

ZONING PERMIT APPLICATION # 279

FULL NAME Brian Loiselle TELE # _____
MAIL ADDRESS 4222 E Mclellan Circle # 7
CITY Mesa AZ STATE AZ ZIP 85205
911 ADDRESS OF PROPERTY 44220 348th Ln
CITY Aitkin STATE MIN ZIP 56431
TOWNSHIP Aitkin
LEGAL DESCRIPTION Lot 45
SECTION 32 TOWNSHIP 47 RANGE 27
(circle) RESIDENTIAL COMMERCIAL ACCESSORY NEW BUILDING ALTERATION

OFFICE USE ONLY
DATE 9-18-06 ^{OTC} APPROVE / DENY
PERMIT# 34668
PARCEL# 01-1-120000
RECEIPT# 4882
CONFORMING SEPTIC
YES P# NO **(NEW)**

BUILDING CONTRACTOR AND LICENSE NUMBER: _____
SIZE OF ALL BUILDINGS COVERED BY THIS APPLICATION Pressure Bed operating Permit

COMMENTS: Other

DESIGNER: O'Keefe
DATA FOR SEWER CONSTRUCTION: INSTALLER Ritter #BEDROOMS/GPD 2 300 GPD

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 Individual 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 [Signature]
SIGNATURE APPLICANT/AGENT

DO NOT WRITE BELOW THIS LINE

ZONING DISTRICT & FLOOD PLAIN
ZONING DISTRICT SL
LAKE/STREAM/RIVER NAME Cedar
LAKE/RIVER ID NUMBER 1-0209
LAKE/RIVER/STREAM CLASSIF. GD
PARCEL LOCATED IN FLOOD PLAIN? Y N
10/100-YR. FLOOD ELEVATION _____
LOWEST FLOOR ELEVATION _____
ELEV. CERTIFICATE REQUIRED Y N
BEFORE CONSTRUCTION Y N
AFTER CONSTRUCTION Y 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 2 SEPTIC DESIGN Pressure Bed GARBAGE DISP/HOT TUB
SSF 1.27 DEPTH TO RESTRICTING LAYER 32" YES NO X
MIN. SIZE SEPTIC TANK 1000 MIN. SIZE PUMP TANK 1500
DRAINFIELD: MINIMUM SQ.FT. 381 WITH .5 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

FEE 300 RECEIVED BY PM DATE 9-18-06

AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

209 Second Street, NW
Aitkin, Minnesota 56431

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



September 19, 2006

RE: Septic Operating Permit #279; Zoning
Permit # 344668; Parcel #01-1-120000

LOISELLE, BRIAN
4222 E MCLELLAN CIRCLE #7
MESA AZ 85205

Dear Mr. Loiseau:

Enclosed is the Operating Permit for an "Other" Septic System (formerly Experimental, Performance, etc.) that you are petitioning Aitkin County Zoning to allow to be installed on your property instead of holding tanks or a standard system. Please review this permit thoroughly and become aquatinted with all of the conditions, then sign the operating permit and return it to me with the enclosed envelope. NOTE: ALL FEES HAVE BEEN PAID THROUGH May 31, 2008.

One provision that is often overlooked by homeowners is the State of Minnesota requirement that a water meter or other flow measuring device be installed and the results recorded by the homeowner on a MONTHLY basis. Please be aware that a Certificate of Compliance can not be issued until this provision is met; you may wish to make provisions for its installation now.

Sometime before this 2008 deadline, you will receive an annual reminder notice on how to renew your operating permit with Aitkin County. This reminder notice will ask that you provide the 1) monthly water meter readings, 2) annual Compliance Inspection report, and 3) renewal application and fee. The Compliance Inspector (CI) is privately hired by you, the landowner and must review the septic system onsite on an annual basis while an operating permit covers the system. This annual review would be a great opportunity to review the conditions of the operating permit.

Should you have questions, please contact me at the number above.


Missy Kingsley
Aitkin County Planning & Zoning

Enclosure

AITKIN COUNTY ENVIRONMENTAL SERVICES

**OPERATING PERMIT FOR WASTEWATER
TREATMENT AND DISPERSAL**

OPERATING PERMIT #: 279

FEE: 50.00

PERMITTEE: Brian Loiselle

PHONE:

ADDRESS: 4222 E McLellan Circle #7
Mesa, AZ 85205-

ZONING PERMIT # 34668

PARCEL #: 01-1-120000

ISSUE DATE: 9/19/2006

RENEW DATE: 5/31/2008

LEGALDESCRIPTION: LOT 45 LESS PART IN DOC 251647 AND PART OF LOT 46 AS IN DO

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

9/25/06
Date



Signature of Permitting Authority

9/28/06
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

Multi-flo aerobic treatment system timed dosed into a downsized 10x38 raised pressure bed sized for 2 bdrs. A maximum of 450 gallons per day into a Multi-Flo Aerobic Treatment System, and then gravity into a new 1500 gallon lift tank. From there, liquid will be Time Dosed at a maximum of 300 gallons per day into a 10x38 pressure bed containing 18 inches of separation.

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	300 gpd	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY

C. MAINTENANCE REQUIREMENTS:

PARAMETER	LOCATION	FREQUENCY
Flow	Water Meter	MONTHLY

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 and 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:

If weeping occurs; lower dosing rate, lower water usage, or increase distribution area and absorption area A different or another Performance or Other System may be installed at the owner's expense. 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:

Notes: No

Parcel number/Tax year: 01-1-120000
Owner(s): 103692
LOISELLE, BRIAN
4222 E MCLELLAN CIRCLE #7
MESA AZ 85205

2007 Reference parcel: 00201008120000
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

Taxpayer: 103692 FALCO: 1 F.O.
LOISELLE, BRIAN
4222 E MCLELLAN CIRCLE #7
MESA AZ 85205

TIF district: 000 000
Lake#/name : 1-0209 CEDAR LAKE (AITKIN/F
Property adr: 44228 348th Ln
AITKIN

Alternate taxpayer:

Emergency# : 56431 -
Twp/City Plt: AITKIN TWP 8
Sec/twp/rge : 32 47.0 27 Acres:
Plat: SUNSET HILLS

480-654-0314

Description: Lot/Block . :
LOT 45 LESS PART IN DOC 251647 & PART OF
LOT 46 AS IN DOC 251648

Press Enter to continue or enter new parcel/tax year. 01-1-120000 2007
F1=Full desc F2=Trans hist F3=Exit F6=Prcl hist F7=Backward F9=Escrow hist
F12=Cancel F14=Phy Addr F17=Dsply Note

A. M. & Associates, Inc.

29465 442nd Lane
Palisade, MN 56469
(218) 768-4430

Michael D. O'Keeffe
Annette M. O'Keeffe

Septic Systems
Designs & Inspections
MPCA #1357

THE ENCLOSED INDIVIDUAL SEWAGE TREATMENT SYSTEM (ISTS)
IS DESIGNED SPECIFICALLY FOR:

Maureen DeSutter
44228 348th Lane
Aitkin, MN 56431

For property located at above address

Cedar Lake
Aitkin Township
Sec 32, Twp. 47, Rge. 27W
Parcel# 01-1-120000

August 5, 2006

**MULTI-FLO AEROBIC TREATMENT SYSTEM
TIMED DOSED INTO A DOWNSIZED 10' x 38' RAISED PRESSURE BED
SIZED FOR 2 BEDROOMS**

This ISTS is to have the wastewater gravity from the 3 bedroom dwelling into the existing conforming 1000 gallon Septic Tank with a Pump Vault placed in the Septic Tank. It will be Timed Dosed at a maximum of 450 gallons per day into a Multi-Flo Aerobic Treatment System, and then gravity into a new 1500 gallon Lift Tank. From there, liquids will be Timed Dosed at a maximum of 300 gallons per day into a 10' x 38' Pressure Bed containing 18 inches of Separation.

Note to Property Owner:

Please be advised that with the installation of the enclosed designed septic system, the Property Owner(s) understands and accepts full responsibility of that which is outlined below.

The State of Minnesota has classified the attached ISTS Design as a "Performance Based System", due to the pretreatment devise used to bring the new drainfield into separation compliance. Therefore, the Property Owner(s) accepts all responsibility and risks involved with the installation and hydraulic performance of this Septic System, and holds A.M. & Associates, Inc. harmless from all liability for this Sewage Treatment System whatsoever.

A Maintenance Service, Monitoring and Inspection Contract is required *before* Aitkin Planning & Zoning will accept an application for an Operating Permit.

A WATER METER MUST BE INSTALLED and the Property Owner(s) accepts the responsibility of recording water meter readings on a monthly/regular basis.

The Property Owner(s) accepts the responsibility of all costs involved for the servicing, monitoring, maintenance and mitigation of this system, that may occur.

8-7-06
Newland

NOTE TO INSTALLER:

1. Installer is to inform property owner of known supplies, contractors, and expenses required in order to make this ISTS operational -that is *not* covered in his contract.
2. Installer *must verify* all measurements and elevations on jobsite.
3. This system *must* be installed according to *current* Minnesota Chapter 7080 and Aitkin County's ISTS & Wastewater Ordinance requirements.
4. Installer is to contact Designer for questions and/or prior to making any changes to the enclosed design.

TANKS and LINES

1. Reuse Existing 1000 gallon Septic Tank (was pumped & inspected 07/17/2006)
2. Pump & Remove Existing 200 gallon Lift Tank and replace with Multi-Flo Treatment System.
3. Install a 1500 gallon Lift Tank (to be used with Timed Dosing).
4. Tank(s) should be water tested for cracks or leaks prior to backfilling.
5. Tank lids *must* be installed at ground level for monitoring and maintenance purposes.
6. Be sure the Sewer and Pump Lines are well supported to avoid bowing after ground settlement.
7. Install 2" "waterproof" styrofoam insulation on top of the Tank(s) and Sewer & Pump Lines to help prevent freezing problems.

MULTI-FLO, TIMED DOSING & CONTROL PANEL

1. Install a Model 3950 Multi-Flo Aerobic Treatment System between the Existing Septic & the New 1500 gallon Lift Tank.
2. Eric Larson is to provide the required Multi-Flo Aerobic Treatment System, control panel, and related equipment, *onsite* expertise and guidance of installation, start-up, maintenance and all other related requirements when installing the Multi-Flow Aerobic Treatment System.
(contact Eric Larson, 6549 Keystone Road, Milaca, MN, (320) 983-2420)
3. Gravity from the 3 bedroom dwelling into the existing conforming 1000 gallon Septic Tank with a Pump Vault placed in the Septic Tank. It will be Timed Dosed at a maximum of 450 gallons per day into a Multi-Flo Aerobic Treatment System, and then gravity into a new 1500 gallon Lift Tank. From there, liquids will be Timed Dosed at a maximum of 300 gallons per day into a 10' x 38' Pressure Bed containing 18 inches of Separation.
4. A Multi-Flo Duplex Panel is to be used with this System.
5. The Timer is to be set according to the Pump Curve.
6. Control panel must be a minimum of 4 feet high from finished ground surface for access.

PRESSURE BED

1. Excavate out the existing Drainfield.
2. Fill in the entire excavated area with "CLEAN" sand to the elevation of 99.4.
3. Install a 10' x 38' Pressure Bed with 6 inches of Rock with the bottom of the Rock no deeper than the elevation of 99.4 giving 18 inches of required separation.

CEDAR LAKE

MAUREEN DeSUTTER
Parcel# 01-1-120000
SEPTIC DESIGN
08/05/2006

**MULTI-FLO AEROBIC TREATMENT SYSTEM
TIMED DOSED AT MAXIMUM OF 300gpd
INTO THE 10' x 38' "RAISED" PRESSURE BED
DOWNSIZED TO 2 BEDROOMS**

6 Inches of Rock

Distribution Device Elev = 98.9
Bottom of Rocklayer Elev = 99.4

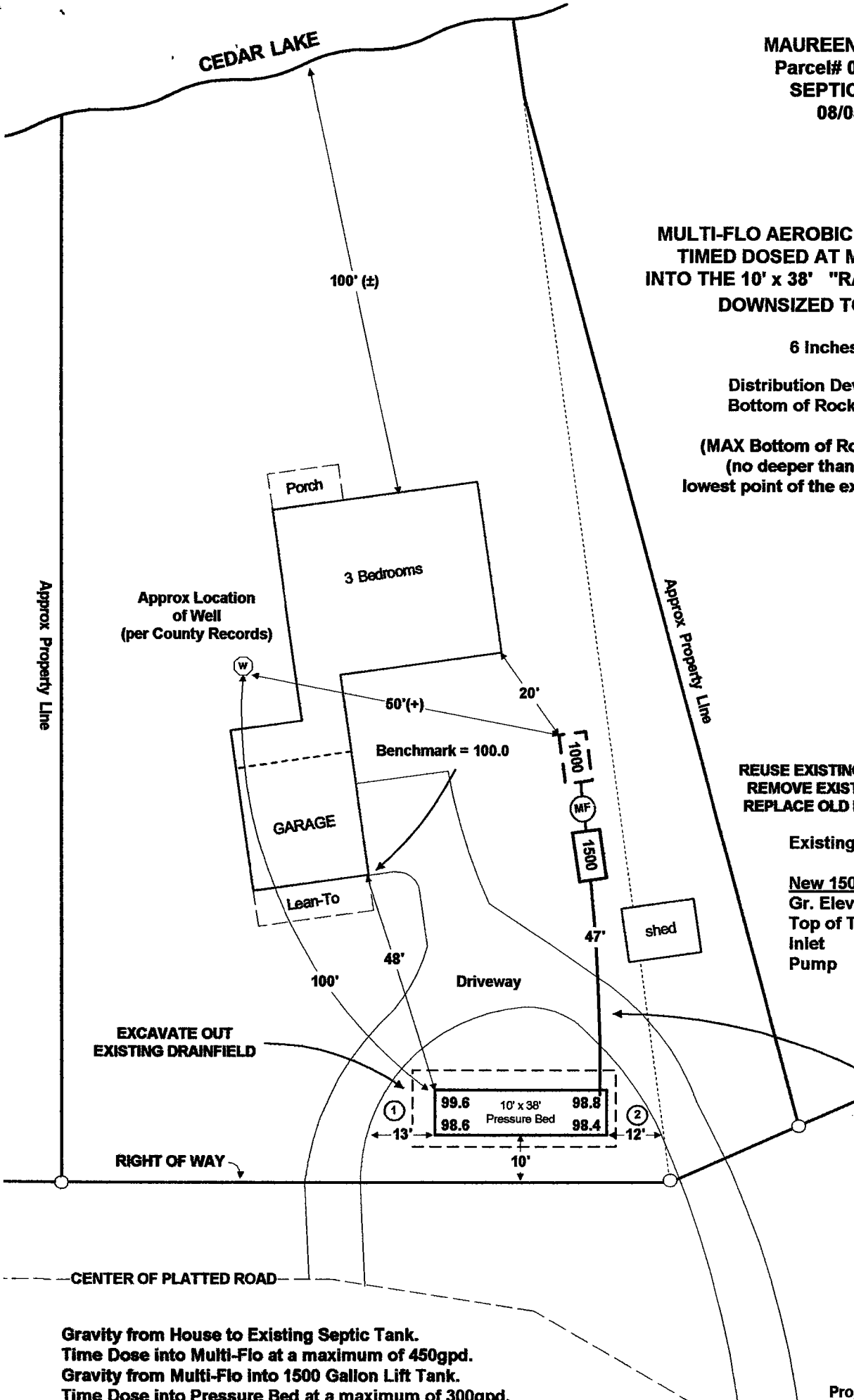
(MAX Bottom of Rocklayer Elev = 99.4)
(no deeper than 1 foot below the
lowest point of the existing ground surface)

REUSE EXISTING 1000 GAL SEPTIC TANK
REMOVE EXISTING 200 GAL LIFT TANK
REPLACE OLD LIFT WITH 1500 GAL LIFT

Existing Inlet = 103.5 (approx)

New 1500 Lift Tank
Gr. Elev. = 100.5
Top of Tank = 103.0
Inlet = 104.0
Pump = 108.0

USE EXISTING
PUMP LINE
BENEATH
BLACKTOP DRIVEWAY



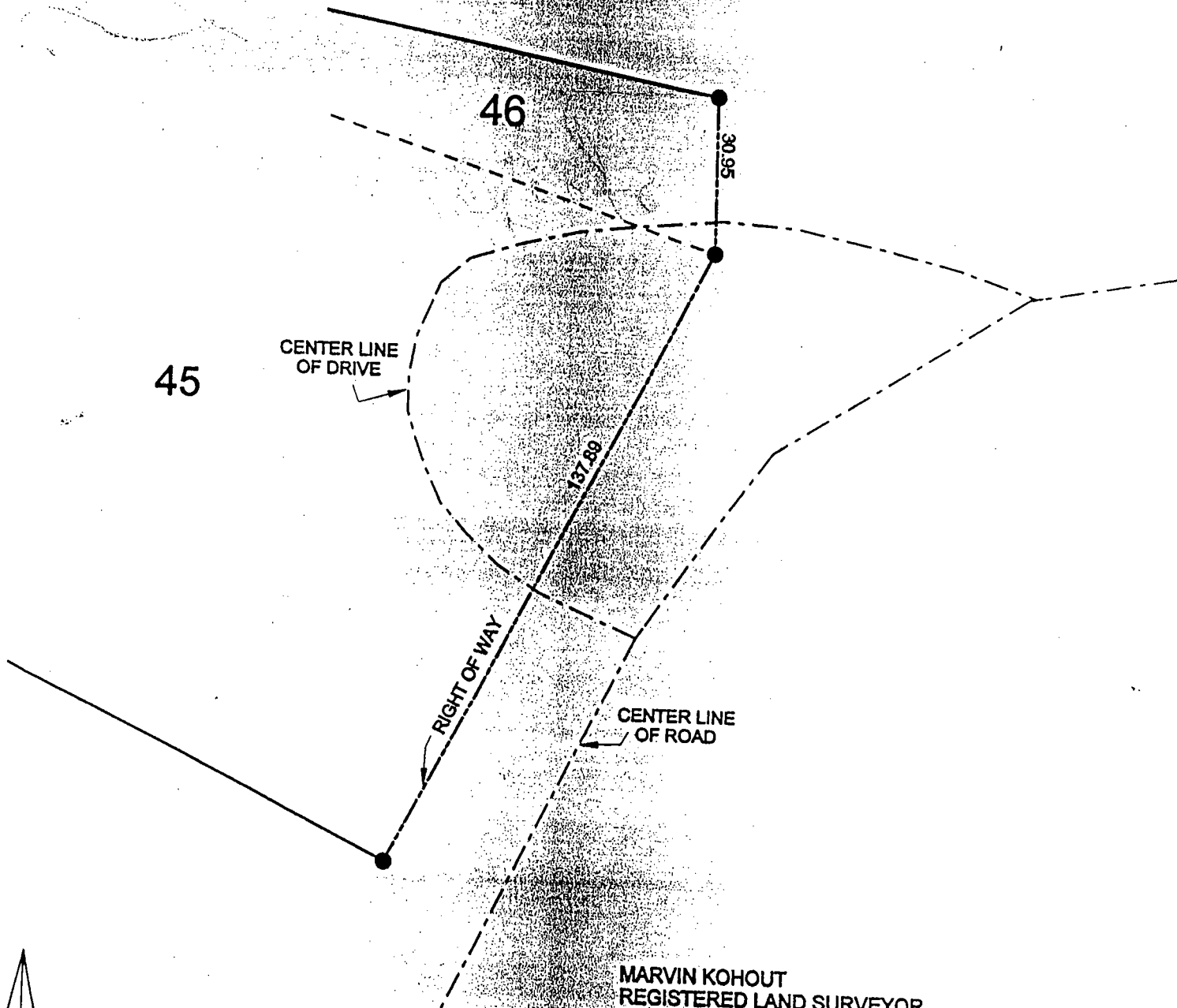
Gravity from House to Existing Septic Tank.
Time Dose into Multi-Flo at a maximum of 450gpd.
Gravity from Multi-Flo into 1500 Gallon Lift Tank.
Time Dose into Pressure Bed at a maximum of 300gpd.

⊗ = Soil Boring

Scale: 1" = 30'

Property Lines as per Owner

CERTIFICATE OF SURVEY
LOT 45 & PART OF LOT 46, SUNSET HILLS
SEC. 32, TWP. 47, RGE. 27
AITKIN COUNTY, MINNESOTA



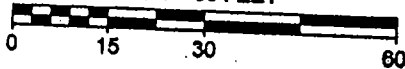
MARVIN KOHOUT
REGISTERED LAND SURVEYOR
PO BOX 384
AITKIN, MN 58431-0384
1-500-730-6673 OR
1-218-927-5452

I HEREBY CERTIFY THAT THIS SURVEY PLAN OR REPORT WAS
PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND
THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE
LAWS OF THE STATE OF MINNESOTA.

Marvin R Kohout
DATE 4 Aug 2006 REG. NO. 17774



SCALE : 1 INCH = 30 FEET



● IRON MONUMENT FOUND

PRESSURE BED DESIGN

PROPERTY OWNER: Maureen DeSutter TWP: Aitkin

PERMIT#: _____ PIN#: 01-1-120000 DATE: _____

DESIGNER NAME: Michael D. and Annette M. O'Keeffe LICENCE#: 1357

SIGNATURE: *Michael D. O'Keeffe* DATE: 8/5/2006

OF BEDROOMS: 2 TYPE I GARBAGE DISPOSAL No AIR TEST: No
 WELL: Deep (50+) _____ Shallow _____ SETBACKS: Tank 50(+) Drainfield 100' Sewer Line _____
 Well Depth Unknown

FLOW

- A. ESTIMATE 300 GPD OR MEASURED GPD _____
 B. SEPTIC TANK VOLUME 1000 GALLONS _____
 C. MINIMUM PUMP TANK VOLUME = 1500 GALLONS _____
 C1. ALARM TYPE = MULTI-FLOW DUPLEX PANEL

EST SEWAGE 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	372
8	1200	675	408

SOILS

- D. DEPTH TO RESTRICTING LAYER = 2.667 FEET = 32 INCHES
 E. MAXIMUM SYSTEM DEPTH = 12.0 INCHES OR 99.40 ELEV
 F. SOIL TEXTURE = Sandy Loam (see DRAWING for designed depth)
 F1. PERCOLATION RATE = 6 to 15 MPI
 G. SOIL SIZING FACTOR = 1.27 SQ FT/GPD

TRENCH BOTTOM AREA

- H. 6 IN. OF ROCK OR GRAVELLESS:
 (A) _____ x (G) _____ = _____ SQ FT
 I. 12 IN OF ROCK: (A) _____ x (G) _____ x .8 = _____ SQ FT
 J. 18 IN OF ROCK: (A) _____ x (G) _____ x .66 = _____ SQ FT
 K. 24 IN OF ROCK: (A) _____ x (G) _____ x .6 = _____ SQ FT

SEPTIC TANK CAPACITIES/VOLUME (gallons)		
NUMBER OF BEDROOMS	MINIMUM CAPACITIES	
	TANK	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-6	(x 1.5)

BED BOTTOM AREA (6 OR 12 INCHES OF ROCK)

- L. GRAVITY BEDS: 1.5 x (A) _____ x (G) _____ = _____ SQ FT
 M. PRESSURE BEDS: (A) 300 x (G) 1.27 = 381 SQ FT

ROCK VOLUME IN CU FT

- N. ROCK DEPTH BELOW PIPE (FT) + .5 ft. x (H-M) = CU FT
0.5 + .25 x 381 = 286 CU FT

ROCK VOLUME IN CU YDS

- O. (N) 286 + 27 = 10.6 CU YDS

ROCK WEIGHT

- P. (O) 10.58 x 1.4 = 14.82 TONS

SYSTEM LENGTH

- Q. BOTTOM AREA 381 + TRENCH WIDTH 10 = 38.1 FT

GRAVELLESS DESIGN:

- (A) x (G) ~ (3 for 10" pipe, or 2 for 8" pipe or width of Chamber)
 (A) _____ x (G) _____ + _____ = _____ FT

LAWN AREA

- R. SELECT TRENCH SPACING, CENTER TO CENTER = _____ FT
 S. (R) 10 x (Q) 38.1 = 381 SQ FT OF LAWN AREA

SIZING TABLE		
PERC RATE	SOIL TEXTURE	(SSF) SQ FT GAL/DAY
< THAN 0.1	COARSE SAND	—
0.1 TO 5	SAND	0.83
0.1 TO 5	FINE SAND	1.67
6 TO 15	SANDY LOAM	1.27
16 TO 30	LOAM	1.67
31 TO 45	SILT LOAM	2.00
46 TO 60	CLAY LOAM	2.20
> THAN 60	CLAY	—

Sizing for Gravelless Trench	
6 inches	= 0% Reduction
12 inches	= 20% Reduction
18 inches	= 34% Reduction
24 inches	= 40% Reduction

PUMP SELECTION PROCEDURE

Property Owner: Maureen DeSutter

A. Determine Pump Capacity:

Gravity Distribution

1. Minimum suggested is 20 gpm
2. Maximum suggested is 45 gpm

Pressure Distribution

3. a. Select number of Perforated Laterals = 3
- b. Select Perforation Spacing = 3 feet
- c. Rock Layer Length 38 - 2 = 36 feet
- d. Determine the number of spaces between perforations:
 (c) 36 ÷ (b) 3 = 12 Spaces
- e. (d) 12 + 1 = 13 Perforations/Lateral
- f. (a) 3 × (e) 13 = 39 Total # of Perforations
- g. (f) 39 × gpm/perf 0.74 = 29 gpm

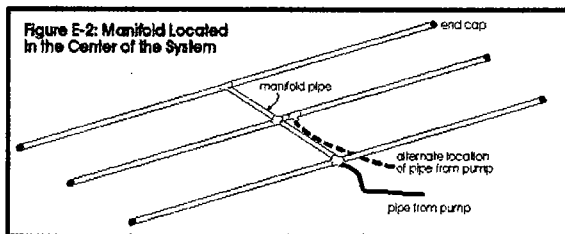
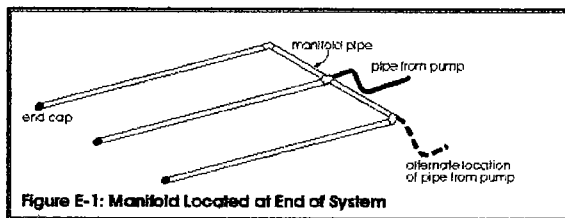
SELECTED PUMP CAPACITY = 29 gpm

B. MINIMUM Diameter for Perforated Laterals

1. If laterals are connected to header pipe as shown in Figure E-1, to select minimum required lateral diameter, enter Figure E-4 with perforation spacing (A3b) and number of perforations per lateral (A3e).
 The MINIMUM diameter for perforated laterals = 1.25 inches
2. If perforated lateral system is attached to manifold pipe near the center, like Figure E-2, perforated lateral length (A3c) and number of perforations per lateral (A3e) will be approximately one half of that in Step B1. Using these values, select the MINIMUM diameter for perforated laterals = _____ inches

Head (feet)	Perforation diameter (inches)			
	1/8	3/16	7/32	1/4
1.0a	0.18	0.42	0.56	0.74
2.0b	0.26	0.59	0.80	1.04
5.0	0.41	0.94	1.26	1.65

a Use 1.0 foot residential systems
 b Use 2.0 feet for other establishments
 * Potential for plugging



C. Determine Head Requirements:

1. Elevation difference between pump and point of discharge = 9 feet (contractor to verify in field)
2. Feet of pressure at manifold = 5 feet
 5 ft - for pressure required at manifold
 0 ft - for gravity distribution
3. Friction Loss
 a. Enter friction loss table with gpm and pipe diameter
 F.L. = 1.55 ft./100 feet of pipe
- b. Determine Total Pipe Length from pump to discharge point
 Pipe length 47 × 1.25 = 59 feet
- c. Calculate Total Friction Loss
 (a) 1.55 × (b) 59 ÷ 100 = 0.90 feet
- d. Total Head Required
 (1) 9 + (2) 5 + (3c) 0.9 = 15 feet

Perforation Spacing (feet)	Pipe Diameter			
	1	1 1/4	1 1/2	2
2.5	8	14	18	28
3.0	8	13	17	26
3.3	7	12	16	25
4.0	7	11	15	23
5.0	6	10	14	22

Flow Rate gpm	Nominal pipe diameter		
	1.5"	2"	3"
20	2.47	0.73	0.11
25	3.73	1.11	0.16
30	5.23	1.65	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

D. Pump Selection

A pump must be selected to deliver at least 29 gpm with at least 15 feet of total head

SIZING OF DOSING CHAMBER (TIMER)

Property Owner: Maureen DeSutter

MAXIMUM SETTING OF 300 GPD TO PRESSURE BED

1. Select gallons per inch = 33

2. Calculate Gallons to cover pump (with 2 inches of water covering pump)

$$\text{Height (in)} + 2 \times \text{gallons per inch (1)}$$

$$\underline{14} + 2 \times \underline{33} = \underline{528} \text{ gallons}$$

3. Calculate Total Pumpout Volume

A. Calculate Minimum Doses Per Day for Even Distribution

a. Perforated Laterals x Lateral Length + Transport Pipe Length = Total Lateral Length

$$\underline{3} \times \underline{36.1} = \underline{108.3} + \underline{47} = \underline{155.3} \text{ feet}$$

b. Total Lateral Length x Pipe Liquid Volume x 3 = Total Gal/Dose

$$\underline{155.3} \times \underline{0.17} = \underline{26.40}$$

$$\underline{26.40} \times \underline{3} = \underline{79.2} \text{ gal/dose}$$

c. Total Doses per Day

$$\underline{300} \text{ gpd} \div \underline{79.2} = \underline{4} \text{ doses per day}$$

B. Calculate Drainback

a. Total pipe length = 47 feet

b. Liquid volume of pipe = 0.17 gallons per foot

c. Drainback quantity =

$$\text{Total Pipe Length (3Ca)} \times \text{Pipe Liquid Volume (3Cc)}$$

$$\underline{47} \times \underline{0.17} = \underline{8.0} \text{ gallons}$$

C. Total Pump out Volume

$$\text{Gallons/dose (3B)} + \text{Drainback (3Cc)}$$

$$\underline{79.2} + \underline{8.0} = \underline{87.19} \text{ Total Gallons}$$

Tank Size	gal/inch
2500	41
1960	43
1860	40
1600	33
1350	32.5
1000	35
730	17
630	26
600	25
350	34

Liquid Volume of Pipe	
Pipe diameter (inches)	Gallons Per Foot
1	0.05
1.25	0.08
1.5	0.11
2	0.17
2.5	0.25
3	0.38
4	0.66

PUMPING RATE:

Selected Pump Capacity = 29 gpm

Calculate the Timer ON Setting

$$\text{Total Gallons (C)} \div \text{Pump Capacity gpm}$$

$$\underline{87.2} \div \underline{29} = \underline{3.0} \text{ Minutes ON}$$

Calculate the Timer OFF Setting

$$\text{(Minutes per Day} \div \text{\# Doses per Day)} - \text{Minutes ON}$$

$$1440 \div \underline{4} - \underline{3.0} = \underline{357.0} \text{ Minutes OFF}$$

SOIL BORING / PIT LOG

PROPERTY OWNER: Maureen DeSutter

PARCEL CODE: 01-1-120000

08/05/2006

<u>Depth</u>	<u>Color</u>	<u>Texture</u>
<u>Soil Boring #1</u>		
0 - 2	10YR 3/3	Top Soil
2 - 11	7.5YR 5/1	Sand & Rock
11 - 32	7.5YR 6/4	Sand & Rock
32 - 36	10YR 6/1 & 5/8	MOTTLED Sand

<u>Soil Boring #2</u>		
0 - 2		Top Soil
2 - 20	10YR 7/3	Sandy Loam
20 - 40	10YR 7/2	Fine Sand
36	10YR 5/6	MOTTLED

NOTE:

Soils were verified by Becky Sovde that Mottling is at 32 and 36 inches below the ground surface.

AITKIN COUNTY ENVIRONMENTAL SERVICES

APPLICATION for an OPERATING PERMIT FOR WASTEWATER TREATMENT AND DISPERSAL

PERMITTEE Maureen DeSutter PARCEL NUMBER 01-1-120000
ADDRESS 44228 348th Lane CITY Aitkin STATE MN ZIP 56431
SEC 32 TWP 47 RGE 27W BLOCK _____ LOT _____ ACRES _____
TELEPHONE (218) 927-6325 GIS LOCATION _____
SITE LOCATION 44228 348th Lane, Aitkin Cedar Lake - Sunset Hills

A. DESCRIPTION OF WASTEWATER TREATMENT AND DISPERSAL SYSTEM:

MULTI-FLO AEROBIC TREATMENT SYSTEM TIMED DOSED INTO A DOWNSIZED 10' x 38' RAISED PRESSURE BED SIZED FOR 2 BEDROOMS

This ISTS is to have the wastewater gravity from the 3 bedroom dwelling into the existing conforming 1000 gallon Septic Tank with a Pump Vault placed in the Septic Tank. It will be Timed Dosed at a maximum of 450 gallons per day into a Multi-Flo Aerobic Treatment System, and then gravity into a new 1500 gallon Lift Tank. From there, liquids will be Timed Dosed at a maximum of 300 gallons per day into a 10' x 38' Pressure Bed containing 18 inches of Separation.

Number of Bedrooms 2

Flow = 300 gpd

Hydraulic Loading Rate = Soil Loading Rate

Organic Loading Rate = 0.00010 BOD/sqft

$$\text{Flow} \times \text{BOD}(\text{mg}/1) \times 8.35 \div 1,000,000 = \# \text{BOD}$$
$$(300 \times 15 \times 8.35 \div 1,000,000 = .037 \text{ BOD})$$

$$\text{System Loading} = \text{organic loading} \div \text{area} = \text{BOD/sqft}$$
$$(.037 \div 384 = 0.00010 \text{ BOD/sqft})$$

Multi-Flow Output = 5 for pretreatment worksheet

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	300 gpd	Water Meter	Monthly	Record on Log Sheet	At time of Operating Permit Renewal
5-Day BOD					
Total Nitrogen					
Total Phosphorus					
TSS					
Fats, Oils, Grease (FOG)					
Fecal Coliform	Less than 10,000 cfu / 100 ml	ATU / Pump Tank	Bi-annual 1 st Year	Take Sample for Testing	Annually
Separation Distance	18 Inches	Drainfield			Annually

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	Tanks	Annually
Pressurization of Laterals in Sand Filter (squirt test)	Multi-Flo	Semi-Annually
Overall visual of entire system for landscaping, drainage and cover material	Total System	Annually

D. MONITORING AND REPORTING REQUIREMENTS:

1. Monitoring results obtained during each year shall be submitted no later than May 1st of each year to:
Aitkin County Environmental Services
209 2nd 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. Waste strength: If fecals exceed limit, reduce waste strength or change waste characteristics. If fecals continue to exceed limit, add disinfection.
3. If Multi-Flo experiences problems, fix or repair at recommendations of Manufacturer, or replace.
4. A different or another Performance or Other System may be installed at the owner's expense.
5. 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. ERIC LARSON , a licensed ISTS firm, has agreed to perform all monitoring responsibilities as outlined within this Operating Permit Application, for a period of _____ 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 #)

08/05/2006
(Date)

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

29465 442nd LANE PALISADE, MN 56469
(Address)

(218) 768-4430
(Telephone)

AITKIN COUNTY ZONING

PERMIT NUMBER 34668

PARCEL NUMBER 01-1-120000

Location 45 Sunst Hills 32 47 27
Lot Block Gov't. Lot Section Twp. Rge.

Issued Sept 18 06 To Loiselle, Brian

Nature of Authorization pressure bed

New Construction _____ Alteration _____

Sewer Installation

Flood Plain and Lowest Floor Elev. _____

This permit expires one year from date of issuance
NOT TRANSFERABLE

NOTE:

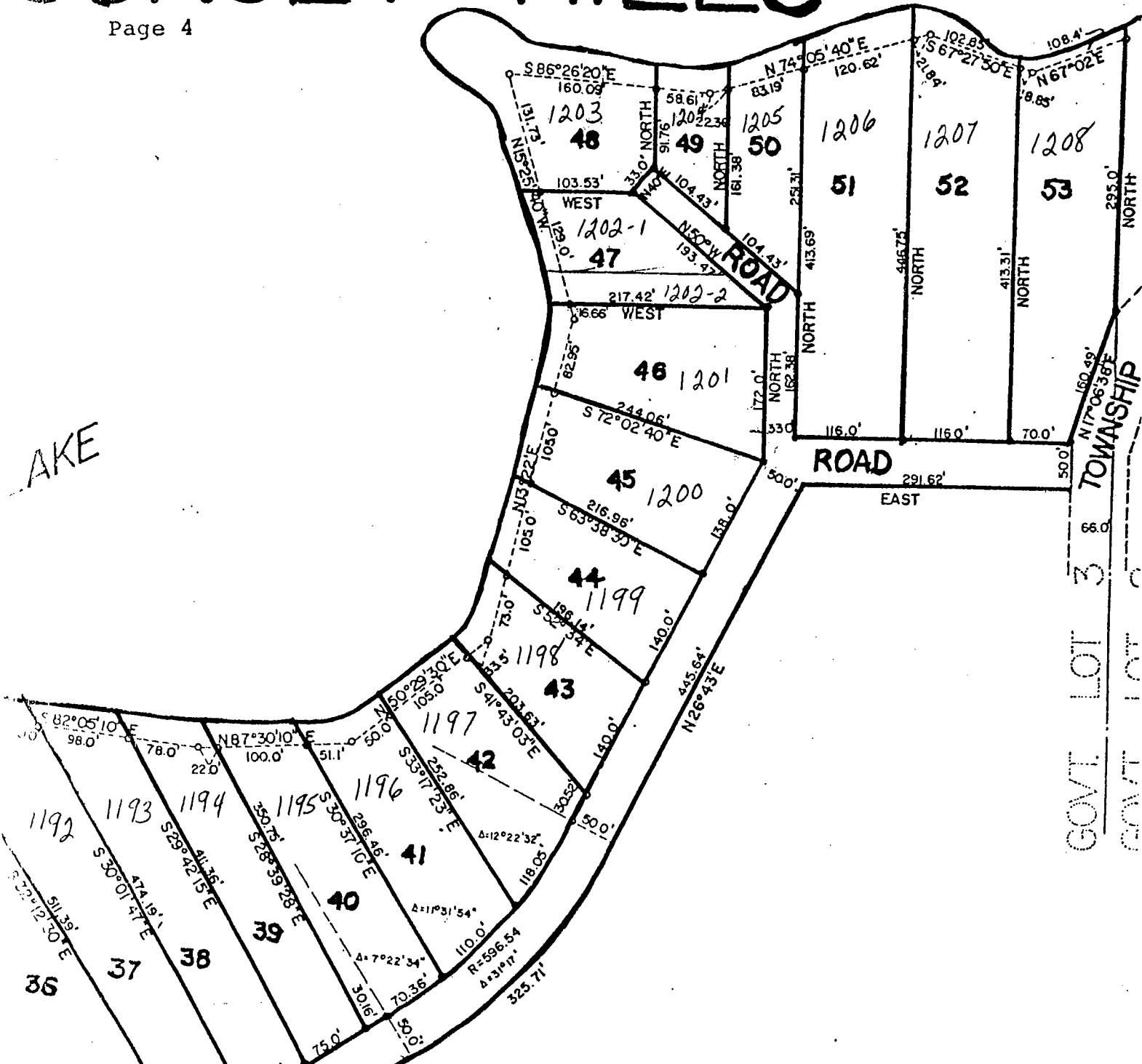
This permit must be posted in a conspicuous place on premises on which work is to be done and remain until work has been completed and inspected. For inspection, call (218) 927-7381.

Dite Hansen
ZONING ADMINISTRATOR

No Portion of any Sewage Disposal System shall be Covered Prior to Inspection

SUNSET HILLS

Page 4



LAKE

GOVT LOT 3 TOWNSHIP
GOVT LOT 1

34668



AITKIN COUNTY
CERTIFICATE OF COMPLIANCE/NOTICE OF NONCOMPLIANCE

This certificate of compliance/notice of noncompliance has been issued this _____ day of 10/23/06 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: _____

Section lot 45 32 Township 47 Range 27 Lake _____

PERMIT NO. 34668 Owner Name Brian Joiselle

Address 4222 E. Mclellan Circle #7 Mesa, AZ 85205

Installer Name Mark Ritter

Type of System Inspected "Other" pressure Bud. w/multi flow

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 [Signature]

INDIVIDUAL SEWAGE TREATMENT SYSTEM INSPECTION FORM AITKIN COUNTY, MINNESOTA

Township Aitkin Date of Inspection 10/19/06 Permit Number 34668
 Owner Brian Loiselle Parcel Number 01-1-120000
 Project Address Sunset Hills lot 45 Less Pt In Doc Installer Mark Ritter
251647d Pt lot 46 as In Doc 251648
 City _____ Zip Code _____ New _____ Repair

SETBACKS:

Buildings to tank(s) 30
 Buildings to drainfield 40
 Well(s) 50' or 100' 100
 Lake/Creek/Wetland 200'

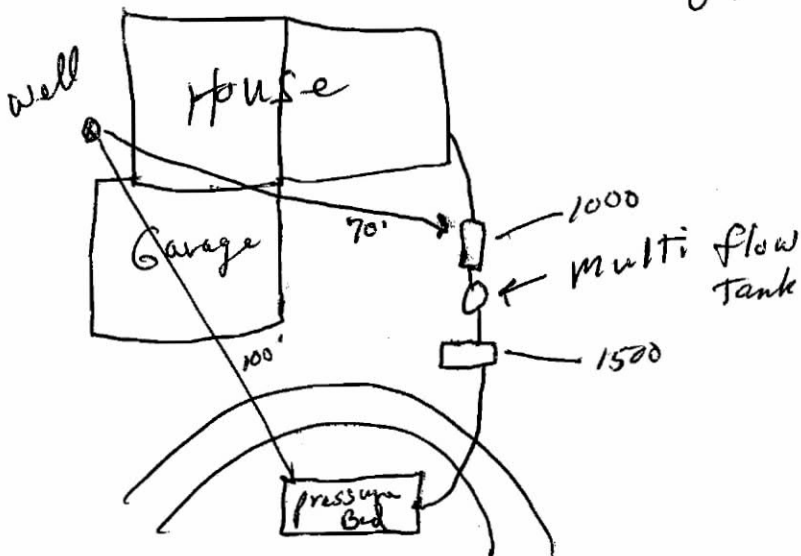
SEPTIC TANKS:

Liquid capacity ~~1000~~ 1350 Existing
 Manufacturer & type Joe pre-cast
 Type of baffle Cement
 Inspection pipes -
 Manholes access ↑
 No. & height of risers -

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 _____

**DRAWING OF SYSTEM
(Include Soils)**



DIST. or DROP BOX & TYPE _____

TRENCHES, BEDS, OR GRAVELLESS LEACHFIELD:

Trench depth 24" w/ 12" clean sand
 Trench length 38
 Trench bottom width 10
 Trench bottom level yes
 Trench spacing pressure Bed
 Drainfield rock below pipe 9" w/ 3-1/2" lattice
 Size of gravelless pipe _____
 Depth of backfill 12"
 Absorption area: square feet 380
 lineal feet _____

PUMPS:

Tank capacity 1500 + Multi-flow tank
 Tank manufacturer & type Joe pre-cast
 No. & height of risers 1-1/2
 Pump manufacturer & model Goold mep 41 & 31
 Horsepower & GPM 1/3 + 4/10-
 Feet of head 14
 Cycles per day 5
 Gallons per cycle 100
 Size of discharge line 3"
 Type of electrical hookup Post
 Type & location of alarm Panel Elec.
 Cycle counter (commercial) _____

"Other"

Inspector's Comments _____

Corrective Action Required _____

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



34753 390th Place • Aitkin, MN 56431
 Phone: 218.927.4125 • Fax: 218.927.4471
 Toll Free: 800.450.4125
 info@rittersewer.com • www.rittersewer.com

July 5, 2013

SEPTIC SYSTEM REVIEW FOR
 Federal National Mortgage
 Operating Permit # 279
 Parcel # 01-1-120000
 Property Address 44228 348th Lane

Property located in Aitkin Township

The above mentioned property has a water meter installed on it. But since the property has no one living at it we do not have water meter reading to report. The system has been cleaned and a new blower motor was installed on the multi-flow so the system is now in compliance with Aitkin County Planning and Zoning until June 25, 2014. I feel that we can put this system on a 1 year operating permit. We have entered into a Maintenance, Monitoring and Inspection Contract with said property owner until June 25, 2014.

Ritter Sewer & Excavating Inc

Mark P. Ritter
 ISTS # 1672

OK# 26399 4/28/13
 receipt # 374964

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

It is hereby agreed this 25 day of June, 2013 by and between
Mark P. Ritter (Inspector) and FNMA (client)

(Client) Name & Address

Federal National Mortgage Assn.

Street Address

P.O. Box 650043

City, State, Zip

Dallas Texas 75265

That in consideration of the payments provided herein, the Inspector shall provide services to perform Preventative Maintenance, Monitoring and Inspection of the Individual Sewage Treatment System (ISTS) located at the property described in the Aikin County Operating Permit.

Each inspection includes an examination of the ISTS followed by a written report to the client. 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. The Inspector is authorized to submit a copy of the report to the Aikin County Environmental Services Department.

This contract does not assume any responsibilities or obligations, which are normally the responsibilities of the Client, 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.

The Inspector can only contract or subcontract for parts or labor after authorization. Billings for service calls shall be made on a case by case basis. This contract only covers maintenance, monitoring and inspection services per current Aikin County Operating Permit and does not cover alarm calls of any kind.

The Inspector shall be provided access to the site and the system in order to perform the following services:

SEPTIC TANK AND LIFT STATIONS INSPECTION

(check the boxes needed to fit the requirements of the Operating Permit)

Check septic tank and compartments for solids buildup and general appearance. If necessary, have tanks pumped (cost of pumping is the responsibility of the client).

Check effluent filter for buildup and clean, if applicable.

Check pumping system, including control panel and floats.

Record and date the readings of the elapsed time meter and cycle counter(s), if applicable.

Check dosing settings (In the control panel, if applicable).

Other: _____

**If the septic tank or lift stations need pumping to be in compliance with the operating permit the cost of the pumping is the responsibility of the Client.

TREATMENT DEVICE

Inspect pretreatment unit (aerobic tank, sand filter, etc.) per manufacturer's recommendations, if applicable.

Inspect and clean any parts per manufacturer's recommendations.

Inspect and clean laterals, if applicable.

Inspect the appearance of the wastewater inside the unit for color, turbidity and examination of odors.

Sample effluent per Operating Permit monitoring requirements.

(Cost of sampling and analysis is the responsibility of the Client)

Other: _____

DISPERSAL FIELD

Inspect for visible signs of failure (surface discharge, soggy ground, wet spots, settling, etc.)

If liquid level monitors are installed, levels will be observed and recorded.

Flush filters and clean cartridges, if applicable.

Check field control unit solenoid operations or manual control, if applicable.

Other: _____

In no event shall 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. This contract does not assume any responsibilities or obligations, which are normally, the responsibility of the Client or us, related to parts or labor and does not extend to cover any costs that may be associated with any recommendations made under this contract.

This contract shall be effective: Beginning June 25, 2013
and Ending June 25, 2014

Cost for Maintenance Service, Monitoring and Inspection Contract is:

\$ 250 /yr. For 1 years totaling \$ 250.-

The inspector agrees to provide inspection, monitoring and routine maintenance service only under this contract. The Client remedies for breach of this contract shall be limited to refund of any of the amounts paid in advance for service. This contract may be renewed 30 days from the ending date.

Payment for all services shall be paid in full upon invoicing

Client:

Inspector:

Sign: Marty Ringham

Sign: Mok P Ritt

Print: Marty Ringham for Fannie Mae

Print: Mok P Ritt

Date: 6/26/2013

Date: June 25-2013

site address
44228 348th Lane
Ankeny IA 50021

Operating Permit # 279

PH# 34668

9

AITKIN COUNTY ENVIRONMENTAL SERVICES/PLANNING AND ZONING

209 SECOND STREET NW
AITKIN, MN 56431
218-927-7342

August 9, 2012

Federal National Mortgage Assn.
PO Box 650043
Dallas, TX 75265-

Re: Operating Permit #: 279
Parcel Identification #: 01-1-120000

8/29/13 transferred to John McIntosh
4-11-14 Charged owner info. KK

U. of M. Environmental
3.1.13 Countryside Realty called. She will be contacting Mark R. Her.

Dear Resident:

SECOND NOTICE

This is a second notice letter to remind you that the Operating Permit for the septic system at the above mentioned parcel of land expired on May 31, 2012. The enclosed operating permit was issued as part of the permit for your septic system and must be renewed. Therefore, to renew the Operating Permit, please complete one of the two following options:

Option 1 (Renewal of Operating Permit):

- 1) Review and sign the enclosed operating permit.
 - 2) Attach the monitoring and maintenance report for your system that was conducted by a State Licensed Compliance Inspector of ISTS systems.
 - 3) Attach the log of your monthly water use readings (Note: If you do not have a water meter or other flow measuring device your system is not in compliance with minimum standards required by Minnesota State Statutes. Please call immediately so we may work out an appropriate timeline to bring your property into compliance).
 - 4) Submit a renewal fee of \$100 (Checks payable to Aitkin County Planning and Zoning).
- Only complete applications can be accepted. Please see enclosed checklist.

Oct 7, 2012 Court date

Option 2 (Operating Permit Renewal Cancellation):

- 1) Have a State Licensed Compliance Inspector of ISTS systems complete an inspection.
- 2) If the Compliance Inspector finds that the system is operating property, please have him/her submit a letter requesting to have the Operating Permit renewed for a longer period or cancelled.
- 3) Please note, the ultimate decision to cancel your operating permit is made by Aitkin County.
- 4) Some types of septic systems can never be removed from the Operating Permit renewal due to Minnesota State Law.

Failure to renew the Operating Permit is a violation of the Operating Permit Contract, the Aitkin County Individual Sewage Treatment System System and Wastewater Ordinance and MN Statutes Chapter 7080. Violation of Aitkin County Ordinances is considered a misdemeanor and you may be issued a citation if you fail to renew the Operating Permit and bring your property into compliance.

Please submit the required information to this Office as soon as possible.

If you have any questions regarding testing, completing the application or your permit in general, please contact our Office at 218-927-7342.

Sincerely,

Aitkin County Planning Zoning

8.29.12
Cathy @ Countryside Realty called - they are fixing the people she will get a maintainer out. She was given Mark R's info. 8-8-12 sent Septic Check contact info.

There are legal issues and Mary @ Countryside Realty. He was asked to keep

Kristi Kunz

From: Kristi Kunz [kristi.kunz@co.aitkin.mn.us]
Sent: Tuesday, June 10, 2014 10:19 AM
To: 'Mar Ritter'
Subject: 2014 Operating Permits

Based on our conversation today, below are the items we discussed per my conversation with Terry.

David Ficek, OP#5 –
1) Submit water meter readings/event counter readings.
2) Submit results of Fecal Coliform, Fats/Oil/Greases, TSS, and BOD5's sampling.
3) Submit a copy of an annual maintenance contract with a Licensed Service Provider
for the length of the renewal period.

Patrick O'Connor, OP# 25 -
1) Verify Nibbler Jr. is working properly and submit results.
2) Submit results of coliform sampling per the contract.

Stuart Mittlesteadt, OP#239 –
1) Inspect ATU – effluent clean? Clear? Odorless? and submit results.
2) Inspect socks – clean if necessary and submit results.
3) Submit results of coliform sampling.

John McIntosh, OP#279 –
1) Submit results of coliform sampling.
2) Inspect ATU – effluent clean? Clear? Odorless? and submit results.
3) Inspect socks – clean if necessary and submit results.

Mary Gielser, OP#381 –
1) Submit results of coliform sampling.
2) Inspect ATU – effluent clean? Clear? Odorless? and submit results.
3) Inspect socks – clean if necessary and submit results.

Once we receive the items listed above, the renewal periods will be moved based on your recommendations.

If you have any questions, just ask.

Thanks!

Kristi K.
Aitkin County Planning & Zoning
218-927-7342

This transmission (the e-mail and all attachments) is confidential and intended solely for the use of the addressee(s). If you have received this transmission in error, please notify the sender by reply and delete this transmission immediately. Any unauthorized distribution, or copying of this transmission, or misuse or wrongful disclosure of information contained in it, is strictly prohibited. The information contained in this document is provided on an as-is basis and does not constitute a binding legal contract or receipt for services

AITKIN COUNTY ENVIRONMENTAL SERVICES

**OPERATING PERMIT FOR WASTEWATER
TREATMENT AND DISPERSAL**

OPERATING PERMIT #: 279

ZONING PERMIT #: 34668

PARCEL #: 01-1-120000

PERMITTEE: John McIntosh

MAILING ADDRESS: 44228 348th Lane
Aitkin, MN 56431

ORIGINAL DATE ISSUED: 5 /31/2009

RENEWAL PERIOD:

RENEWAL EXPIRATION: 5 /31/2014

PROPERTY ADDRESS:

44228 348th Ln.
Aitkin, MN 56431

TELEPHONE:

LEGAL: LOT 45 LESS PART IN DOC 251647 AND PART OF LOT 46

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.

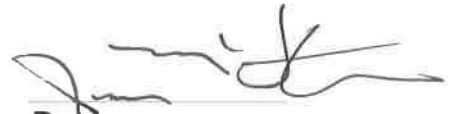
This permit is effective on the issuance date identified above.

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.

5/30/14

Signature of Permittee



Date

Signature of Permitting Authority

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

Multi-flo aerobic treatment system timed dosed into a downsized 10x38 raised pressure bed sized for 2 bdrs. A maximum of 450 gallons per day into a Multi-Flo Aerobic Treatment System, and then gravity into a new 1500 gallon lift tank. From there, liquid will be Time Dosed at a maximum of 300 gallons per day into a 10x38 pressure bed containing 18 inches of separation.

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 FREQUENC
Flow	300 gpd	Water Meter	MONTHLY	Record on Log Sheet	ANNUALLY ok ✓

C. MAINTENANCE REQUIREMENTS:

PARAMETER	LOCATION	FREQUENCY
Flow	Water Meter	MONTHLY ok ✓

D. MONITORING AND REPORTING REQUIREMENTS:

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

Aitkin County Environmental Services
209 2nd Street NW, Room 100
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 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 performed by: Mark Ritter.

- Need fecal coliform test. < 10,000
- ATU test for ~~OD~~ clear, odorless
- socks - clean?

*6-10-14
ok to move
to 5yr after
these are checked.
pH TN.
Not pumped*

SEPTIC SYSTEM REVIEW FOR
John McIntosh
Operating Permit# 279
Parcel # 01-1-120000

Property located in Aitkin Township

May 31, 2014

The above mentioned property has a water meter installed on it. On July 2, 2013 the meter reading was 266,250. On June 1, 2014 the meter reading was 306,950 with a difference of 40,700 gallons. So at 40,700 gallons divided by 335 days = 122 gallons per day average.

The system is set up for 300 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.

PH# 34608

SEPTIC SYSTEM REVIEW FOR
John McIntosh
Operating Permit# 279
Parcel # 01-1-120000

Property located in Aitkin Township

Oct. 23, 2014

The above mentioned property has a water meter installed on it. On July 2013 the meter reading was 266,250. On June 2014 the meter reading was 306,950 with a difference of 40,700 gallons. So at 40,700 gallons divided by 335 days = 122 gallons per day average.

The system is set up for 300 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.

The ATU unit appears to be working properly (no odor, clear effluent), socks if need be will be cleaned annually. See attached test results taken on Oct. 2, 2014.

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

Sincerely,



Mark P. Ritter
Ritter Sewer & Excavating, Inc.

Analysis Report

October 22, 2014

REPORT TO:
RITTERS SEWER & EXCAVATING

34753 390TH PLACE
AITKIN MN 56431-

INVOICE TO:
RITTERS SEWER & EXCAVATING
MARK RITTER
34753 390TH PLACE
AITKIN MN 56431-

Date Sampled: 10/1/2014
Time Sampled: 09:45
Date Rcvd-Brnd: 10/1/2014
Time Rcvd-Brnd: 10:18

Sampled by: MARK RITTER
Sample Type: WW
Recv Temp: 3.8 C

LOCATION:
MCINTOSH
44228 348TH LANE

SITE / ANALYTE	Analyzed Value	MCL	Analytical Method	Analysis Date/Time	Analyst	Code #
LIFT STATION IN FRONT OF DRAINFIELD						
BOD (5 DAY), MG/L-C	LESS THAN 2.0		SM 6210 B-01 online	10/2/2014 10:37	BS	29120B
FECAL COLIFORM, COLONIES/100 ML-C	300		SM 9222 D (m-FC)- 97 online	10/1/2014 16:00	SK	29120B
RESIDUE, NONFILTERABLE (TSS), MG/L-C	LESS THAN 4.00		USGS I-3765-85	10/2/2014	BS	29120B

Approved By:

Sara Ahlers

Date Approved: 10-23-14

Sara Ahlers, Laboratory Director

A.W. Research Laboratories is Certified by the Minnesota Department of Public Health and follows approved methods and procedures. Minnesota Laboratory Certification # 027-035-135. All data generated using certified methods noted as -C, all data generated using non-certified methods noted as -NC, and all analytes for which certification is unavailable -NA. The results above relate only to the samples tested. This report must not be reproduced, except in full, without the written approval of the laboratory. Under the Safe Drinking Water Act (SDWA), EPA sets legal limits on the levels of certain contaminants in drinking water-these limits are indicated as Maximum Contaminant Levels of MCL on the report.

-End of Analysis Report-

MVTL

MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 E. Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Highway ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885
www.mvttl.com

MEMBER ACIL

Page: 3 of 3

SARAH
A W RESEARCH LABORATORIES
16326 AIRPORT RD
BRAINERD MN 56401

Report Date: 20 Oct 2014
Lab Number: 14-A43296
Work Order #: 12-14421
Account #: 002432
Sample Matrix: WASTEWATER
Date Sampled: 1 Oct 2014 9:45
Date Received: 2 Oct 2014 9:55

Project Name: MARK RITTER
Sample Description: 29120

Temp at Receipt: 3.2C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Oil and Grease, < 5 mg/L, 5, EPA 1664A, 17 Oct 14 14:00, MDK

Approved by: [Signature]

Dan O'Connell, Chemistry Laboratory Manager New Ulm, MN

RL - Reporting Limit
Analytes performed under our Minnesota Department of Health Accreditation conform to the current TMI standards.
The reporting limit was elevated for any analyte requiring a dilution as coded below:
! - Due to sample matrix # - Due to concentration of other analytes
? - Due to sample quantity * - Due to internal standard response
CERTIFICATION: MN LAB # 027 015 125 WI LAB # 999447680 ND MICRO # 1013 M ND WW/DW # R-040

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

AN EQUAL OPPORTUNITY EMPLOYER

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

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



10/28/2014

Re: Operating Permit #279
Zoning Permit # 34668
Parcel #01-1-120000

John McIntosh
44228 348th Lane
Aitkin, MN 56431

Dear Permittee:

This letter is to inform you that your Operating Permit has been renewed until 5/31/2019 and the Operating Permit renewal period has been moved to a 5 YEAR based on the recommendation from your Operating and Maintenance provider.

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

AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING

209 Second Street, NW Room# 100

Aitkin, Minnesota 56431

PH: (218) 927-734

FX: (218) 927-437



7/22/2013

Federal National Mortgage Assn.
PO Box 650043
Dallas, TX 75265-

Re: Operating Permit # 279
Zoning Permit # 34668
Parcel # 01-1-120000

Dear Permittee:

This letter is to inform you that your Operating Permit has been renewed until 5 /31/2014.

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 blue ink that reads "Kristi K." The signature is written in a cursive, slightly slanted style.

Aitkin County Planning & Zoning

Water Meter

Installed 1-23-07

Reading

1-23-07	0
2-23-07	4730
3-23-07 (4410)	9140
4-23-07 (4670)	13810
5-23-07 (8730)	22540
6-23-07 (5020)	27560
7-23-07 (8480)	36040
8-23-07 (5610)	41650
9-24-07 (4740)	46390
10-23-07 (4510)	50900
11-23-07 (4630)	55520
10-8-07 (2250)	57780

(Water meter

1-23-08 (4330)	62110
2-23-08 (4290)	66400
3-23-08 (4650)	71050
4-23-08 (4030)	75080
5-23-08 (4110)	79190

New part installed
concerning alarm function
on 5-30-08

6-23-08 (4480)	83670
8-23-08 (9470) 2100	93140
9-26-08 (4540)	97680
well problem - meter off 9-27-08 to flushing pump	
10-15-08 (4300)	101920
10-23-08 (1120)	103100
11-24-08 (3750)	106850

Water Meter

1-2-09 (5110)	111960
1-23-09 (2570)	114530
2-23-09 (4150)	118680
3-23-09 (3190)	121870
4-26-09 (4360)	126230
5-23-09 (3680)	129910
2-1-09 (5180)	135690
7-22-09 (3370)	139260
8-19-09 (2940)	142100

SEPTIC SYSTEM REVIEW FOR
John McIntosh
Parcel # 01-0-120000
Operating permit #279

Property located in Aitkin Township

May 21, 2019

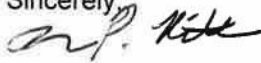
The above mentioned property has a water meter installed on it. On July 2015 the meter reading was 344,290. On July 2018 the meter reading was 463,624 with a difference of 116,906 gallons. So at 116,906 gallons divided by 1,095 days =106 gallons per day average. The Aerobic tank, pumps, alarms and time dosing panel are all operating properly. The BOD5, TSS and fecal are all within standards (see attached sheet).

The system is set up for 300 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.

Analysis Report

May 14, 2019

REPORT TO:

Ritter Sewer & Excavating
 Mark Ritter
 34753 390th Place
 Aitkin MN 56431

INVOICE TO:

Ritter Sewer & Excavating
 Mark Ritter
 34753 390th Place
 Aitkin MN 56431

Date Rcvd-Brnd: 5/8/2019
 Time Rcvd-Brnd: 10:29

Sampled By: Mark Ritter
 Sample Type: WW
 Recv Temp°C: 1.0 on ice

LOCATION:

Mcintosh Operating #279

SITE / ANALYTE	Sample Date/Time	Analyzed Value	Units	Reporting Limit	Analytical Method	Analysis Date/Time	Analyst	Code #
Lift To Mound		5/8/2019 @ 07:50						
Biochemical Oxygen Demand, 5 Day		< 2.0	mg/L	2	SM 5210 B-2011	5/9/19 11:29	CJS	019908
Fecal Coliform		840	MPN/100mL	1	COLILERT-18 (FECAL COLI.)	5/8/19 15:01	SK	019908
Residue-Nonfilterable (TSS)		2	mg/L	1	USGS I-3765-85	5/9/19 10:07	SK	019908

Approved By:



Date Approved: 5/14/2019

Sara Ahlers, Laboratory Director

A.W. Research Laboratories, Inc. is Certified by the Minnesota Department of Public Health and follows approved methods and procedures. Minnesota Laboratory Certification # 027-035-135. All data generated using certified methods noted as -C, all data generated using non-certified methods noted as -NC, and all analytes for which certification is unavailable - NA. The results above relate only to the samples tested. This report must not be reproduced, except in full, without the written approval of the laboratory. We appreciate your feedback, please email us at awlab@awlab.com with questions or comments. Thank you!

~End of Analysis Report~

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

ISSUANCE DATE: 5 /31/2019
RENEWAL PERIOD: 5 YEAR

OPERATING PERMIT #: 279
ZONING PERMIT #: 34668
PARCEL #: 01-1-120000

PERMITTEE: John McIntosh

TELEPHONE:

MAILING ADDRESS:
44228 348th Lane
Aitkin, MN 56431

PROPERTY ADDRESS:
44228 348th Ln.
Aitkin, MN 56431

LEGAL DESCRIPTION: LOT 45 LESS PART IN DOC 251647 AND PART OF LOT 4

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.

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

5/1/19
Date


Signature of Permitting Authority

5-28-19
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.

Invoice #47809 (05/28/2019)

2. Zoning/Land Use Permit Applications Misc. (OFFICE USE ONLY) App. # App-2019-004530, UID # 197846

John C McIntosh

(218) 927-7342

44228 348th Ln, Aitkin, MN 56431

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

Charge		Cost	Quantity	Total	Note
Operating Permit Renewal added 05/28/2019 5:00 PM \$100		\$100.00	x 1	\$100.00	
Grand Total					
				Total	\$100.00
Payment #45120					
Method:	Check		380		
Date:	05/28/2019	Note:	44228 348th Ln, Aitkin		
Made By:	John C McIntosh				
Confirmed By:	Shannon Westerlund				

AITKIN COUNTY ENVIRONMENTAL SERVICES-PLANNING & ZONING
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Aitkin, Minnesota 56431

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5/28/2019

John McIntosh
44228 348th Lane
Aitkin, MN 56431

Re: Operating Permit # 279
Zoning Permit # 34668
Parcel # 01-1-120000

Dear Permittee:

This letter is to inform you that your Operating Permit has been renewed until 5/31/2024 .

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 blue ink that reads "Shannon W." with a stylized flourish at the end.

Aitkin County Planning & Zoning