary changes, have samples taken and tested, tanks pumped, and any other activities that were required to meet the requirements of your permit.

Please contact our office with any questions regarding the renewal of this permit.

Sincerely,

Aitkin County Planning & Zoning

SEPTIC SYSTEM REVIEW FOR  
Jim Harris  
Operating Permit# 228  
Parcel # 01-0-075503

Property located in Aitkin Township

May 22, 2017

The above mentioned property has a water meter installed on it. On January 2014 the meter reading was 377,410. On January 2017 the meter reading was 591,500 with a difference of 214,090 gallons. So at 214,090 gallons divided by 1,095 days =195 gallons per day average.

The system is set up for 750 gallons per day so I believe that we can put this system on a 5 year operating permit.

The tanks, effluent filter, pumps, floats, alarms and control panel will still be inspected ever year.

We have entered into a Maintenance, Monitoring and Inspection Contract with said property owner.

Sincerely,



Mark P. Ritter  
Ritter Sewer & Excavating, Inc.

**AITKIN COUNTY ENVIRONMENTAL SERVICES**

**OPERATING PERMIT FOR WASTEWATER  
TREATMENT AND DISPERSAL**

**OPERATING PERMIT #:** 228

**ZONING PERMIT #:** 33316

**PARCEL #:** 01-0-075503

**PERMITTEE:** Jim & Kristin Harris

**MAILING ADDRESS:** 45079 350th Street  
Aitkin, MN 56431-

**ORIGINAL DATE ISSUED:** 5 /31/2009

**RENEWAL PERIOD:**

**RENEWAL EXPIRATION:** 5 /31/2017

**PROPERTY ADDRESS:**

45079 350th St.  
Aitkin, MN 56431

**TELEPHONE:** (218) 831-5833

**LEGAL:** PT GOVT LOT 1 IN DOC 368976 (PT TRACT C)

**FEE PAID:** 100

**DATE PAID:**

**RECEIPT:**


**CK #:**

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system shall expire on the above expiration date. The Permittee is not authorized to discharge after the date of expiration. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

**I hereby certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.**

  
\_\_\_\_\_  
**Signature of Permittee**

5/11/17  
\_\_\_\_\_  
**Date**

  
\_\_\_\_\_  
**Signature of Permitting Authority**

5/23/17  
\_\_\_\_\_  
**Date**

If you have any questions regarding this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.

Misc. (OFFICE USE ONLY) App. # App-2017-001798

Aitkin County Planning & Zoning / Environmental Services  
 209 2nd Street NW, Room 100  
 Aitkin, MN 56431

Phone: 218-927-7342

Fax: 218-927-4372

Email: [aitkinpz@co.aitkin.mn.us](mailto:aitkinpz@co.aitkin.mn.us)

Charge		Cost	Quantity	Total	Note
Operating Permit Renewal added 05/23/2017 11:01 AM		\$100.00	x 1	\$100.00	
<b>Grand Total</b>					
<b>Payment</b>			<b>Total</b>	<b>\$100.00</b>	
<b>Method:</b>	Check	<b>Note:</b> check 2501 for renewal of OP 228			
<b>Date:</b>	05/23/2017	Jim Harris			
<b>Made By:</b>	Jim Harris	45079 350th St, Aitkin			
<b>Confirmed By:</b>	Kalea Suihkonen				

HARRIS Water Meter  
 45079 350<sup>th</sup> St  
 AITKIN

	2014	2015	2016	2017
Jan	377,450	450,920	525,850	500,500
Feb	Gallons per year	73,510	74,970	65,620
March				
April	396,780		546,910	
May		47,100		614,700
June				
July	412,300	483,960	562,340	
August	418,510		567,950	
Sept				
Oct		501,480		
Nov	437,530		585,120	
Dec				



**AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING**  
**209 Second Street, NW Room# 100**  
**Aitkin, Minnesota 56431**

PH: (218) 927-7342  
FX: (218) 927-4372



5/30/2017

Jim & Kristin Harris  
45079 350th Street  
Aitkin, MN 56431-

Re: Operating Permit # 228  
Zoning Permit # 33316  
Parcel # 01-0-075503

Dear Permittee:

This letter is to inform you that your Operating Permit has been renewed until 5/31/2021 .

Please adhere to your monitoring and maintenance contract including monitoring your water use. Failure to do so would violate the agreement to operate your system and could void the operating permit. You should contact your Operation and Maintenance provider directly with questions that you may have during the year.

Thank you for your good stewardship and we hope that your system continues to operate well, protecting groundwater for you and the environment.

Sincerely,

*Kaleas.*

Aitkin County Planning & Zoning

## AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

307 Second St NW, Room 219  
Aitkin, Minnesota 56431

(P): (218) 927-7342

(F): (218) 927-4372

(E): aitkinpz@co.aitkin.mn.us



8/2/2022

Jim & Kristin Harris  
45079 350th Street  
Aitkin, MN 56431-

Re: Operating Permit # 228  
Zoning Permit # 33316  
Parcel ID# 01-0-075503

Dear Permittee:

This letter is to remind you that the Operating Permit for the septic system at the above mentioned parcel is due for renewal this year by September 30th. The enclosed Operating Permit was issued as part of the permit for your septic system and must be renewed.

The Operating Permit for the current renewal period is enclosed. If there are no changes to the current Operating Permit, please submit all of the following to the County Office to renew the Operating Permit: (If any boxes below are checked, then we have received that item.)

9-30-22

Signed Operating Permit (enclosed)

\$150 permit renewal fee (a \$50 late fee will apply if not paid by 9/30/22)

Monitoring and maintenance activities report by Service Provider

A table of your water usage

If your designer finds the system is operating in conformance with the Operating Permit, please have him/her submit a letter requesting to have the Operating Permit renewed for a longer period or to request terminating the Operating Permit. Our Office will determine if this is possible.

The performance and life expectancy of this septic system is dependent on regular monitoring and maintenance of all parts of the system. Your compliance with the Operating Permit will ensure continued performance of the system. Failure to perform the monitoring and maintenance of this system could cause costly repairs and/or replacement of this system. In addition, failure to comply with the monitoring, maintenance and reporting of the septic system is a violation of the Aitkin County's Subsurface Sewage Treatment System Ordinance and could be prosecuted by the County Attorney's Office.

All information required must be submitted to this Office by the expiration date referenced on your Operating Permit. We are notifying you to give you sufficient time to contact your Service Provider and make any necessary changes, have samples taken and tested, tanks pumped, and any other activities that were required to meet the requirements of your permit.

Please contact our office with any questions regarding the renewal of this permit.

Sincerely,

Aitkin County Planning & Zoning

Invoice #56321 (10/03/2022)

2. Zoning/Land Use Permit Applications Misc. (OFFICE USE ONLY) App. # App-2022-009639, UID # 206562

Jim Harris

(000) 000-0000

45079 350th St, Aitkin, MN 56431

Aitkin County Planning & Zoning / Environmental Services  
307 Second St. NW Room 219

Aitkin, MN 56431

Phone: 218-927-7342

Fax: 218-927-4372

Email: aitkinpz@co.aitkin.mn.us

Charge		Cost	Quantity	Total	Note
Operating Permit Renewal added 10/03/2022 3:28 PM \$150		\$150.00	x 1	\$150.00	
<b>Grand Total</b>				<b>Total</b>	<b>\$150.00</b>
<b>Payment #50276</b>					
<b>Method:</b>	Check		2973		
<b>Date:</b>	10/03/2022	<b>Note:</b>	OP 228 2022 renewal		
<b>Made By:</b>	Jim Harris				
<b>Confirmed By:</b>	Shannon Wiebusch				

SEPTIC SYSTEM REVIEW FOR  
Jim Harris  
Parcel # 01-0-075503  
Operating permit #228

Property located in Aitkin Township

September 29, 2022

The above mentioned property has a water meter installed on it. On Aug 2017 the meter reading was 647,850. On Aug 2022 the meter reading was 1,148,630 with a difference of 500,780 gallons. So at 500,780 gallons divided by 1825 days = 274 gallons per day average.

The system is set up for 750 gallons per day so I believe that we can put this system on a 5 year operating permit.

The tanks, effluent filter, pumps, floats, alarms and control panel will still be inspected ever year.

We have entered into a Maintenance, Monitoring and Inspection Contract with said property owner.

Sincerely,



Mark P. Ritter  
Ritter Sewer & Excavating, Inc.

**AITKIN COUNTY ENVIRONMENTAL SERVICES  
OPERATING PERMIT FOR WASTEWATER  
TREATMENT AND DISPERSAL RENEWAL**

**ISSUANCE DATE:**

9/30/2022

**RENEWAL PERIOD:**

5 YEAR

**OPERATING PERMIT #: 228**

**ZONING PERMIT #: 33316**

**PARCEL #: 01-0-075503**

**PERMITEE:**

Jim & Kristin Harris

**MAILING ADDRESS:**

45079 350th Street

Aitkin, MN 56431-

Aitkin County Environmental Services authorizes the Permittee to operate a wastewater treatment and dispersal system located on the above described property in accordance with the requirements of this permit.

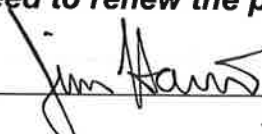
This permit is effective on the issuance date identified above.

This permit and the authorization to treat and disperse from the above system is valid through the renewal period identified above. The Permittee is not authorized to discharge after the renewal period. The Permittee shall submit such information and forms as required by Aitkin County Environmental Services no later than thirty (30) days prior to the expiration date. When the required information is submitted and approved by Aitkin County Environmental Services, the permit may be renewed. This permit is not transferable from owner to owner.

If you have any questions regarding this permit, including the specific permit requirements, reporting, monitoring or permit compliance status, please contact Aitkin County Environmental Services at 218-927-7342.


***I hereby certify with my signature as the permittee that I understand the provisions of this permit including the maintenance and monitoring requirements. I agree to indemnify and hold Aitkin County harmless from all loss, damages, costs and charges that may be incurred by use of this system and if I fail to comply with the provisions of this Operating Permit. If I sell this property during the life of the permit, I will inform the new owner(s) of the permit requirements and the need to renew the permit.***

Signature of Permittee

  
JIM HARRIS

Date 8/16/22

Signature of Permitting Authority



Date 10-3-22

**A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM**

Adding sandfilter pretreatment to allow the longevity of the existing septic system

**B. PERFORMANCE STANDARD REQUIREMENTS:**

During the period beginning on the effective date (issuance date) of this permit and lasting until this permit's expiration date, the Permittee is authorized to discharge from the wastewater treatment unit to subsurface dispersal. No surface discharge is permitted. The following parameters must be monitored and the results must be found within the compliance limits.

PARAMETER	COMPLIANCE LIMIT	SAMPLE LOCATION	SAMPLE FREQUENCY	SAMPLE TYPE	REPORTING FREQUENCY
Separation	3 feet	Dispersal System	ANNUALLY	Measure in Field	ANNUALLY ✓
Flow	750 gal per day	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY ✓

**C. MAINTENANCE REQUIREMENTS:**

PARAMETER	LOCATION	FREQUENCY
Flow	Water Meter	MONTHLY <i>see attached</i> ✓
Pumps, Floats & Alarms	Pump Chamber	ANNUAL <i>good</i> ✓
Sand Filter	Sand Filter	ANNUAL ✓
Solids Removal & Water Tightness	Septic tank(s)	ANNUAL <i>good</i> ✓
Surface Discharge	Dispersal System	ANNUAL <i>none</i> ✓
Vegetative Cover	Dispersal System	ANNUAL <i>good</i> ✓

**D. MONITORING AND REPORTING REQUIREMENTS:**

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
January	591,500		796,140	904,040	1,009,920	1,117,600
February						
March		708,370				1,104,570
April			821,110	929,970	1,035,330	
May	614,700	726,560				
June			838,670	945,530	1,054,310	1,130,210
July	636,240				1,063,890	
August	647,850	753,810				1,148,630
September			865,860	974,320		
October	665,130	771,680			1,092,430	
November						
December	679,950	788,500	895,500	1,002,300	1,109,080	

HARRIS WATER METER READINGS

45079 350<sup>th</sup> STREET

AITKIN, MN 56431

**AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING**  
**307 Second Street NW Room# 219**  
**Aitkin, Minnesota 56431**

PH: (218) 927-7342

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10/3/2022

Jim & Kristin Harris  
45079 350th Street  
Aitkin, MN 56431

Re: Operating Permit # 228  
Zoning Permit # 33316  
Parcel # 01-0-075503

Dear Permittee:

This letter is to inform you that your Operating Permit has been renewed until 9/30/2027 .

Please adhere to your monitoring and maintenance contract including monitoring your water use. Failure to do so would violate the agreement to operate your system and could void the operating permit. You should contact your Operation and Maintenance provider directly with questions that you may have during the year.

Thank you for your good stewardship and we hope that your system continues to operate well, protecting groundwater for you and the environment.

Sincerely,

A handwritten signature in cursive script that reads "Shannon W.".

Aitkin County Planning & Zoning