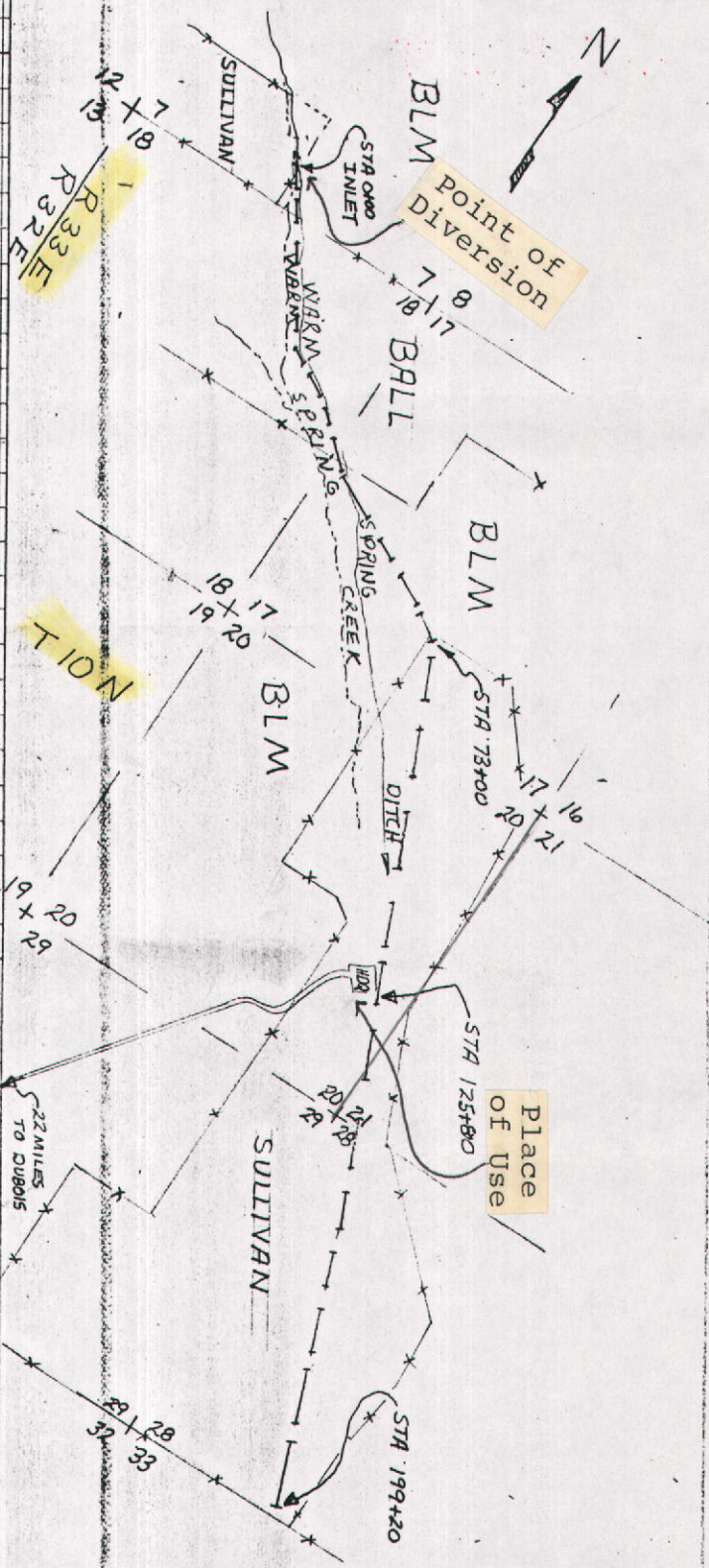
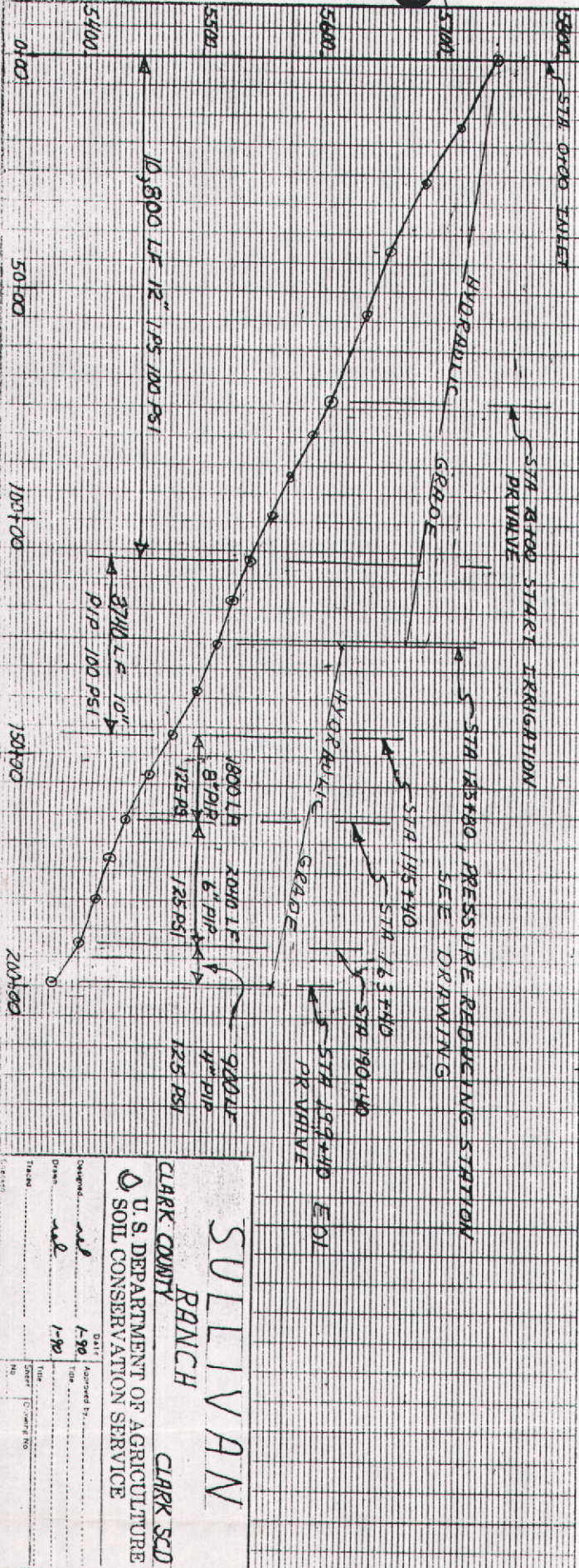


32-7170
36-8652



MICROFILMED
SEP 09 1992

SULLIVAN RANCH
CLARK COUNTY
CLARK SCD
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Drawn: *ml*
Date: 1-90
Title: *1-90*
Sheet: *1-90*
No. *1-90*

LICENSE REVIEW CHECKLIST

Reviewed by Sharla Curtis on

Permit No. 32-7170

BU Fee Pd \$

Name/Address: ☒ OK ☐ CHANGE

Govt Lots ☐ n/a ☐ plat copy attached

AREA OF CONCERN: No/Yes ESPA Moratorium ☐ GWMA TRUST/NON-TRUST ☐

GROUNDWATER: (✓Flow Chart)

Supp irr (irr = only use) - 065-104
Supp irr (+ other uses) - 100-105
≤ 0.24 cfs/5 acres - No MD
> 0.24 cfs/5 acres - 01M (if on permit)

LOCATION:

Trust - R55(consumptive uses)
Non-Trust - 048

SURFACE WATER: (✓Flow Chart)

In/Above MSF - WB9
WD - R04 (WD#)
≤ 0.20 cfs/others - R02- 01P or No MD
> 0.20 cfs - R43

SPRINGS/SINK, INACTIVE WD & REST OF STATE

≤ 0.24 cfs/5 acres - No MD
>0.24 cfs/5 acres - 01M or No MD

RIVER BASINS: (SW special considerations)

SNAKE R (01) - W22, N/A
(02,03) - WB9 if above Weiser
Payette R (65) - 047(Payette Lake)
Salmon R (70's) - 029 (fish screens)
Weiser R (67) - 086-087

USES:

STORAGE - 18A-R02-01P-18B-NA
IRR ≤ 5 ac - R66/R67/R68/R69 (0.03 cfs/ac)
> 5 ac - R62/R63/R64/R65 (0.02 cfs/ac)
STOCKWATER - R37 (BLM/USFS)
MINING - 106
FISH PROP - 029(70'S only)-042-106
HEAT/COOL - R07(injection well)
FIRE PROT. - 077

USES:

POWER - R22-R23 (+uses)-025-106-W42-W43-027
MUNICIPAL
Restricted area - 022,075
Irr., GW supp to SW - 102
DOMESTIC
Surface water - WB5 (Big Wood or Boise above Star Bridge)
27A (Payette R)
>1 in restricted area - 070-071-075(no parks/common areas, etc)
Irr use listed separate - WB5
Lawn/garden included - W01

ADVANCE PRIORITY? ☐ Yes ☒ No

MISC CONDITIONS/REMARKS:

Multiple pd's per ¼¼ - W32
Subd lot desc (pd) - W59
Subd lot desc (pu) - W60
Use definitions - W02 example - C/tire shop
Non-consumptive - 027
Water Quality - 106-R07
Mitigation - 121 (if on permit)
PPU acre limit - W27

CHECK NEW IRR SEASON MAP ☐

OVERLAP ANALYSIS/RATES/VOLUMES:

PD overlap rights - W35-W36 Right #
PU overlap rights - WB7-W31(<1 ac)
GW replaced SW - 050

Permit Rate 8.40 cfs Fee Limit N/A center exam cfs
Measured 2.95 cfs Theoretical cfs

Use	Rate	Volume
Power	2.95 cfs	1649.0 af
	cfs	af
	cfs	af
TOTALS	2.95 cfs	1649.0 af

OTHER CONDITIONS/REMARKS/COMMENTS

SRBA Claim Filed ☐ Yes ☒ No

AMENDMENTS REQUIRED ☐ Yes ☒ No

If no, is a claim required: ☐ Yes ☒ No

non-commercial, private use
only
No power purchase contract not
FERC regulated



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

February 22, 2000

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

RE: Permit No. 32-07170

Gentlemen:

In September we received a proof of beneficial use statement along with a certified examination field report for the above referenced permit.

The field report has been briefly reviewed for completeness in an effort to issue a license. There are a couple of items that were insufficiently described and we cannot complete our license review without obtaining this information. The two deficiencies are 1) solid confirmation and/or measurement of the diversion system capacity and 2) diversion volume. These two items are required by Rule 35.01.j of the Field Examination Rules.

By copy of this letter to Mr. Brockway, the certified examiner, I request that the above items be reviewed and that information to complete the requirements be submitted within 30 days.

If you have any questions, please give me a call.

Sincerely,

SHARLA CURTIS
Sr. Water Resource Agent

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APR 03 2002

[illegible]

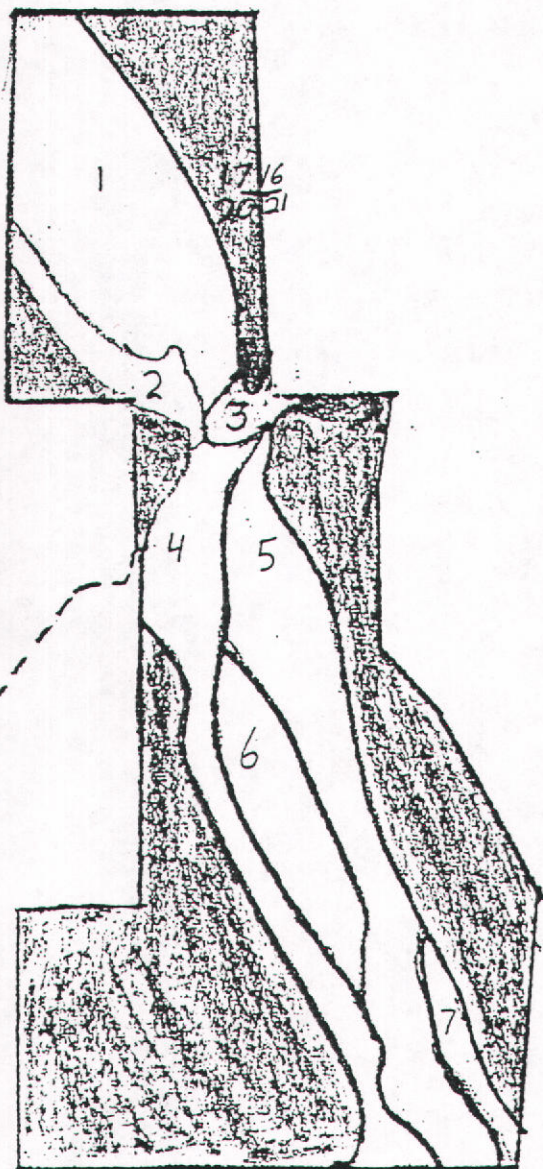
Place of Use

MICROFILMED
APR 03 2002

LD SYMBOL

NEW SYM.

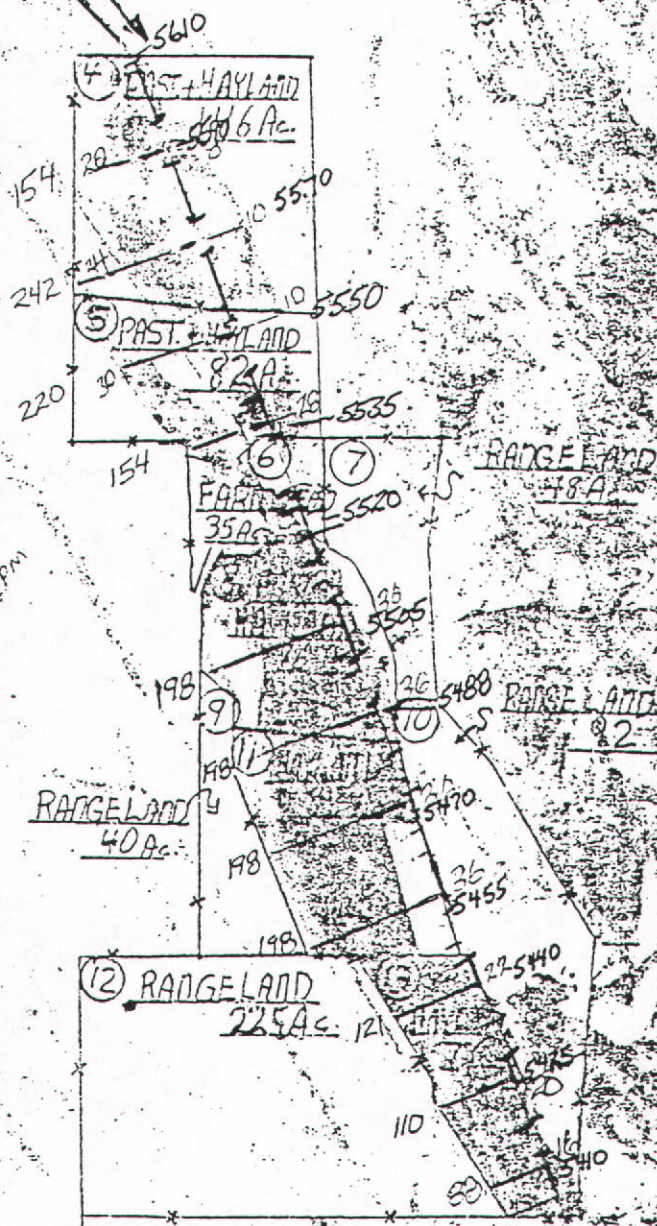
1	MK3 ₂ M/A-1	IIIK ₉
2	RE3 ₂ M/A-1	BV
3	Gj2M/2B-1	BjE
4	RE2 ₂ M/A-1	BVI
5	Gj2 ₂ M/A-1	Bj
6	MK2 ₂ M/A-1	IIIK
7	Gj1 ₂ M/2B-1	BjB



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342.1070 183!
1001MT x 999/1000 = 1800 gpm



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SEP 09 1992

14 RECEIVED
CALIFORNIA
1975

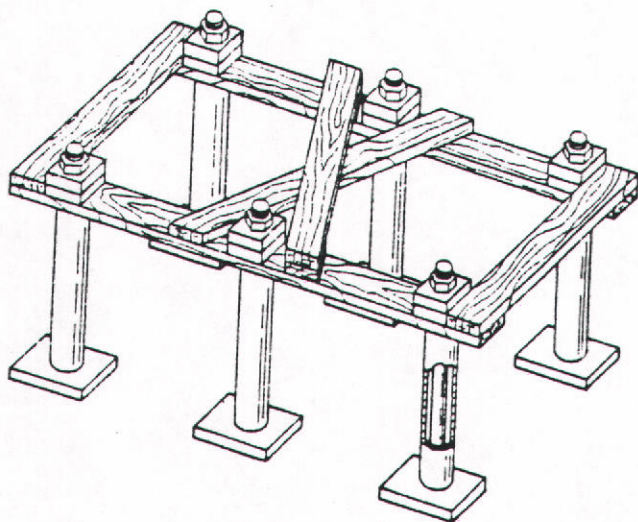


FIGURE 1

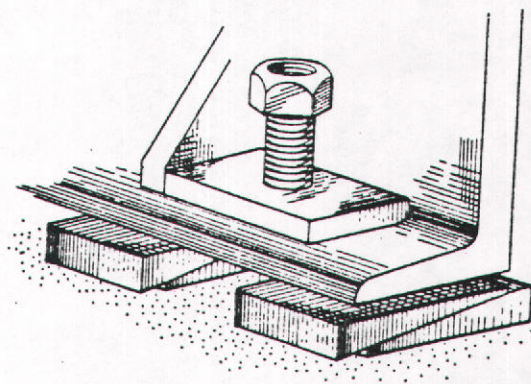


FIGURE 5

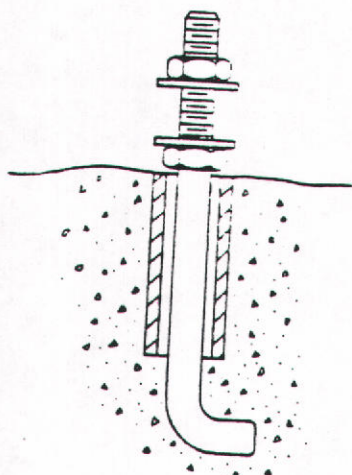


FIGURE 2

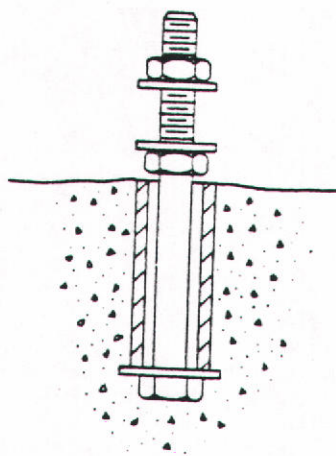


FIGURE 3

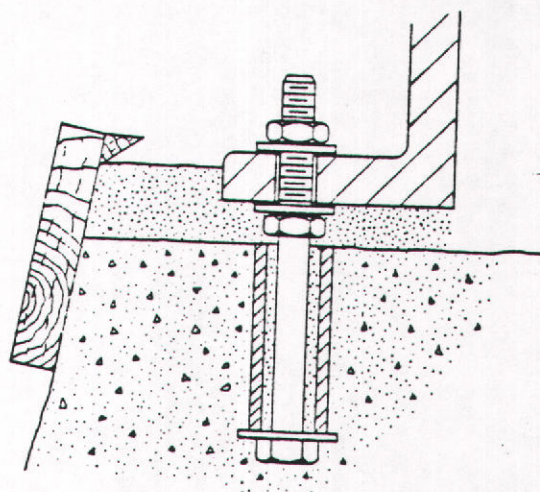


FIGURE 4

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SEP 09 1992

TURBINE COUPLING ALIGNMENT

Precise alignment of turbine and generator is mandatory for correct turbine system performance. To prevent excessive stress on the generator and turbine bearings, the coupling, and the shafts, it is necessary to conduct the following alignment procedure prior to initial startup and thereafter at any time the turbine or generator is serviced.

1. Mount a pair of dial indicators so that one reads the angular runout between the two shafts, and the other reads the concentric runout. While this may be done using standard dial indicator extensions, it is recommended that a set of yokes, such as those shown in Figure 1, be used. These yokes are constructed so that a fork on one yoke engages the other yoke, thus allowing both shafts to be easily turned in unison.
2. Rotate the shafts in unison and read the total indicator runout on the dial indicators. Reposition the units on the baseplate, using shims as necessary to achieve angular and concentric alignment within the tolerances given below:

MAXIMUM TOTAL INDICATOR RUNOUT

Operating Speed	Angular	Concentric
Under 1700 RPM	0.004"	0.006"
1700 - 4000 RPM	0.002"	0.003"

3. When the units are properly aligned, tighten the mounting bolts, then double-check the alignment.

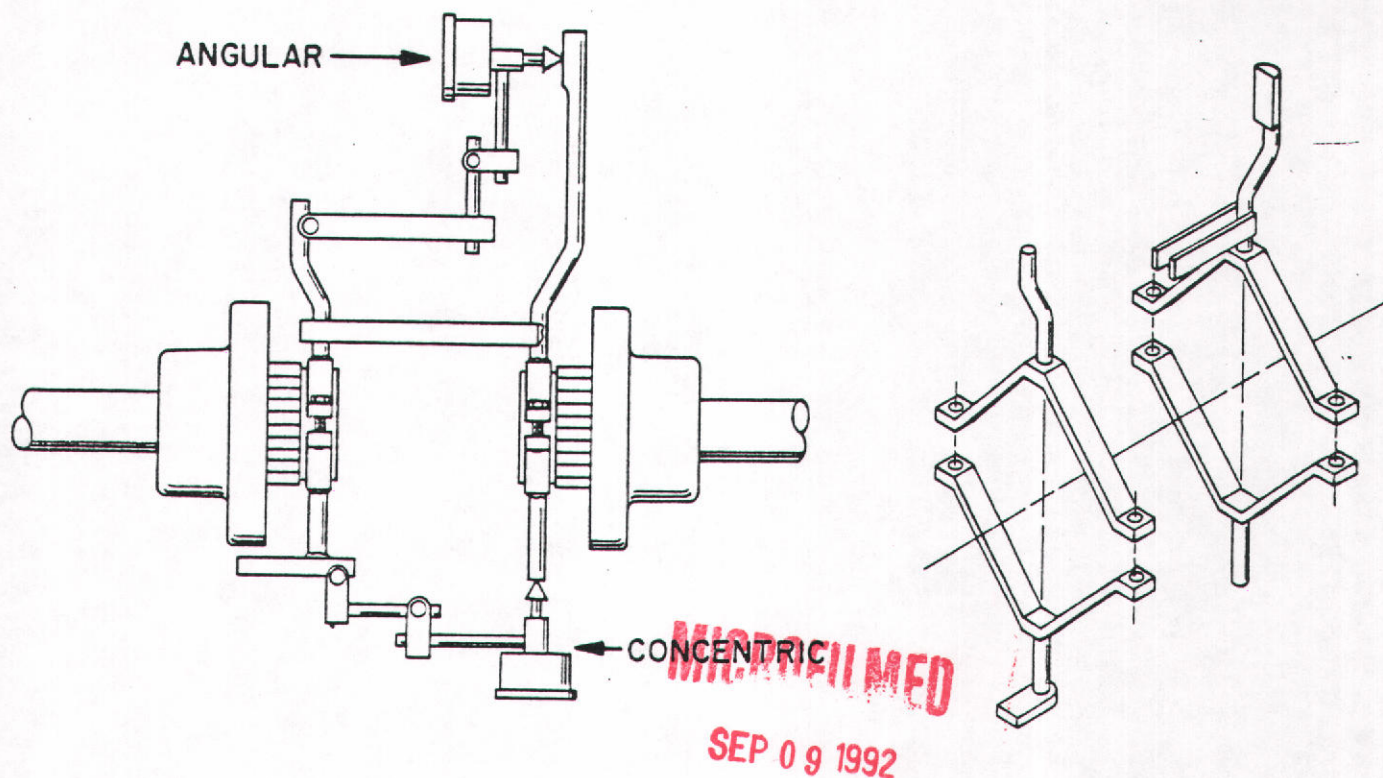
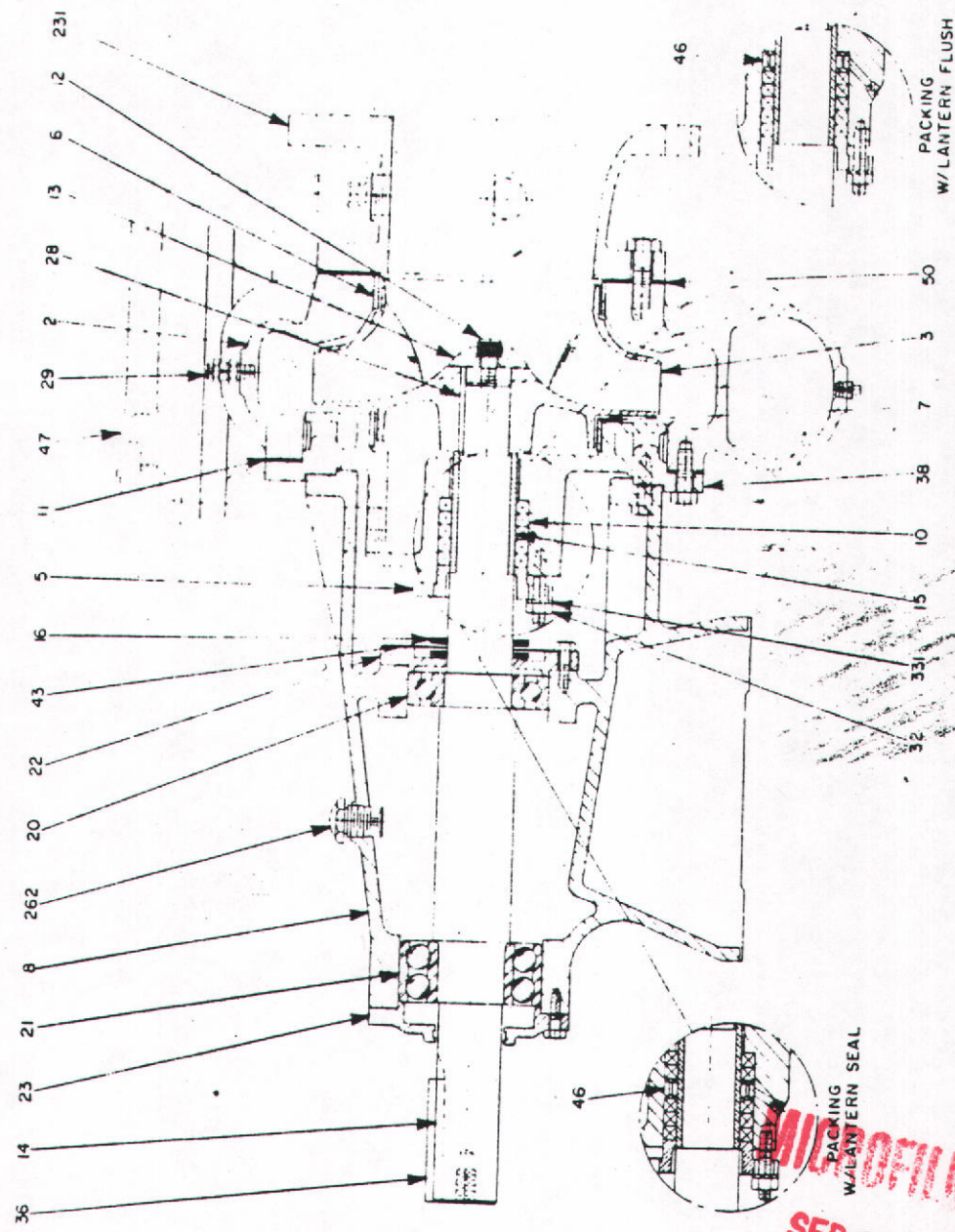


FIGURE 1

PARTS LIST

- 2. Volute
- 3. Impeller
- 5. Packing Gland
- 6. Suction Wear Ring
- 7. Hub Wear Ring
- 8. Frame
- 10. Packing
- 11. Volute Gasket
- 12. RUNNER Lock Screw
- 13. RUNNER Washer
- 14. Shaft
- 15. Shaft Sleeve
- 16. Deflector
- 20. Bearing (P.E.)
- 21. Bearing (D.E.)
- 22. Bearing Cover (P.E.)
- 23. Bearing Cover (D.E.)
- 28. Impeller Key
- 29. Vent Plug
- 32. Gland Stud & Nut
- 36. Shaft Key (D.E.)
- 38. Back Side Plate
- 43. Shower Curtain Shield
- 46. Lantern Ring
- 47. Balance Line
- 50. Suction Spool Gasket
- 231. EXHAUST
- 262. Breather
- 331. Gland Clip (2)



SEP 09 1992

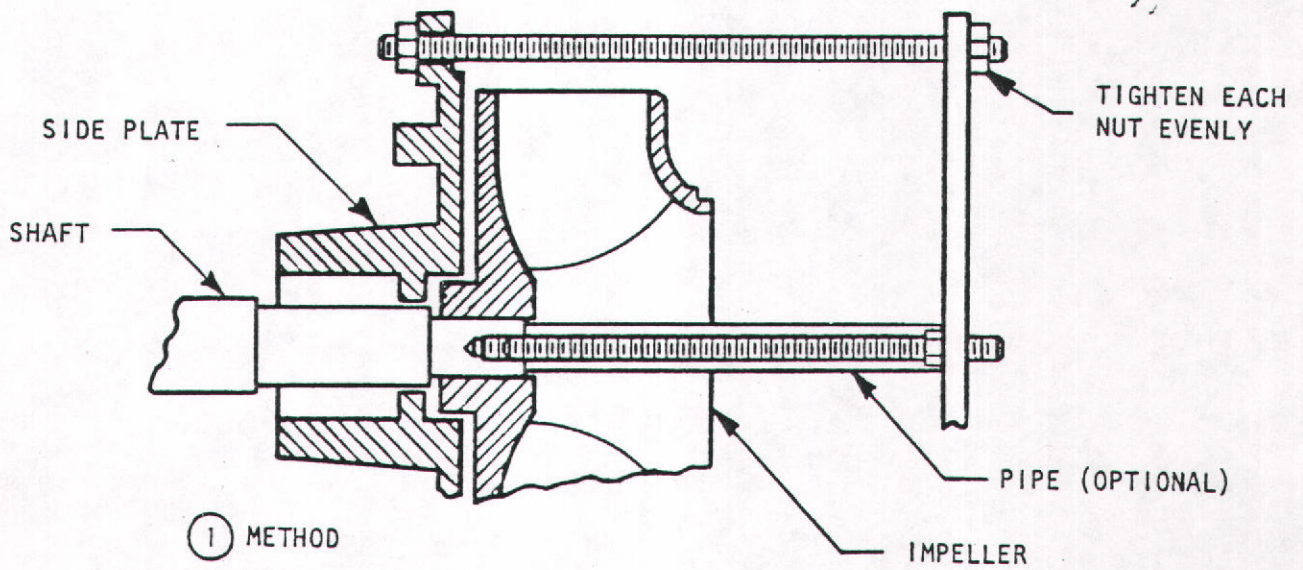
NOT REFILMED

Note: For Seal Arrangements See

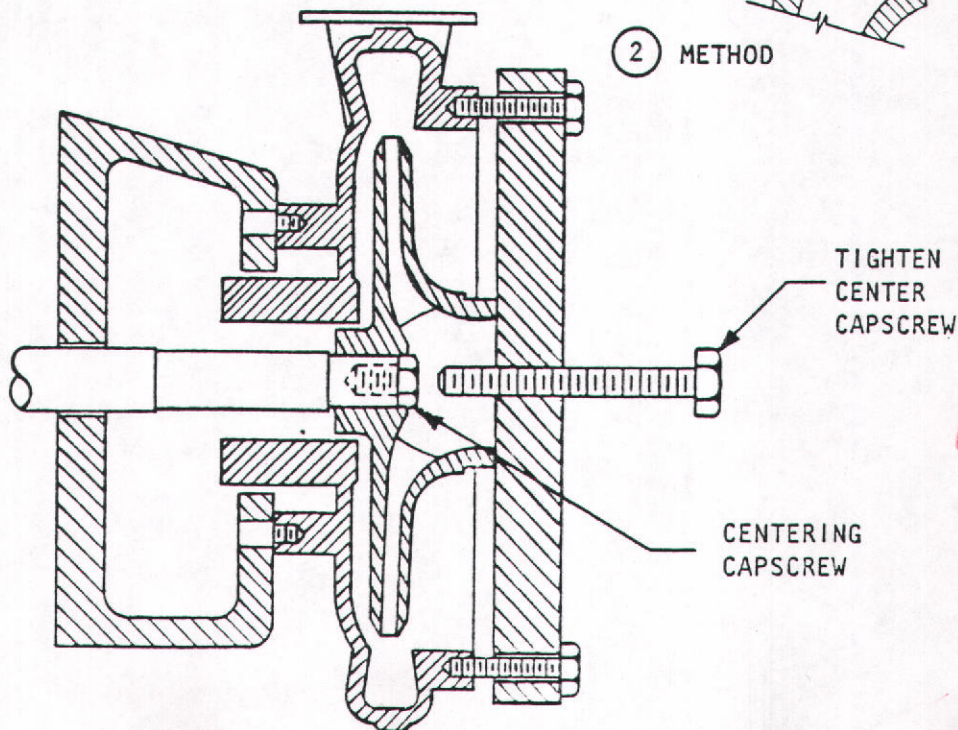
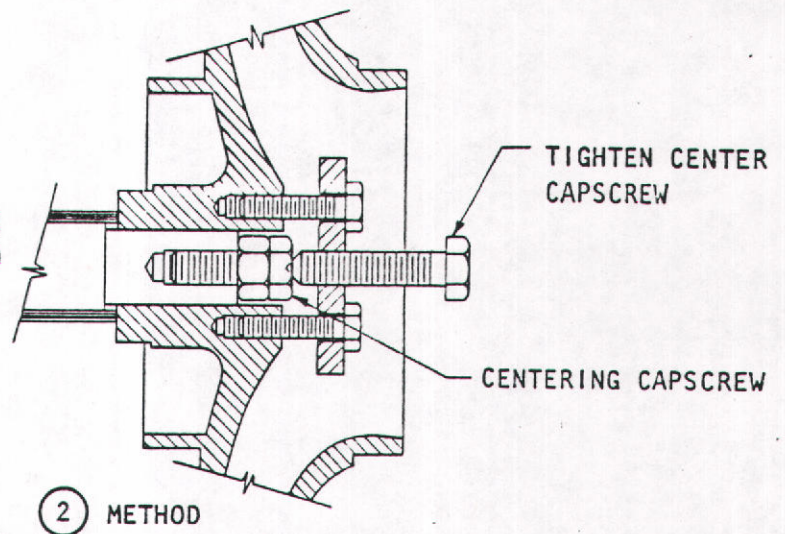
DOUBLE VOLUTE
MODEL "5TR26TR2" NO.8 FRAME
GREASE LUBRICATED

CORNELL MFG. CO. PORTLAND, OREGON

DISMANTLING METHODS



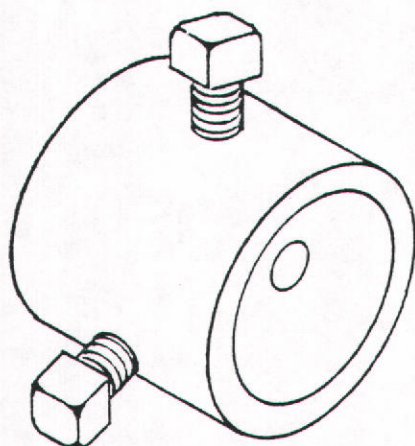
R, H, NW, DELTA AND NON CLOG SERIES
(EXCEPT NL) IMPELLER PULLING METHOD



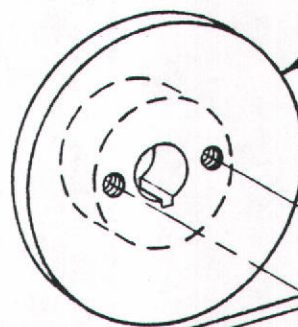
W AND Y SERIES
IMPELLER PULLING METHOD

MICROFILMED

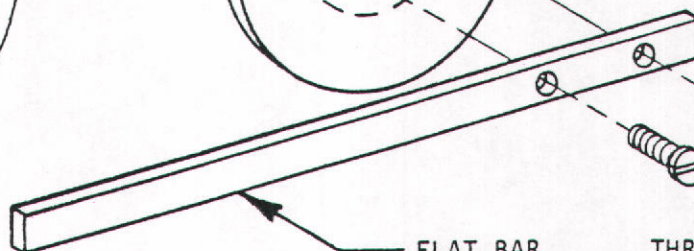
SEP 09 1992



SLEEVE PULLER

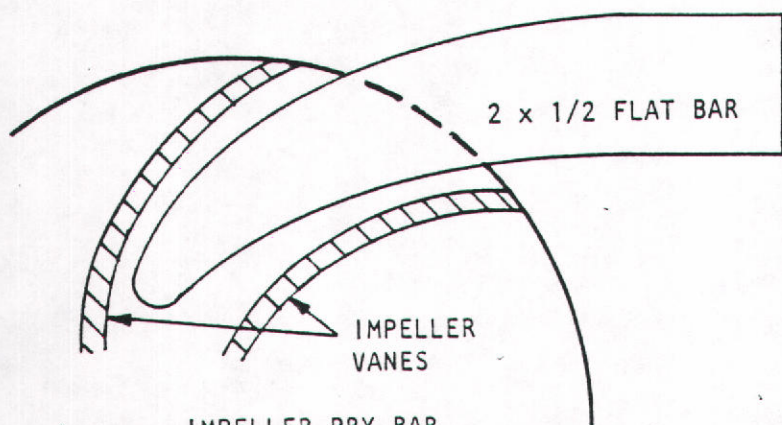


DRIVE HUB OR
COUPLING FLANGE

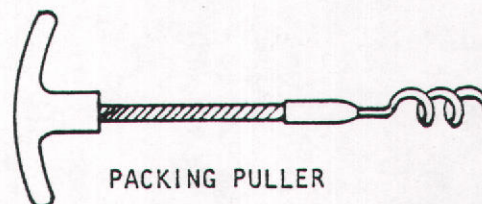


FLAT BAR

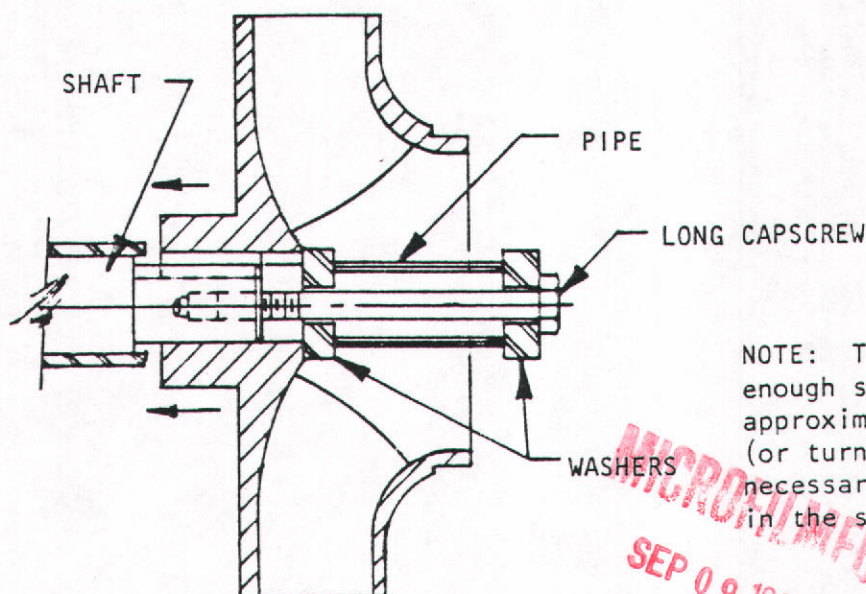
THREADED IMPELLER
PULLING METHOD



IMPELLER PRY BAR
FOR THREADED IMPELLERS



PACKING PULLER



INSTALLING IMPELLER METHOD

NOTE: The cap screw must be long enough so it will enter the shaft approximately eight (8) threads (or turns) by hand. This is necessary to protect the threads in the shaft.

SEP 09 1992

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 32-07170

Priority: February 19, 1991

Maximum Diversion Rate: 2.95 CFS
Maximum Diversion Volume: 1,649.0 AF

It is hereby certified that SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423 has complied with the terms and
conditions of the permit, issued pursuant to Application for Permit dated February 19, 1991; and has
submitted Proof of Beneficial Use on September 27, 1999. An examination indicates that the works
have a diversion capacity of 4.01 cfs of water from:

SOURCE

WARM SPRINGS CREEK

Tributary: SINKS

and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL DIVERSION VOLUME</u>
POWER	01/01 to 12/31	2.95 CFS	1,649.0 AF

LOCATION OF POINT(S) OF DIVERSION:

WARM SPRINGS CREEK NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 7, Twp 10N, Rge 33E, B.M. CLARK County

PLACE OF USE: POWER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	33E	20																	X

CONDITIONS OF APPROVAL

1. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
2. Use of water under this right shall be non-consumptive.
3. The rights for the use of water confirmed in this license shall be junior and subordinate to all rights for the use of water other than hydropower, within the State of Idaho that are initiated later in time than the priority of this right and shall not give rise to any right or claim against any future rights for the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this right.
4. The diversion and use of water for hydropower purposes under this license is subject to review by the Director on or after September 1, 2009. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.
5. The power generation use authorized under this right is for non-commercial, private use only.
6. Rights 32-2011, 32-2060, 32-2081, 32-2112 and 32-7170 when combined shall not exceed a total diversion rate of 10.20 cfs.

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APR 03 2002

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 32-07170

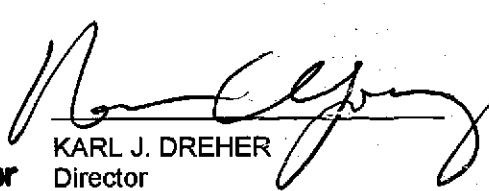
CONDITIONS OF APPROVAL

7. Rights 32-2011, 32-2060 and 32-2081 are also diverted through the point of diversion described above.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed and sealed this 14th day of MARCH, 2002.

Acting for


KARL J. DREHER
Director

MICROFILMED
APR 03 2002

RECEIVED
SEP 17 1999

FOR OFFICE USE ONLY
Amt. of Fee \$: N/A
Receipt No.: _____
Receipt By: _____
Date Received: _____

Department of Water Resources

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

1. Permit No. 32-07170 Telephone No. (208) 657-2583

2. Name(s) of Permit Holder(s): Sullivan Livestock Co.

3. Mailing Address: P.O. Box 191 Dubois, Id. 83423

4. Source of Water: Warm Springs Creek If GROUNDWATER (well), Date Drilled: mo. _____ / yr. _____

a. Well Driller: _____ Drilling Permit Number: _____ - _____ - _____

b. OPTIONAL:
Pump Horsepower: _____ Pressure (psi): _____ Dynamic pumping level (ft): _____

5. Use(s) (as authorized by the water right permit):

Domestic (No. of households): _____ Stockwater (No. and type of stock): _____

Irrigation (No. of acres): _____ Other: Hydro Power

6. Total rate of diversion and/or volume for which proof is submitted: 2.95 cfs OR _____ acre feet

7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)

(This question is not optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)

Measuring Device:	Is a measuring device required?	Yes _____	or No <u>X</u>
	Has the measuring device been installed?	Yes _____	or No <u>X</u>
Flow Measurement Port:	Is a flow measurement port required?	Yes _____	or No <u>X</u>
	Has the measurement port been installed?	Yes _____	or No <u>X</u>

8. Fee Enclosed: \$ _____ (See Fee Schedule on back of the instructions for filing proof of beneficial use)

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: Jared Sullivan Telephone Number: (208) 657-2583

Address: P.O. Box 375 Dubois, Id. 83423

10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder: Louis W. Sullivan, President Date: 9/22/99
(include your title, if on behalf of company or organization)

MICROFILMED

APR 03 2002

RECEIVED
SEP 30 1993
Department of Water Resources

For Office Use Only
\$15 Fee Received by 80
Date 9-29-93
Receipt No. 6019194

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

REQUEST FOR EXTENSION OF TIME
TO PROVIDE ADDITIONAL TIME IN WHICH TO SUBMIT PROOF OF
BENEFICIAL USE FOR A WATER RIGHT PERMIT

The Idaho Department of Water Resources will consider this form as a request that the permit holder(s) be granted an additional period of time in which to complete development of water right under the provisions of Section 42-204, Idaho Code.

Permit No. 32-07170

Name(s) of Permit Holder: Sullivan Livestock Co., Inc., Franklin W. Sullivan, Pres.

Mailing Address: P. O. Box 191, Dubois, Idaho 83423

Date Proof is Due October 1, 1993 Telephone No. (208) 657-2583

Describe what work has been completed toward the development of this water right:
(This must be filled out! If no work has been completed, show "none".)

The project has been completed to the extent that it has been operated on
an experimental basis. Problems developed over the electrical generation
portion of the project which required additional research and adaptation to
allow the project to operate at an optimal level. In excess of Costing \$ 50,000.00

The permit holder(s) has been unable to complete the remainder of the work for the following reasons:

1. The BLM right of way and related concerns regarding the ongoing relation-
ship between the BLM and the permit holder.
 2. Negotiations with the BLM were a source of delay. Flaws in the system
had to be worked out.
 3. An individual has been retained to conduct the necessary testing, but
scheduling conflicts prevent him from completing his findings before 10-1-93.
- Permit holder(s) request an extension to November 30, 1993 Franklin W. Sullivan

FEE: \$15.00

(Signature)*

*If other than permit holder, Power of Attorney must be supplied.

ACTION OF THE DEPARTMENT OF WATER RESOURCES

IT IS HEREBY ORDERED that the above request for extension of time be APPROVED OCT 19 1993
and the time within which to submit proof of beneficial use is extended
to October 1, 1994.

Signed this 4th day October, 19 93

J. Glen Saylor
Chief, Water Allocation Bureau

State of Idaho
Department of Water Resources

Permit To Appropriate Water

NO. 32-07170

Proposed Priority: February 19, 1991 Maximum Diversion Rate: 8.40 CFS

This is to certify, that SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

has applied for a permit to appropriate water from:

WARM SPRING CREEK tributary of SINKS

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
POWER	01/01 to 12/31	8.40 CFS

LOCATION OF POINT(S) OF DIVERSION: NESESW , Sec. 7, Township 10N, Range 33E
CLARK County

PLACE OF USE: POWER
TWN RGE SEC

10N 33E 20 NESE

CONDITIONS/REMARKS:

1. Proof of construction of works and application of water to beneficial use shall be submitted on or before October 1, 1993.
2. Subject to all prior water rights.
3. This right is subject to the provisions of Sections 42-205 through 42-210, Idaho Code, restricting the sale, transfer, assignment, or mortgage of this right. Failure to comply with these provisions is cause for immediate cancellation of this right.
4. This right does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.
5. The water right acquired under this permit for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.
6. The diversion and use of water under this right and any license subsequently issued is subject to review by the Director on the date(s) of expiration of any license issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

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SEP 08 1992

State of Idaho
Department of Water Resources

Permit To Appropriate Water

NO. 32-07170

CONDITIONS/REMARKS:

7. Use of water under this right shall be non-consumptive.
8. The issuance of this right in no way grants any right-of-way or easement across the land of another.
9. The power generation use authorized under this permit is for non-commercial, private use only.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code.
Witness the signature of the Director, affixed at Boise, this

3rd day of September, 1992

R. Keith Higginson
R. Keith Higginson, Director

for

MICROFILMED

SEP 09 1992

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Sullivan Livestock Company, an Idaho Corporation Phone 208-657-2583
Post office address P.O. Box 191, Dubois, ID 83423
2. Source of water supply Warm Spring Creek which is a tributary of N/A (sinks)
3. Location of point of diversion is NE $\frac{1}{4}$ of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, Govt. Lot _____
Sec. 7 Township 10N Range 33E B.M. Clark County; additional
points of diversion if any: _____
4. Water will be used for the following purposes:
Amount 8.40 ^{cfs} for power purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated is (a) 8.40 _{cubic feet per second} and/or (b) _____ _{acre feet per annum}
6. Proposed diverting works:
 - a. Description of ditches, flumes, pumps, headgates, etc. A cement embankment gathers water and moves another pipe, then to a bubbler, then into the pipeline.
 - b. Height of storage dam N/A feet; active reservoir capacity N/A acre-feet; total reservoir capacity N/A acre-feet; period of year when water will be diverted to storage: N/A to N/A inclusive.
 - c. Proposed well diameter is N/A inches; proposed depth of well is N/A feet.
 - d. Is ground water with a temperature of greater than 90°F being sought? N/A
7. Time required for the completion of the works and application of the water to the proposed beneficial use is 1 year years (minimum 1 year).

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SEP 09 1992

a place for animal watering in accordance with the requests of the

12. Remarks: from both. Along the pipeline water is diverted to provide

and BLM; permission for installation of the pipeline has been obtained

Pipeline crosses land owned by Ball Brothers applicant to make this filing.

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the

b. Who owns the land to be irrigated or place of use? Sullivan Livestock Company

11. a. Who owns the property at the point of diversion? SULLIVAN LIVESTOCK COMPANY

~~a water right in the same water for irrigation purposes~~

10. Describe any other water rights used for the same purposes as described above. Applicant has

Sullivan Livestock Company

Generator sits on the east side of Warm Springs Channel near headquarters of

Total number of acres to be irrigated.

[illegible]

ponding place of use below. See instructions for standard symbols.

b. If water is used for other purposes, place a symbol of the use (example: *D for Domestic*) in the corresponding column.

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.

9. Description of place of use:

e. Other, describe fully. This power generation is for applicant's own use.

d. Domestic; show number of households.

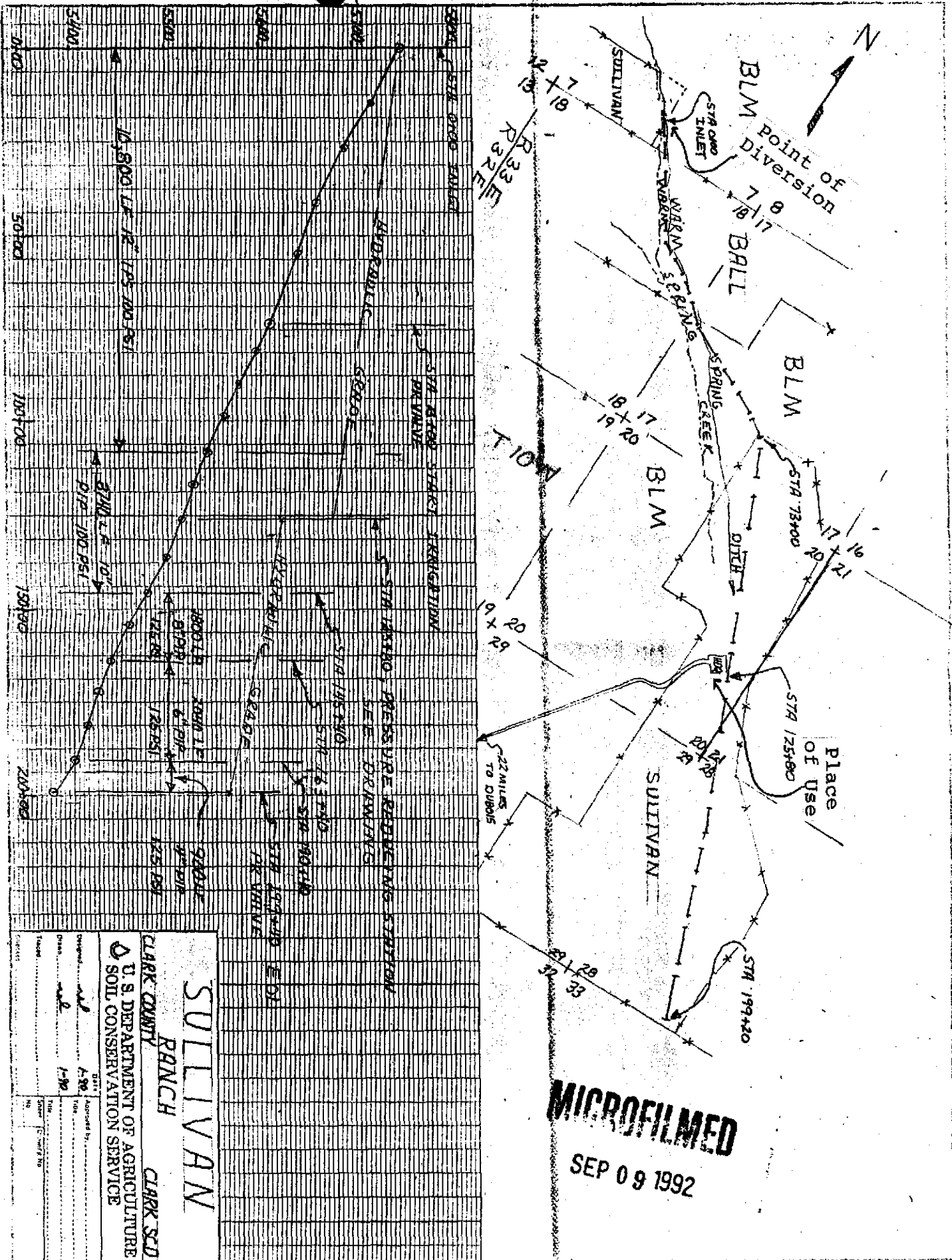
c. Municipal; show name of municipality.

b. Stockwatering; list number and kind of livestock.

a. Hydropower, show total feet of head and proposed capacity in KW. with 280' of fall

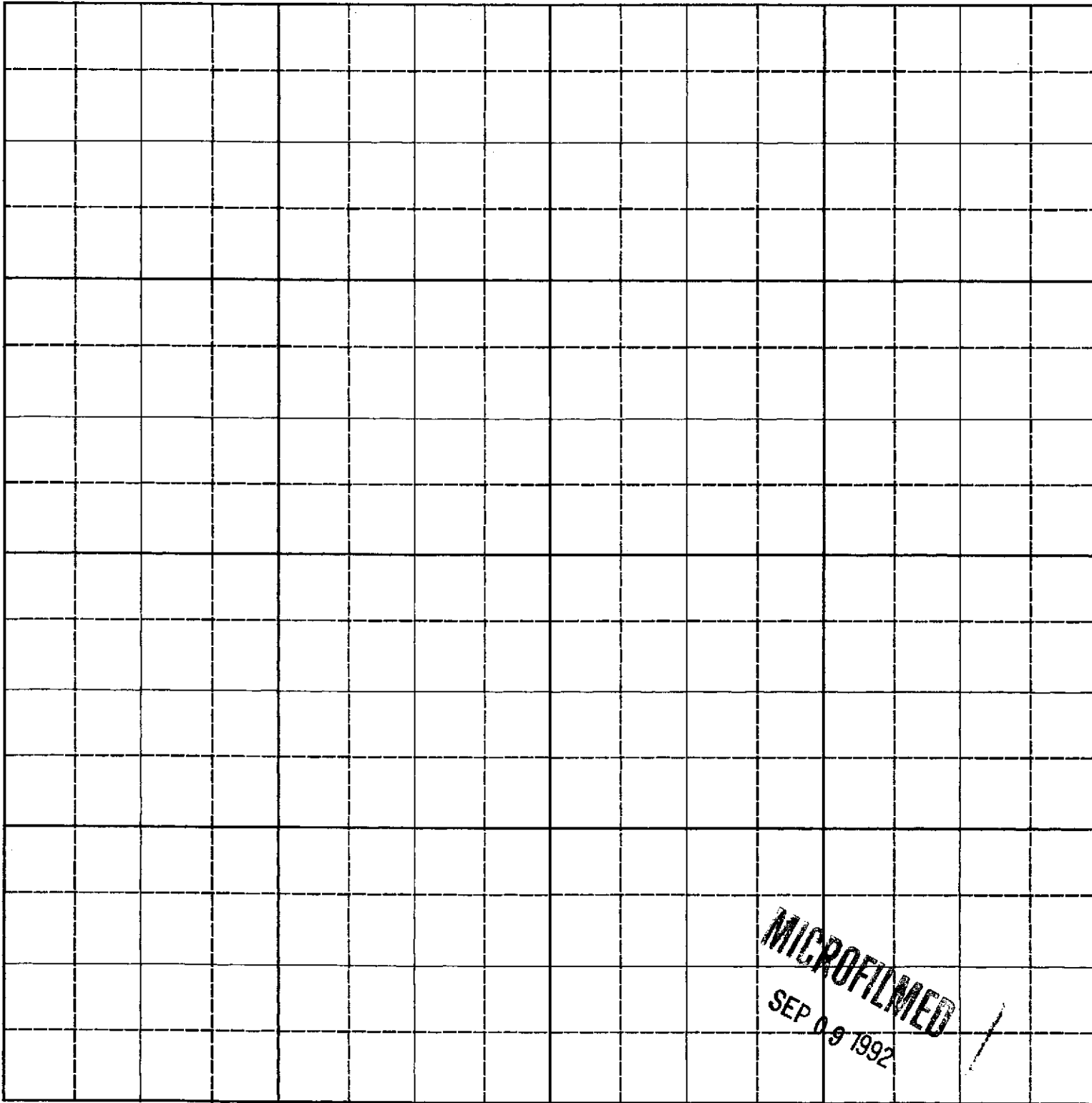
8. Description of proposed uses (if irrigation only, go to item 9):

32-7170
36-8652



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Franklin W. Sullivan, President

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Received by OW Date 2-19-91 Time 4:15 P
Fee \$ 4.00 Received by HVS # E015705 Date 2-20-91
Publication prepared by RB Date 4-4-91 Published in Post-Register
Publication approved OW Date 4-26-91

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. _____, and said application is hereby _____.

1. Approval of said application is subject to the following limitations and conditions:

a. SUBJECT TO ALL PRIOR WATER RIGHTS.

b. Proof of construction of works and application of water to beneficial use shall be submitted on or before _____, 19____.

c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

d. The water right acquired under this permit if for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against any future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of this permit.

e. Other: _____

The officers of Sullivan Livestock Company, Inc. as of February 6, 1991, are as follows:

President:	Franklin W. Sullivan
Vice President:	Kathleen Young
Secretary/Treasurer:	Lois Sullivan
Special Advisor to the President:	M. Frank Sullivan


Franklin W. Sullivan

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS TO BE USED
FOR POWER PURPOSES

RECEIVED

MAY 13 1991

A. Establishment of Residency: (Complete either 1, or 2).

Department of Water Resources
Eastern District Office

1. Individual Applicant or Individual Members of a Partnership:

I, _____ of _____,
(name) (city)

county of _____, State of Idaho, being duly sworn, do
hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I, FRANKLIN W. SULLIVAN of DUBOIS,
(name) (city)

County of CLARK, State of Idaho, being duly sworn, depose
and say: That I am the designated registered agent of the SULLIVAN LIVESTOCK
COMPANY: that as such I am in charge of the registered
(name of corporation)

office of the said corporation as required by Section 30-1-12, Idaho Code, at
DUBOIS Idaho, wherein are kept the corporate records required
(city)

by Section 30-1-52, Idaho Code: and that SULLIVAN LIVESTOCK COMPANY
(name of corporation)

is a corporation qualified to do business in the State of Idaho under the laws of
the State of Idaho.

B. ~~Ownership~~ of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for
Permit:

(check one)

- ☐ Will not utilize existing man-made irrigation facilities such as a dam or a
canal.
- ☐ Will utilize existing man-made irrigation facilities such as a dam or a canal,
and permission of the owner is documented in an affidavit attached hereto.
- ☒ Will utilize existing man-made irrigation facilities such as a dam or a canal
and the owner of the facilities is the signee of this affidavit.

State of Idaho)
County of Bonneville) ss.

Franklin W. Sullivan
Applicant
FRANKLIN W. SULLIVAN

On this 10th day of May, 19 91, personally
appeared before me the signer(s) of the above instrument, who duly acknowledged
to me that he (she) (they) executed the same.

Leont W. Gamble
Notary Public residing at
Idaho Falls, Idaho

seal

My commission expires:

6/15/92

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SEP 09 1992

Proof of Publication The Post-Register

RECEIVED

APR 16 1991

Department of Water Resources
Eastern District Office

State of Idaho, }
County of Bonneville } ss

I, Ted Delezene, first being duly sworn, depose and say: That I am the
Foreman of The Post Company, a corporation of Idaho Falls, Bonneville
County, Idaho, publishers of The Post-Register, a newspaper of general circulation, published daily, except
Saturday, at Idaho Falls, Idaho; said Post-Register being a consolidation of the Idaho Falls Times, established in
the year 1890, The Idaho Register, established in the year 1880 and the Idaho Falls Post, established in 1903,
such consolidation being made on the 1st day of November, 1931, and each of said newspapers have been
published continuously and uninterruptedly, prior to consolidation, for more than seventy-eight (78) weeks and
said Post-Register having been published continuously and uninterruptedly from the date of such consolidation,
up to and including the last publication of notice hereinafter referred to.

That the notice, of which a copy is hereto attached and made a part of this affidavit, was published in
said Post-Register for Two Issues consecutive weeks, first publication having been made
on the 4th day of April, 1991, last publication
having been made on the 11th day of April, 1991, and that the
said notice was published in the regular and entire issue of said paper on the respective dates of publication, and
that such notice was published in the newspaper and not in a supplement.

Subscribed and sworn to before me, this 12th day of April, 1991.

Cathy von Borstel

Notary Public

My commission expires March 5, 1996

B10

23-07147
U.S. DEPT. OF AGRICULTURE
FOREST SERVICE
TARGHEE NATIONAL FOREST
P.O. BOX 208
ST. ANTHONY, ID 83445
Source: DRY CANYON SPRING
Tributary: DRY CANYON
Diversion Pt: SWNWSW Sec 23 T 03N R
43E
Use: STOCKWATER (.020 CFS)
POWER (.020 CFS)
Total Diversion: (.040 CFS)
Date Filed: 7/2/1990
In: T03N R43E S23 NWSW
S27 SWSE
S32 SWNE
S33 SWNW SWSW

23-07148
WILLIAM S. & IDA T. HOLDEN TRUST
291 S. RIDGE AVE.
IDAHO FALLS, ID 83402
Source: GROUNDWATER
Diversion Pt: NENE Sec 17 T 01N R 44E
Use: IRRIGATION (3,000 CFS)
Total Diversion (3,000 CFS)
Date Filed: 2/27/1991
In: T01N R44E S17 NENE NWNE SWNE

SENE
153.0 ACRES TOTAL
32-07170
SULLIVAN LIVESTOCK CO.
AN IDAHO CORP.
P.O. BOX 191
DUBOIS, ID 83423
Source: WARM SPRING CREEK
Tributary: SINKS
Diversion Pt: NESESW Sec 7 T 10N R 33E
Use: POWER (8,400 CFS)
Total Diversion: (8,400 CFS)
Date Filed: 2/19/1991
In: T10N R33E S20 NESE

The permit(s) will be subject to all prior
water rights. Protests may be submitted
based on the criteria of Sec. 42-203A, Idaho
Code and/or the new public interest cri-
teria of Sec. 42-203C, Idaho Code. Protests
must be filed with the Director, Dept. of
Water Resources, 150 Shoup Ave., Suite
15, Idaho Falls, Idaho 83402 on or before
APRIL 22, 1991.

R. Keith Higginson, Director
Published: April 4, 11, 1991

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SEP 09 1992



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098

Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

March 15, 2002

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

RE: License No. 32-7170 - Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

The license is a PRELIMINARY ORDER issued by the Department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-327-7946.

Sincerely,

Shelley W. Keen

Water Rights Supervisor

SWK:klt

Enclosure(s)

cc: KENT GAUCHAY

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APR 03 2002

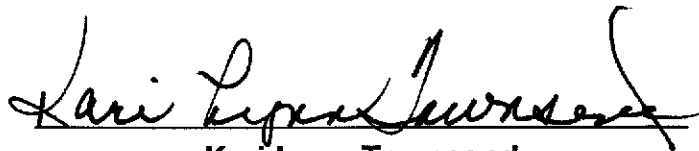
CERTIFICATE OF SERVICE

I hereby certify that on March 15, 2002 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDER(Approved License) to the person(s) listed below:

RE: WATER RIGHT NO. 32-7170

**SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423**

**KENT GAUCHAY
SIMPSON GAUCHAY & GARDNER
PO BOX 50484
IDAHO FALLS ID 83405-0484**


Kari Lynn Townsend
Secretary

MICROFILMED
APR 03 2002

**EXPLANATORY INFORMATION
TO ACCOMPANY A
PRELIMINARY ORDER**

The accompanying order or approved document is a "Preliminary Order" issued by the department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action of the Department of Water Resources (department) unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the department or the Idaho Water Resource Board (Board) is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

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APR 03 2002

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) the petition for reconsideration is disposed of; or
- (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

MEMORANDUM

To: File 32-7170

From: Sharla

Date: March 5, 2002

Re: Rate of Diversion Limitation

Three other decreed rights share the point of diversion listed in this right along with another point of diversion located in the SWNW, S36, T11N, R32E; a fourth (ground water) right lists this point as a rediversion point. Rights 32-2060 and 32-2081 were recommended and decreed for points of diversion reflected as ACCOMPLISHED TRANSFERS, so there has been no recent measurement of the points of diversion described by them.

On this date, I spoke with Ernie Carlsen as to why the condition would have been added to the decreed rights without having made a measurement. He indicated that Sullivan Livestock is the only user of Warm Springs Creek other than some Forest Service and BLM stock uses and so they pretty much divert whatever water there is available at the time. He doubted that Warm Springs Creek ever runs with 10.20 cfs except for times of flooding. So the three existing rights were totaled for a maximum limit.

Although the limit wasn't based on an actual measurement, the fact that the creek can only run with 10.20 cfs in times of extreme flooding and based on the system design whereby water is diverted through a pipe to irrigate lands both upstream and downstream of the power generating facility, it is appropriate to carry the 10.20 cfs limitation on this license for consistency

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APR 03 2002

LICENSE REVIEW CHECKLIST

Reviewed by Sharla Curtis on

Permit No. 32-7170

BU Fee Pd \$

Name/Address: ☒ OK ☐ CHANGE

Govt Lots ☐ n/a ☐ plat copy attached

AREA OF CONCERN: No/Yes ESPA Moratorium GWMA TRUST/NON-TRUST

GROUNDWATER: (✓Flow Chart)

Supp irr (irr = only use) - 065-104
Supp irr (+ other uses) - 100-105
≤ 0.24 cfs/5 acres - No MD
> 0.24 cfs/5 acres - 01M (if on permit)

LOCATION:

Trust - R55(consumptive uses)
Non-Trust - 048

SURFACE WATER: (✓Flow Chart)

In/Above MSF - WB9
WD - R04 (WD#)
≤ 0.20 cfs/others - R02- 01P or No MD
> 0.20 cfs - R43

SPRINGS/SINK, INACTIVE WD & REST OF STATE

≤ 0.24 cfs/5 acres - No MD
> 0.24 cfs/5 acres - 01M or No MD

RIVER BASINS: (SW special considerations)

SNAKE R (01) - W22, N/A
(02,03) - WB9 if above Weiser
Payette R (65) - 047(Payette Lake)
Salmon R (70's) - 029 (fish screens)
Weiser R (67) - 086-087

USES:

STORAGE - 18A-R02-01P-18B-NA
IRR ≤ 5 ac - R66/R67/R68/R69 (0.03 cfs/ac)
> 5 ac - R62/R63/R64/R65 (0.02 cfs/ac)
STOCKWATER - R37 (BLM/USFS)
MINING - 106
FISH PROP - 029(70'S only)-042-106
HEAT/COOL - R07(injection well)
FIRE PROT. - 077

USES:

POWER - R22-R23 (+uses) ~~025-106-W42-W43-027~~
MUNICIPAL
Restricted area - 022,075
Irr., GW supp to SW - 102
DOMESTIC
Surface water - WB5 (Big Wood or Boise above Star Bridge)
27A (Payette R)
> 1 in restricted area - 070-071-075(no parks/common areas, etc)
Irr use listed separate - WB5
Lawn/garden included - W01

ADVANCE PRIORITY? ☐ Yes ☒ No

MISC CONDITIONS/REMARKS:

Multiple pd's per ¼¼ - W32
Subd lot desc (pd) - W59
Subd lot desc (pu) - W60
Use definitions - W02 example - C/tire shop
Non-consumptive - 027
Water Quality - 106-R07
Mitigation - 121 (if on permit)
PFU acre limit - W27

CHECK NEW IRR SEASON MAP

OVERLAP ANALYSIS/RATES/VOLUMES:

PD overlap rights - W35-W36 Right #
PU overlap rights - WB7-W31(<1 ac)
GW replaced SW - 050

Permit Rate 8.40 cfs Fee Limit N/A cert exam cfs
Measured 2.95 cfs Theoretical cfs

Use	Rate	Volume
Power	2.95 cfs	1649.0 af
	cfs	af
	cfs	af
TOTALS	2.95 cfs	1649.0 af

OTHER CONDITIONS/REMARKS/COMMENTS

SRBA Claim Filed ☐ Yes ☒ No

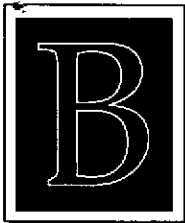
AMENDMENTS REQUIRED ☐ Yes ☒ No

If no, is a claim required: ☐ Yes ☒ No

non-commercial, private use

only

No power purchase contract not
FERC regulated



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics

Hydrology

Water Resources

RECEIVED

FEB 19 2002

Department of Water Resources

February 12, 2002

Shelly Keen
Idaho Department of Water Resources
1301 North Orchard
Boise, ID 83706

By FAX and mail *rec'd 2/12*

Subject: Permit No 32-07170 Beneficial Use Exam

Dear Shelly:

The beneficial use field report submitted in connection with the proof of beneficial use did not indicate the annual volume for the hydroelectric generation use as you indicated in your letter of December 14, 2001. At the time of the submittal of the report, it was my understanding that for water rights for hydro this was not a required item. In any case, I have further corresponded with the owners of the ranch, namely Mr. Jared Sullivan, who outlined the operation of the hydro plant.

The electrical output from the hydro plant is used entirely on the ranch. The pipeline diverting from Warm Springs Creek serves both as a penstock for the hydro plant and as part of the distribution system for irrigation. Water rights, 32-2011, 32-2060, 32-2081, and 32-2112 are appurtenant to the ranch and have been claimed and recommended with a permissible place of use identical on all rights. Water right 32-2112 is for a ground water diversion with injection and re-diversion at the pipeline. The points of diversion under these rights include the pipeline diversion through which the power right 32-7170 is diverted. Based on some NRCS design data, which I have, the pipeline appears to have been designed for 1800 gpm (4.01 cfs).

Irrigation water is diverted from the pipeline to lands upstream of the hydro and can be bypassed around the hydro to sprinkler irrigated lands down stream. Water passing through the hydro flows back into the creek and is diverted downstream into ditches serving lands under the irrigation water rights.

The hydro has been operated on-line at all times. During the non-irrigation season, from April 15 through October 1, the penstock carries only water going through the hydro plant, which was measured at 2.96 cfs during the

CHARLES E.
BROCKWAY,
PH.D., P.E.

CHARLES G.
BROCKWAY,
PH.D., P.E.

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

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APR 9 3 2002

field exam. During the irrigation season, the hydro operates but sometimes with diminished flow because of irrigation diversions. However, during part of the irrigation season, the full flow passes through the hydro and is utilized downstream for irrigation. Based on discussions with Jared Sullivan and operation scenario was developed and I have developed an estimated seasonal volume use distribution for flow through the hydro as shown in Table 1.

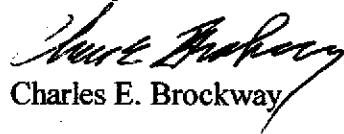
Table 1. Estimated Seasonal Use of Water for Hydroelectric Generation
Sullivan Land and Livestock

Month	Average Discharge cfs	Monthly Volume af
Jan	2.95	181
Feb	2.95	163
Mar	2.95	181
Apr	2.0	118
May	2.0	123
June	1.25	74
July	1.25	77
Aug	1.25	77
Sept	2.0	118
Oct	2.95	181
Nov	2.95	175
Dec	2.95	181
Total		1649

The estimated season use through the hydro is therefore 1649 acre feet. I believe this information answers the questions, which you raised in your letter of December 14, 2001, which will allow completion of processing of the proof of beneficial use and licensing of the water right.

If you have additional questions, please call.

Sincerely,



Charles E. Brockway

Cc: Kent W. Gauchay
Sullivan Livestock Co

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APR 03 2002



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

February 5, 2002

KENT W GAUCHAY
SIMPSON & GAUCHAY
PO BOX 50484
IDAHO FALLS ID 83405-0484

VIA FAX: 208-522-4295

RE: Water Appropriation Permit No. 32-7170
Sullivan Livestock Company, Inc.

Dear Mr. Gauchay:

I recently received your letter asking for an open extension to complete the beneficial use field report for Permit No. 32-7170 without loss of priority. Rule 35.02.c. of the Beneficial Use Examination Rules (IDAPA 37.03.02) says:

If the director determines that a field report is acceptable but that additional information is needed to clarify the field report, he will notify the certified water right examiner in writing of the information required. If the additional information is not submitted within thirty (30) days or within the time specified in the written notice, the priority date of the permit will be advanced one (1) day for each day the information submittal is late. Failure to submit the required information within one (1) year of the date of the department's request is cause for the director to take action to cancel the permit.

On February 22, 2000, IDWR sent a letter to Sullivan Livestock Co., Inc., requesting additional information in support of the field report. A copy of the letter was sent to the field examiner, Mr. Charles E. Brockway. On May 19, 2000, IDWR repeated the request via FAX to the examiner. On December 14, 2001, IDWR re-initiated the request in a letter sent to Sullivan Livestock Co., Inc., and copied to the field examiner. At your request, on January 11, 2002, a verbal extension was granted for an additional 30 days.

The rule quoted above does not provide for extensions of time to comply with the request for additional information. In trying to be prudent, IDWR has renewed the request many times without applying the penalty called for in the rule. As a result, the intent of the rule, which is to see that the business of establishing proof of beneficial use is performed expeditiously, may already have been violated.

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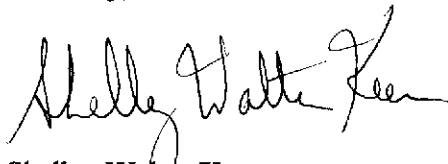
SEP 03 2002

Kent W. Gauchay
February 5, 2002
Page 2

Beneficial Use Examination Rule 35.02.c. was invoked by the request made in writing on December 14, 2001. Thirty days from December 14 is January 13, a Sunday, so the 30-day period closed on Monday, January 14, 2002. As a matter of prudence, and perhaps without support in the rule, a 30-day verbal extension was given and noted in the water right file on January 11, 2002. Thirty days from January 14, 2002, is Wednesday, February 13, 2002. To avoid advancement of the priority date of the permit, the additional information requested by IDWR must be submitted by February 13, 2002. If the additional information is submitted after that date, the priority date of the permit will be advanced in accordance with Beneficial Use Examination Rule 35.02.c.

If you have any questions, please call me at 208-327-7946, or email me at skeen@idwr.state.id.us.

Sincerely,

A handwritten signature in cursive script, reading "Shelley Walter Keen".

Shelley Walter Keen
Water Rights Supervisor

Copy: Charles Brockway, Sr.

RECEIVED

SIMPSON & GAUCHAY

ATTORNEYS AT LAW
497 NORTH CAPITAL AVENUE, SUITE 200
POST OFFICE BOX 50484
IDAHO FALLS, IDAHO 83405-0484

FEB - 4 2002

Department of Water Resources

CRAIG W. SIMPSON
KENT W. GAUCHAY

TELEPHONE
(208) 523-2000
FACSIMILE
(208) 522-4295

February 1, 2002

Shelley Keen, Water Rights Supervisor
Idaho Department of Water Resources
1301 N. Orchard St.
P.O. Box 83720
Boise, ID 83720-0098

Re: *Water Right No. 32-7176*
Claimant: Sullivan Livestock Company, Inc.

Dear Shelley:

I write once again in follow-up of the above-referenced matter. On January 29, 2002, I spoke with Charles Brockway, Sr. Mr. Brockway handled the gathering of the information that was submitted to the IDWR on the initial application. Mr. Brockway is in the process of gathering additional information that will address the issues raised in your letter of December 14, 2001.

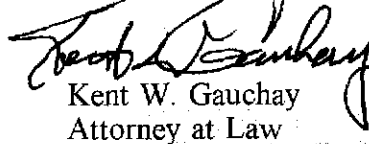
I wanted to let you know that we are working diligently to gather the information and submit it to you so that your questions and concerns can be addressed. If you have any questions or concerns regarding this, I would appreciate hearing from you.

I anticipate that Mr. Brockway will gather the information and submit it to you in the near future. However, I would like an open extension on this to ensure that no loss of a priority date is incurred while we are gathering this information. Mr. Brockway has always been very efficient and timely in gathering information, and I have every reason to suspect that he will do likewise here.

Thank you.

Sincerely,

SIMPSON & GAUCHAY


Kent W. Gauchay
Attorney at Law

KWG/lrr
pc: Sullivan Livestock Co.
Charles Broadway, Sr.
lrr/skeen.1

MICROFILMED

APR 03 2002

SIMPSON & GAUCHAY
ATTORNEYS AT LAW
407 NORTH CAPITAL AVENUE, SUITE 200
POST OFFICE BOX 50484
IDAHO FALLS, IDAHO 83405-0484

CRAIG W. SIMPSON
KENT W. GAUCHAY

TELEPHONE
(208) 523-2000
FACSIMILE
(208) 522-4295

January 14, 2002

RECEIVED

JAN 14 2002

Department of Water Resources

Shelley Keen
Water Rights Supervisor
Idaho Department of Water Resources
1301 N. Orchard Street
P.O. Box 83720
Boise Idaho 83720-0098

VIA FAX: 208-327-7866

Re: Water Right No.:32-7170
Claimant: Sullivan Livestock Company Inc.

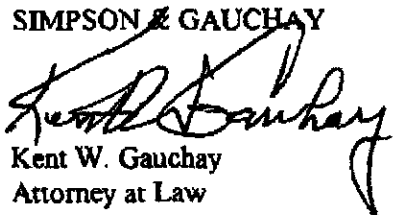
Dear Shelley:

I write in follow-up of our telephone conversation of January 11, 2002 regarding Sullivan Livestock Company. It is my understanding you are giving Sullivan Livestock Company an additional thirty (30) days to respond to the issues raised in your letter of December 14, 2001. If this is not correct please contact me.

Thank you for your cooperation.

Sincerely,

SIMPSON & GAUCHAY


Kent W. Gauchay
Attorney at Law

KWG/hp
p.c. Sullivan Livestock Co.

MICROFILMED

APR 03 2002

MEMORANDUM

DATE: January 11, 2002

TO: Water Right File 32-7170

FROM: Shelley W. Keen *SWK*

RE: More time to submit additional information

Today attorney Ken Guchet (spelling?) called to ask for more time to respond to my request for additional information. We agreed to an additional 30 days.

MICROFILMED

S:\SKeen\Wrmemos\Memo.doc APR 03 2002



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098

Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

December 14, 2001

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

RE: Water Right No. 32-7170

Dear Water Right Holder:

I am reviewing the proof of beneficial use statement and the Beneficial Use Field Report you submitted to IDWR on September 24, 1999, in connection with Permit 32-7170. As noted in the letter sent to you by Sharla Curtis of this office on February 22, 2000, there are a couple of items that must be addressed by the field examiner before IDWR can complete the review necessary to issue a water right license. Specifically, the following three items should be addressed.

- The examiner did not recommend an annual diversion volume for hydropower purposes. The annual diversion volume should be based on actual use during the authorized development period, which ended on October 1, 1994.
- The relationship of this water right to rights 32-2011, 32-2060, 32-2081, and 32-2112 is unclear. Do they share a single point of diversion? Is the capacity of the pipeline the maximum amount of water that can be diverted under all the rights at one time?

The department will maintain the proof of beneficial use for 30 days to provide you the opportunity to submit the required information. Pursuant to Beneficial Use Rule 35.02.c., the priority date of the permit will be advanced if the required information is not submitted within 30 days. If the information is not submitted within one year, the permit will be canceled.

If you have questions regarding this matter, please contact me at (208) 327-7946.

Sincerely,

Shelley Keen
Water Rights Supervisor

C: C. E. Brockway, P.E.

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APR 03 2002



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

February 22, 2000

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

RE: Permit No. 32-07170

Gentlemen:

In September we received a proof of beneficial use statement along with a certified examination field report for the above referenced permit.

The field report has been briefly reviewed for completeness in an effort to issue a license. There are a couple of items that were insufficiently described and we cannot complete our license review without obtaining this information. The two deficiencies are 1) solid confirmation and/or measurement of the diversion system capacity and 2) diversion volume. These two items are required by Rule 35.01.j of the Field Examination Rules.

By copy of this letter to Mr. Brockway, the certified examiner, I request that the above items be reviewed and that information to complete the requirements be ~~submitted~~ **submitted within 30 days.**

If you have any questions, please give me a call.

Sincerely,

SHARLA CURTIS
Sr. Water Resource Agent

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APR 03 2002

MEMORANDUM

TO: Shelley ^{SVK} and Glen, *file*

FROM: Sharla

DATE: January 13, 2000

RE: Certified Exam Report

I have looked at this certified exam report and have a couple of items that will need to be addressed by the examiner or further reviewed before licensing can proceed.

First of all, there are three existing rights which overlap the point of diversion. The licenses as found on the water rights database don't overlap, however, the Snake River Basin Adjudication claims that have been filed on them do list the point of diversion described by the examiner. The three licenses total a diversion of 10.2 cfs. The examiner measured 2.95 cfs and while he stated that no irrigation was occurring at the time of the exam, he does state that the pipeline serves gravity sprinklers and describes the amount not being diverted into the pipeline as "some flow". There's a pretty large difference between 2.95 cfs and 10.2 cfs. At the very least we need some solid confirmation of "diversion" capacity so that we can place an appropriate condition limiting the diversion under this right in combination with the others.

The other issue is that of volume. The information supplied by the examiner does not give us enough information to determine a diversion volume. The power use is for supply to the ranch so it no doubt runs continuously but not necessarily at the rate of 2.95 cfs.

If you would like me to seek the additional information from the examiner so that license review can be accomplished for this right, just let me know. Otherwise, I would assume those issues will be addressed in the proof acknowledgement letter????

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APR 03 2002



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

September 15, 1999

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

JARED SULLIVAN
PO BOX 191
DUBOIS ID 83423

RE: Proof of Beneficial Use for Permit 32-07170

Dear Mr. Sullivan:

As you requested, I have enclosed a Proof of Beneficial Use form that you should complete and return to IDWR within fourteen days. The Beneficial Use Field Report was submitted in September of 1994 by C. E. Brockway, so there is no fee required with the Proof of Beneficial Use form.

For your reference, I have also enclosed photocopies of your permit, the approved Request for Extension of Time, and the field report. If you have any questions, please contact me at 208-327-7946.

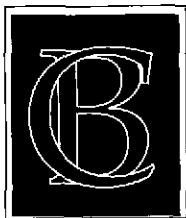
Respectfully,

Shelley Walter Keen
Water Rights Supervisor

Enclosures

MICROFILMED

APR 03 2002



CHARLES
BROCKWAY
ENGINEERING

September 25, 1994

Mr. Gary Spackman
Idaho Dept. of Water Resources
1301 N. Orchard Street
Boise, Idaho 83706-2237

RECEIVED

SEP 26 1994

Department of Water Resources

RECEIVED

SEP 27 1994

Department of Water Resources

Subject: Proof of Beneficial Use 32-7170
Sullivan Livestock Co. Inc.

Dear Gary:

Enclosed is the completed Beneficial Use Field Report for permit 32-7170 for the hydropower facility on the Sullivan Livestock Co. Inc ranch in Clark County.

Sincerely,

C. E. Brockway, P.E.

cc: Franklin Sullivan
Kent Gauchay

CHARLES E.
BROCKWAY,
PHD, P.E.

706 SUNRISE
BOULEVARD
NORTH

TWIN FALLS,
IDAHO 83301

208 • 733 • 0938
FAX: 733 • 1746

MICROFILMED

APR 03 2002

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
SEP 27 1994
Department of Water Resources

A. GENERAL INFORMATION

Permit No. 32-07170

1. Owner: Sullivan Livestock Co. Inc. Phone No. 208-657-2583

Current Address: P.O. Box 191 Dubois, ID 83423

2. Accompanied by: Franklin Sullivan EXAM DATE: 9/30/93

Address: P.O. Box 191 Dubois, ID 83423 Phone No. 208-657-2583

Relationship to Permit Holder: President

3. Source: Warm Spring Creek tributary to NA (Sinks)

B. OVERLAP REVIEW

1. Other water rights with the same place of use: LICENSE #18904 (1/1/19), #2675 (1/1/19), G30169, 37-7121

2. Other water rights with the same point of diversion: #18904, #2675

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident No.	Gov't Lot	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
		NESE	SW		7	10N	33E	Clark	USGS QUAD

2. Place(s) of Use:

Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10N	33E	20																	

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APR 13 2002

3. Delivery System Diagram: Indicate all major components and distances between components. Indicate well size/ditch size/pipe l.d. as applicable.

Scale: 1" = _____

_____ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

_____ Aerial Photo Attached (required for irrigation of 10+ acres)

_____ Photo of Diversion and System Attached

4.

Well or Diversion Identification No. *	Generator Motor Make	Kv Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
	Lima Elec.	20Kv AD 13510 6 C16	Triboro	5846

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Current Meter	OTT			47966	4"	

2. Measurements: *See attached*

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E. NARRATIVE/REMARKS/COMMENTS

See attached narrative

Have conditions of permit approval been met? ☒ yes ☐ no

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F. FLOW CALCULATIONS

Measured Method:

Current Meter

☒ Additional Computation Sheets Attached

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use

Power

Period of Use

From *1 Jan* To *31 Dec*

Rate of Diversion

Q (cfs) *2.95*

Annual Volume

V (afa)

2. Recommended Amendments

☐ Change P.D. as reflected above

☐ Add P.D. as reflected above

☒ None

☐ Other

☐ Change P.U. as reflected above

☐ Add P.U. as reflected above

I. AUTHENTICATION

Field Examiner's Name *Charles E. Brockway* Date *9/25/94*

Reviewer _____ Date _____



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APR 03 2002

SULLIVAN LIVESTOCK CO INC
PERMIT NO 32-07170
HYDROPOWER

Point of Diversion

Place of Use

MICROFILMED
APR 03 2002

Place of Use

MICROFILMED

APR 03 2002

CURRENT METER CALCULATIONS

SULLIVAN LIVESTOCK INC. HYDRO PERMIT NO 32-07170

WARM SPRING CREEK APPROX. 20 YDS DOWNSTREAM OF HYDRO RETURN

*SEPT 30, 1993

C.E. BROCKWAY AND DON SHENTON

OTT METE 47966*

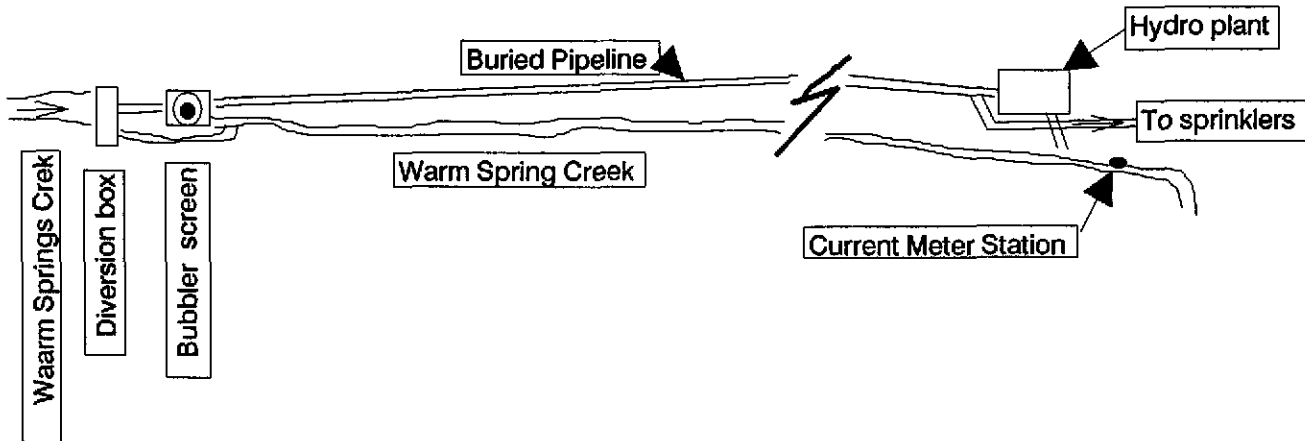
SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANGLE CORR.	VEL	DELTA AREA	DELTA Q	SUM Q
1	0.6	0.40	0		50	1	0.00	0.00	0.00	0.00
2	1.0	0.65	75		50	1	1.29	0.21	0.14	0.14
3	1.5	0.70	95		50	1	1.63	0.34	0.49	0.63
4	2.0	0.65	129		50	1	2.21	0.34	0.65	1.28
5	2.5	0.63	112		50	1	1.92	0.32	0.66	1.94
6	3.0	0.55	82		50	1	1.41	0.30	0.49	2.43
7	3.5	0.46	54		50	1	0.94	0.25	0.30	2.73
8	4.0	0.48	27		50	1	0.49	0.24	0.17	2.90
9	4.7	0.20	0		50	1	0.00	0.24	0.06	2.95

AVG. VE 1.33 FPS
 AREA 2.23 SQ FT
 DISCH. 2.95 CFS
 147.7 INCHES
 1326 GAL/MIN

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APR 03 2002

SULLIVAN LIVESTOCK INC. HYDRO PERMIT NO 32-07170
SULLIVAN LIVESTOCK HYDRO-WARM SPRINGS CREEK
SYSTEM SCHEMATIC



The pipeline conveys water from Warm Springs Creek approximately two miles upstream of the farmstead to serve gravity sprinklers and the private hydropower plant. Sprinkler laterals are served from the main pipe line both upstream and downstream of the hydro plant. All water not diverted into the pipeline reverts to Warm Springs Creek and is diverted through ditches to serve gravity irrigated lands.

All water diverted into the pipeline can be utilized for power generation or all of the water can be used for sprinkler irrigation through a bypass of the turbine.

The pipeline was designed by the Soil Conservation Service and consists of 11,400 feet of 12 inch diameter and 10 inch diameter pipe down to the hydro plant and 7,620 feet of 4 to 10 inch diameter pipe downstream of the hydro plant. The system was designed for a diversion of 1800 gpm (4.01 cfs). Power generated by the system is used exclusively for domestic and ranch related demands on the farmstead.

An examination of the system on September 30, 1993 indicated that 2.95 cfs was being utilized through the turbine which provided a load reading of 95 percent. Some flow in Warm Springs Creek was not being diverted into the pipeline. No water was being diverted to sprinklers upstream or downstream of the hydro plant.

The generation facility consists of a Cornell STR2 turbine? No 5046?(nameplant unreadable) coupled to a 20 Kw Lima Electric Co generator (Serial No AD 135106 C1G). The generation system is enclosed in a metal covered pump house adjacent to Warm Springs Creek and the return flow enters the creek through a short pipe.

Discharge from the turbine constituted the total flow in Warm Springs Creek downstream of the power house. A current meter measurement of the system discharge was made in the creek approximately 20 yards downstream of the power house. The current meter was an Ott propellor meter #47966 with factory rating. Measured discharge was 2.95 cfs and the measurement was rated as 'good'. C.E. Brockway was assisted in the measurement by D.W. Shenton, Watermaster.

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APR 03 2002

C. Mainline Design

Mainline Design	100 PSI	IPS 12"	10,900 LF
	100 PSI	PIP 10"	3,200 LF
Mainline: <u>PVC</u>	125 PSI	PIP 2,000 LF 8" + 2,000 LF 6" + 1,000 LF 4"	
(material)	(pressure rating)	(other description, such as SDR, PIP, IPS, Gate, Class)	

*Friction factor used $C = 150$

Total 19,000 LF

Desirable mainline velocities are 5 fps or less (req. on PVC & AC Pipe)

Station		Dia. of Pipe	Flow (gpm)	Velocity (fps)	Distance	Friction	Friction	Accum.	Elev Drop Ft.	Net Head Ft.	Working Pressure PSI	Pressure Required For Lateral Ft.
From	To					Loss Per 1000'	Loss This Section (Ft.)	Friction Loss				
0+00	16+00	12	1800	5.0	1600	6.775 = 5.2	8.5	8.5	30	22	9	
16+00	38+00	1	1800	1	2200		11.7	20.2	70	50	22	
38+00	68+00	1	1800	1	3000		15.9	36.1	120	84	36	
68+00	78+00	1	1800	1	1000		5.3	41.4	140	99	43	47
78+00	88+00	1	1726	4.8	1000	6.775 = 4.9	4.9	46.3	160	114	49	
88+00	98+00	1	1484	4.1	1000	4.4 = 3.5	3.5	49.8	180	130	56	
98+00	108+00	1	1264	3.5	1000	3.4 = 2.7	2.7	52.5	195	143	62	
108+00	114+00	10	1110	4.8	600	8.875 = 6.9	4.1	56.6	210	153	66	
Hwy. Plant -- USE 50 Ft of Head --> 50								106.6	210	102	45	
114+00	120+00	10	1110	4.8	600	6.9	4.1	110.7	219	108	47	47
120+00	130+00	10	1110	4.8	1000		6.9	117.6	225	107	47	
130+00	140+00	10	912	4	1000	6.775 = 4.7	4.7	122.3	242	120	52	
140+00	150+00	8	714	4.3	1000	11.84 = 9.2	9.2	131.5	260	129	56	
150+00	160+00	8	516	3.6	1000	6.775 = 5.2	5.2	136.7	275	138	60	
160+00	170+00	6	318	3.9	1000	10	8.4	145.1	290	145	63	
170+00	180+00	6	198		1000	4.2	3.5	148.6	305	156	68	
180+00	190+00	4	88		1000	6.64	5.5	154.1	320	166	72	

For Power Plant at the House
Assume using 50 Ft of Head (21.7 psi)
 $(1110 \text{ gpm})(50 \text{ Ft}) = 14 \text{ whp.}$

MICRO... Sheet 4 of 6

$$P = \frac{W}{t} = \frac{53.9 \text{ kJ}}{7.3 \text{ s}} = 7.3 \text{ kW}$$

July 31, 1994

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

PROOF DUE NOTICE

RE: PERMIT NO. 32-07170

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before October 1, 1994. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

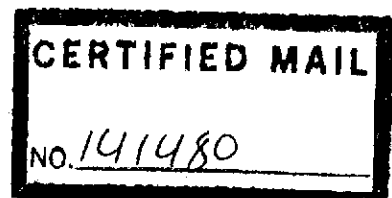
Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

JULIE L. YARBROUGH
Senior Secretary

Enclosures

MICROFILMED
APR 03 2002





State of Idaho
DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

December 1, 1993

Sullivan Livestock Co., Inc.
c/o Franklin W. Sullivan
P.O. Box 191
Dubois, ID 83423

RE: PERMIT NO. 32-07170 - REQUEST FOR AN EXTENSION OF TIME

Dear Mr. Sullivan:

Returned is the request for extension of time which you submitted to the department on November 29, 1993 in connection with the above referenced permit. A review of the water right file shows that on October 4, 1993, the department approved an extension request extending the date for the submittal of the proof of beneficial use to October 1, 1994. Hence, the latest extension of time request is not needed.

The department will return the fifteen dollar (\$15) extension fee (receipt no. E019340) to you under separate cover.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

Encl: 1

c: IDWR - E. Region
Fiscal - Debbie Allen

RECEIVED
JAN 11 1994

RECEIVED
NOV 23 1993
Department of Water Resources

For Office Use Only
\$15 Fee Received by DO
Date 11-24-93
Receipt No. EO 19340

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

REQUEST FOR EXTENSION OF TIME
TO PROVIDE ADDITIONAL TIME IN WHICH TO SUBMIT PROOF OF
BENEFICIAL USE FOR A WATER RIGHT PERMIT

The Idaho Department of Water Resources will consider this form as a request that the permit holder(s) be granted an additional period of time in which to complete development of water right under the provisions of Section 42-204, Idaho Code.

Permit No. 32-07170

Name(s) of Permit Holder: Sullivan Livestock Co., Inc., Franklin W. Sullivan, Pres.

Mailing Address: P. O. Box 191, Dubois, Idaho 83423

Date Proof is Due November 30, 1993 Telephone No. (208) 657-2583

Describe what work has been completed toward the development of this water right:
(This must be filled out! If no work has been completed, show "none".)

The project is complete and operating on an experimental basis. Problems
have been encountered which are making it difficult to operate at complete
capacity.

_____ In excess of
Costing \$ 50,000.00

The permit holder(s) has been unable to complete the remainder of the work for the following reasons:

Charles Brockway of Twin Falls has been retained to do the necessary testing
for Proof of Beneficial Use. However, on the date scheduled to complete the
testing, the system went down and froze up. Additional time is needed to
complete testing.

Permit holder(s) request an extension to January 15, 19 94

FEE: \$15.00

Franklin W. Sullivan
(Signature)*

*If other than permit holder, Power of Attorney must be supplied.

ACTION OF THE DEPARTMENT OF WATER RESOURCES

IT IS HEREBY ORDERED that the above request for extension of time be

RECEIVED

JAN 11 1994

Signed this _____ day _____, 19 _____



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

October 4, 1993

Sullivan Livestock Co
PO Box 191
Dubois, ID 83423

Re: Permit No. 32-07170

Dear Permit Holder:

Enclosed is a copy of the approved request for extension of time. The time within which to submit proof of beneficial use is extended to October 1, 1994. Please note that the department has granted this extension based on due diligence. It is important that you work diligently toward the completion of this project during the construction period allowed since the department will not be able to grant additional extensions based on due diligence.

If you have any questions or if I can be of any further assistance, please feel free to contact this office.

Sincerely,

Karen L. Gustafson
Senior Secretary

Enclosure

C: IDWR-Regional Office

RECEIVED

OCT 19 1993

ANALYSIS SHEET
FOR
EXTENSION OF TIME

Permit No. 32-07170 Reviewed by Klg Date 10/11/93

BASIC INFORMATION

9/29/93 Date stamp received
yes Extension received timely
yes Fee received and receipted
yes Name and signature same as permit
no Address Change

BASIS FOR EXTENSION REQUEST

yes Has adequate work been completed to demonstrate due diligence?
Has the permit been involved in litigation?
Is supporting documentation needed to complete the file? Requested?
Is delay by a government agency?
Is supporting documentation needed to complete the file? Requested?
Is the project more than 25,000 acre feet for irrigation or 10,000 acre feet for a reservoir?

ACTION TAKEN

*Recommend for approval Based on due diligence
Extend to 10/1/94*

PRIORITY CALCULATION

Date extension received	_____	=	_____
Proof due date	_____	=	_____
Number of days late	_____	=	_____
Priority date	_____	=	_____
New Priority Date	_____	=	_____

DATA ENTRY

New Address _____
Change Proof Due Date 10/4/93 Klg
Change Priority Date _____

July 31, 1993

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

PROOF DUE NOTICE

RE: PERMIT NO. 32-07170

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before October 1, 1993. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

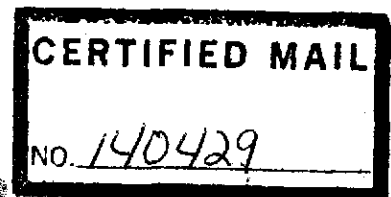
If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

Karen L. Gustafson
Secretary/Records Manager

Enclosures



OCT 19 1993



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

September 8, 1992

SULLIVAN LIVESTOCK CO INC
PO BOX 191
DUBOIS ID 83423

PERMIT APPROVAL NOTICE

RE: PERMIT NO. 32-07170

Dear Permit Holder:

Enclosed is a copy of your approved application for permit. We direct your attention to the conditions of approval on the final page.

Enclosed is a form entitled "Instructions for Proof of Beneficial Use". Please read the instructions carefully since you must take further action to develop this permit. Also enclosed is a form entitled "Proof of Beneficial Use". If your project is already completed you should complete and submit this form immediately.

Sincerely,

BRENDA L. MILLER
Water Resource Agent

BLM:cz

Enclosures

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SEP 09 1992

APPLICATION FOR PERMIT REVIEW

Application #: 32-7170 Date: 8-29-92 Reviewer: Brenda Miller BM

SYSTEM COMPLETED:

No - 26A-P17
 Complete in 1 year - P16
 Yes
 Proof not submitted - P16
 Proof submitted - N/A

GROUNDWATER:

GT. 0.2 cfs <flo-ch> - 01G-P03, 01C-P03 (existing well)
 - NMR <fl ch>, A of C MUD LAKE MORATORIUM
 LT. 0.2 cfs - No measurement required <flow chart>
 Drilling Permit:
 Approved w/permit - P99
 Not included - 046-46A-46B-P23 (after 7/1/87), N/A

SURFACE WATER: not in w/d - 01C-P03 (=GT.2 w/pump), NMR <flow chart>

LOCATION:

Water Districts - WD No. ~~NOT REGULATED BY WATER~~
 Surface water - R04, R04-01H-P01(LT.2 w/pump) ~~MASTER~~
 R04-01J-P08(GT.2), NMR <flow chart>
 Groundwater - P05
 Irrigation Districts - 023
 Canal Co. Areas - 023
 Drainage Districts - 024
 Boise Front (63) - 058 (Groundwater)
 Swan Falls Flag - 3 (1, Blank or Other)
 Trust - 051-052-053-P74(Consumptive Uses)
 Non Trust <1> - 048-049

RIVER BASINS:

(Surface Water) Water District Control Condition &....
 Boise (63) - 05A & 11E
 Payette (65) - 047-P04, 059-P71
 Snake (01, 02 & 03) - 11A-P04(01), 061-P07(02/03 No W.D.Cond.)

USE:

Fish Propagation - 06A, 09E-P10 & 010 (WQ/Choose One),
 042(req.), 002-P06(MD), 07A(Spec.),
 044(Policy 5G)
 Power - 8A, 025, 17K, 17G, P18 Use Power Review
 Mining - 06A, 010, or 09E-P10 & 054(req.)
 Storage - 18A-for multiple measuring devices(In WD),
 18B-P09(Size)
 Rec/Wildlf/Aes - 027(Non-Consumptive)
 Domestic - 021 (Boise River - upstream from L Peak)
 (restricted areas) 27A (Payette River & main tributaries)

OWNERSHIP:

Non land owner - 004

PROTESTED:

Agreement - 020

Beneficial Use Due Date: - 10-01-1993

Other Conditions:

Rule 4,5,3 waived per memo
 HWT memo of 5-13-91.

MEMORANDUM

TO: File No. 32-7170
FROM: Gary Spackman *Gary*
DATE: August 19, 1992

RE: Approval of Application for Permit

I have reviewed application for permit no. 32-7170. I have also spoken to Kent Gauchay, an attorney representing the applicant. The hydropower system employed by the Sullivans, is used solely for production of electricity utilized at the Sullivan Ranch. Normally, personal generation of electricity does not invoke jurisdiction of the Federal Energy Regulatory Commission (FERC). In this case, however, part of the delivery pipeline is located on BLM land. FERC automatically takes jurisdiction whenever part of the hydropower works crosses federal land.

Mr. Gauchay contacted FERC in Washington, D.C., and after explaining the facts, was told that FERC had jurisdiction, but the person he talked with said that he wished Gauchay had not called. He implied that FERC would just as soon ignore a project such as Sullivans. Based on the representations of Kent Gauchay, I recommend that we approve this application for permit without FERC approval, but add a condition stating that this permit does not constitute approval from the Federal Energy Regulatory Commission. All other standard conditions for hydropower should be imposed.

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SEP 09 1992

SIMPSON, GAUCHAY & GARDNER

ATTORNEYS AT LAW

497 NORTH CAPITAL AVENUE, SUITE 200

P. O. BOX 50484

IDAHO FALLS, IDAHO 83405-0484

CRAIG W. SIMPSON
KENT W. GAUCHAY
STEVEN A. GARDNER

TELEPHONE
(208) 523-2000
FACSIMILE
(208) 522-4295

June 18, 1992

RECEIVED
JUN 22 1992

Department of Water Resources

Mr. Gary Spackman, Manager
Water Rights Permits Section
Department of Water Resources
1501 N. Orchard Street
Statehouse Mail
Boise, Idaho 83720-9000

Re: Application for Permission to Appropriate Water No. 32-7170

Dear Mr. Spackman:

I write in regard to your letter to me of May 7, 1992. We have also discussed this matter over the telephone on two (2) difference occasions.

Please allow me to explain a few matters that I believe are relevant which have not been previously discussed concerning this particular application.

Mr. Sullivan ranches and farms in a rather remote area of Clark County. This particular farm and ranch operation has been in the Sullivan family for over 100 years. For the vast majority of those years, all irrigation that was accomplished on the ranch was of a flood irrigation type. It is my understanding that the Sullivans have had the water rights on Warm Springs Creek for most of the history of the ranch.

A few years ago, in an effort to expand and be more effective, Mr. Sullivan approached the ASCS about the possibility of making more effective utilization of the water from Warm Springs Creek. In response to this request, the ASCS designed a water system wherein some of the water from the creek bed was diverted into a pipeline. By running the water through the pipeline, sufficient pressure was created to permit sprinkler irrigation. The more efficient use of the water allowed Mr. Sullivan to increase the acreage under cultivation.

The location of the Sullivan ranch is such that they do not have access to commercial electricity. For a number of years, they lived without the benefit of electricity. Then they installed a generator which ran off diesel that generated electricity for their personal use. As the ASCS developed the pipeline system to increase the efficiency of his farming operation, it became

SEP 09 1992

necessary that some means be created to take some of the pressure off and, thus, almost as a sideline, it was determined that perhaps some type of generator system could be installed to relieve pressure of the pipeline for irrigation purposes and at the same time allow for generation of electricity. Thus, built in to the system was a means by which the water going through the pipeline could be used to generate electricity for personal use on the Sullivan ranch. The amount of electricity is rather minimal and provides for basically their domestic and limited farm use. None of the electricity produced is sold, nor will it ever be. My point is that the system is designed primarily for irrigation and generation is more of an afterthought.

As we have discussed, a portion of this pipeline crosses B.L.M. property. The electrical generation system is located on private property.

Please find enclosed herewith a photocopy of the right-of-way grant given to my client by the B.L.M. The B.L.M. was made fully aware of this project and no work was done on the installation of this pipeline across the public land until the B.L.M. approved.

Also enclosed herewith are more detailed plans and information on exactly how the system operates. I do not know if these are exactly what you had in mind, but I reviewed all of the information that Mr. Sullivan has in his possession and I believe this is most pertinent as to show the exact construction and nature of this particular project. Again, I wish to emphasize that the project was designed primarily to serve as an irrigation system and utilize the water from Warm Springs Creek for irrigation. The creation of the electricity generating apparatus was not the primary intent and purpose for construction of the system. Nevertheless, the Sullivans want to protect their use of water for electrical generation.

Given this information, I would appreciate it if you would again review our application for a permit for the appropriation of the energy rights of this particular water of which Mr. Sullivan already has the irrigation rights.

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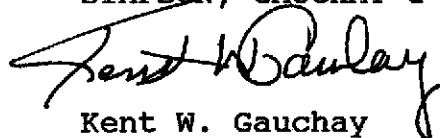
SEP 09 1992

Mr. Gary Spackman
June 18, 1992
Page 3

Thank you for your cooperation and attention to this matter.

Sincerely,

SIMPSON, GAUCHAY & GARDNER


Kent W. Gauchay

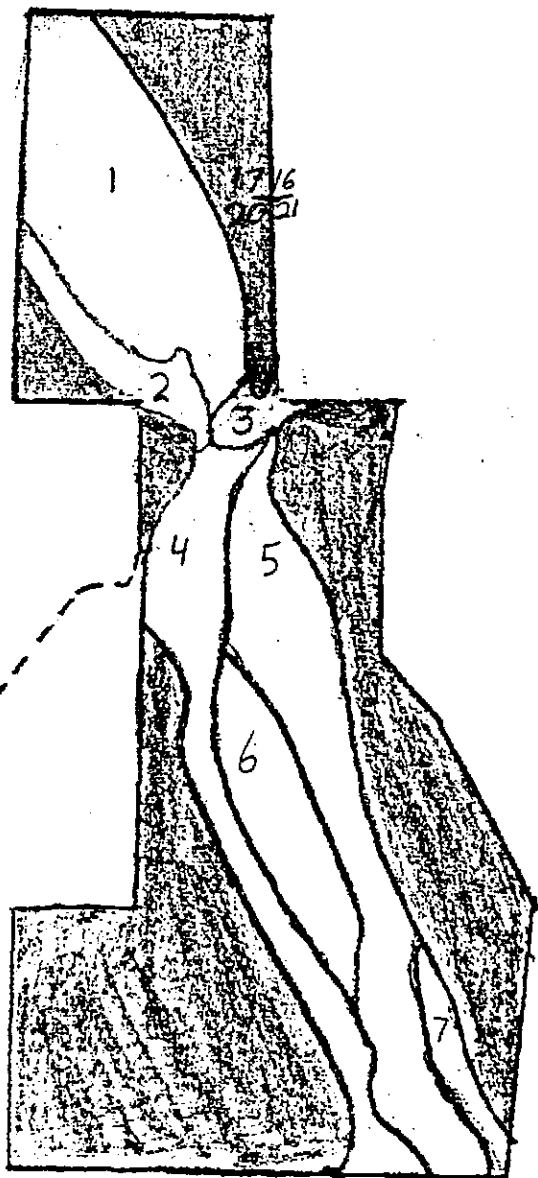
KWG/mc
pc: Frank & Lois Sullivan
Enclosures

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LD SYMBOL

NEW SYMBOL



1	MK 3M/A-1	MK9
2	RE 3M/A-1	BV
3	Gj 2M/2B-1	BjE
4	RE 2M/A-1	BVI
5	Gj 2M/A-1	Bj
6	MK 2M/A-1	NIK
7	Gj 1M/2B-1	BjB

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Bj - Bereniceton Loam 0-2% slopes
AND
BjB- Bereniceton silt loam, 2-4% slopes

The Bereniceton series consists of well drained soils. They are formed in mixed alluvium on low terraces and alluvial fans. Slopes are 0-2% on Bj and 2-4% on BjB. Elevation is 5100 to 5500 feet. Dominant vegetation is Wyoming big sagebrush, shadscale and perennial grasses. Precipitation is 8 to 11 inches. The mean annual air temperature is 41 to 43 F and the frost free season is 110 to 120 days.

In typical profile the surface layer is silt loam about 11 inches thick. The underlying layer is silt loam about 30 inches thick. The substratum is stratifications of sandy loam and fine sandy loam that extends below 60 inches and rests over clean sand and gravel. The soil is strongly calcareous.

The soil is moderately rapidly to moderately slowly permeable. Runoff is very slow and the erosion hazard is slight.

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MkG - McCaleb gravelly loam 2-4% slopes

This McCaleb soil consists of well drained soil formed in alluvium on alluvial and colluvial fans. Elevation is 5100 to 5500 feet. Dominant vegetation is big sagebrush, annual and perennial grasses. Precipitation is 8 to 11 inches. The mean annual air temperature is 41 to 43°F., and the frost-free season is 100 to 120 days.

In a typical profile the surface layer is pale brown and light brownish gray loam about 6 inches thick. The underlying layer is pale brown loam about 3 inches thick. The substratum is very pale brown and white loam gravelly loam that extends to about 23 inches over a gradual boundary grading to sand and gravel except that the surface layer has 20 to 50% of gravel by volume. The upper horizons are moderately calcareous, and the lower horizons are strongly calcareous. The profile is moderately alkaline.

Mapping Symbols: MK3gm/A-1

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SEP 09 1992

BV - Becreek loam, 0-2% slopes

This Becreek soil is a well-drained soil formed in mixed alluvium on alluvial terraces and fans. Elevation is 4800 to 5600 feet. Dominant vegetation is big sagebrush, rabbitbrush, annual and perennial grasses. Precipitation is 8 to 11 inches, and the frost-free season is 100 to 120 days.

The surface layer is a grayish brown loam about 6 inches thick. The subsoil and substratum are pale brown loam to 30 inches with loose gravel and cobbles underneath. The surface layer and subsoil are neutral with the substratum slightly alkaline. Included with this soil in mapping are five other soils making up about 15 percent.

The soil is moderately permeable. Available water capacity for the profile is 6.5 to 11 inches. Effective rooting depth is 20 to 40 inches. Runoff is very slow and erosion hazard is slight. The soil is used for irrigated alfalfa-hay and grain. (Capability unit IIIsl05, irrigated; soil vegetative group A; hydrologic group B.)

Mapping symbols: BV3M/A; BV3M/1A-1; RE3M/A-1

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BVI - Becreek loam, deep variant 0-2%

The Becreek series consists of well drained soils. They formed in mixed alluvium on alluvial terraces and fans. Elevation is 4800 to 5600 feet. Dominant vegetation is big sagebrush, rabbitbrush, annual and perennial grasses. Precipitation is 8 to 11 inches, and the frost-free period is 100 to 120 days. The surface layer is grayish brown loam about 6 inches thick. The subsoil and substratum are pale brown loam to 60 inches with loose gravel and cobbles underneath. The surface layer and subsoil are neutral and non-calcareous. The substratum is mildly alkaline and moderately calcareous. Included with this soil in mapping are about 5 percent of Driggs loam or gravelly loam soils, 1 percent of Medicine Lodge silt loam soils, 4 percent of Arco loam or gravelly loam soils, 2 percent of Stan loamy sand and 1 percent of Becreek series. Runoff is slow and erosion is slight. The soil is used for irrigated alfalfa hay and grain. (Capability unit IIIc100, irrigated; windbreak suitability group 71; soil vegetative group A; hydrologic group B.)

Mapping symbols: BVI

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MK - McCaleb Loam, 0-2% slopes

This McCaleb soil consists of well drained soil formed in alluvium on alluvial and colluvial fans. Elevation is 5100 to 5500 feet. Dominant vegetation is big sagebrush, annual and perennial grasses. Precipitation is 8 to 11 inches. The mean annual air temperature is 41 to 43⁰F., and the frost-free season is 100 to 120 days.

In a typical profile the surface layer is pale brown and light brownish gray loam about 6 inches thick. The underlying layer is pale brown loam about 3 inches thick. The substratum is very pale brown and white loam and gravelly loam that extends to about 23 inches over a gradual boundary grading to sand and gravel. The upper horizons are moderately calcareous, and the lower horizons are strongly calcareous. The profile is moderately alkaline. Included with this soil in mapping are 3 other soils making up 10%.

Mapping symbols: MK2m/A-1

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SEP 09 1992

U.S. DEPARTMENT OF AGRICULTURE
Soil Conservation ServiceSCS-CPA-11
(3-86)

PAGE

1 OF 2

CONSERVATION PLAN
SCHEDULE OF OPERATIONS

1. NAME		2. COUNTY		3. STATE		4. CONTRACTOR OR AGREEMENT NO.		5. TOTAL ACRES UNDER CONTRACT					
Frank Sullivan		Clark		Idaho		LTA		400 Acres					
ITEM NO.	FIELD NO.	PLANNED CONSERVATION TREATMENT (Record of Decisions)	ESTIMATED AMOUNT (UNITS)	COST BASIS \$	COST-SHARE RATE %	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE BY YEAR (For Noncost-Share Items Show Units)						REF. NO.	
						19 90	19 91	19 92	19 93	19 94	19 95		19 96
6	7	CTU # 1 - Irrigated Pasture & Hayland	9	10	11	\$	\$	\$	\$	\$	\$	2000	17
1	1-4	Irrigation System, Sprinklers (442) A gravity irrigation system will be installed to irrigate these fields.	400 Ac.	N/C	N/C								
2	1-4	Structure for Water Control (587) The system will require two main structures - the first will divert water into pipeline and the second will screen water to allow for maximum efficiency of system.	1	\$ 1000	N/C	(1)							
3	1-4	Structure for Water Control (587) The system will require two main structures - the first will divert water into pipeline and the second will screen water to allow for maximum efficiency of system.	1	\$ 1000	N/C	(1)							
4	1-4	Irrigation Water Conveyance (430) *See SCS Pipeline design	19,000Ft.	\$ 4/Ft.	50%	\$ 35,000							
5	1-4	Irrigation Water Management (449) Irrigation water will be applied according to ID ENG-40, Sprinkler System design	400 Ac.	N/C	N/C	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	
6	1-4	Pasture & Hayland Management (510) *See Specifications for Management	400 Ac.	N/C	N/C	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	
7	1-4	Pasture & Hayland Planting (512) *See Grass Planting Plan	400 Ac.	N/C	N/C	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	(400 Ac)	

APPROVED
09 1992

CONSERVATION PLAN
SCHEDULE OF OPERATIONS

SCS-LTP-11B
(2-89)

PAGE

2 OF 2

NOTE The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 522a). The authorities for requesting the information to be supplied on this form are: 16 U.S.C. 590a-f (Soil and Water Conservation); 16 U.S.C. 590h(b) (Agriculture Conservation); 16 U.S.C. 590p(b) (Great Plains); 30 U.S.C. 1236 et seq. (Rural Abandoned Mine Reclamation); 33 U.S.C. 1288 et seq. (Rural Clean Water); The Food Security Act of 1985, Public Law 99-198; and the regulations promulgated thereunder. The information requested is necessary for the development and implementation of a conservation, reclamation or water quality as the basis for satisfying program eligibility and compliance requirements, and for providing technical assistance and/or cost-sharing under the previously mentioned authorities. Furnishing this information is voluntary; however, failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other State or Federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

1. NAME Frank Sullivan		2. COUNTY Clark		3. STATE Idaho		4. CONTRACT OR AGREEMENT NO. LTA		5. TOTAL ACRES UNDER CONTRACT 400 Acres				
ITEM NO.	FIELD	PLANNED CONSERVATION TREATMENT (Record of Decisions)	ESTIMATED AMOUNT (UNITS)	COST BASIS	COST-SHARE RATE %	COMPLETION SCHEDULE AND ESTIMATED COST-SHARE BY YEAR (For Noncost-Share Items Show Units)						
						19 90	19 12	19 13	19 14	19 15	19 16	19 17
6	7	Total Cost-Share by Year:			11	\$ 35,000	\$	\$	\$	\$	\$	\$
		Total Contract Cost-Share:				\$ 35,000	\$	\$	\$	\$	\$	\$

- NOTES:
- A. All items numbered in column 6 must be carried out as a part of this contract to prevent violation.
 - B. When established, the conservation practices listed in column 8 must be maintained by the participant at no cost to the government.
 - C. Enter total cost per unit in column 10 unless the method of cost-share is flat rate. When flat rate, enter the amount per unit to be paid to the participant.
 - D. All cost share rates in column 11 are based on average cost with the following exceptions:
 - AA = Actual costs not to exceed average cost.
 - FR = Flat rate.
 - NC = Non cost-shared.
 - AM = Actual cost not to exceed a specified maximum.
 - E = Modifications will be referenced by number in column 17.
- By signing, the participant acknowledges receipt of this conservation plan including the SCS-CPA-11 and SCS-CPA-11B and agrees to comply with the terms and conditions hereof.

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18. CERTIFICATION OF PARTICIPANTS		19. SIGNATURE		20. DATE		21. SIGNATURE		22. DATE	
SIGNATURE		SIGNATURE		DATE		SIGNATURE		DATE	
23. SIGNING OFFICIALS SIGNATURES									
24. TECHNICAL ADEQUACY CERTIFICATION					25. APPROVED BY (Signature of Conservation District Representative)				
DATE					DATE				

GRAVITY PRESSURE MAIN LINE

J-ENG-40
Rev. 3
6/77

C. Mainline Design 100 PSI IPS 12" 10,800 LF
 100 PSI PIP 10" 3,200 LF
 Mainline: PVC 12.5 PSI DIP 2,000 LF R" * 2,000 LF 6" + 1,000 LF 4"
 (material) (pressure rating) (other description, such as SDR,
 PIP, IPS, Gate, Class)

*Friction factor used C=150

Total 19,000 LF

Desirable mainline velocities are 5 fps or less (req. on PVC & AC Pipe)

Station From To	Dia. of Pipe	Flow (gpm)	Velocity (fps)	Distance	Friction Loss Per 1000'	Friction Loss This Section (Ft.)	Accum. Friction Loss	Elev Drop Ft.	Net Head Ft.	Working Pressure PSI	Pressure Required For Lateral Pipes
0+00 16+00	12	1800	5.0	1600	6.7 (2.5) = 5.3	8.5	8.5	30	22	9	
16+00 38+00	1	1800	1	2200		11.7	20.2	70	50	22	
38+00 68+00	1	1800	1	3000		15.9	36.1	120	84	36	
68+00 78+00	1	1800	1	1000		5.3	41.4	140	99	43	47
78+00 88+00	1	1726	4.8	1000	6.7 (7.8) = 4.9	4.9	46.3	160	114	49	
88+00 98+00	1	1484	4.1	1000	4.4 = 3.5	3.5	49.8	180	130	56	
98+00 108+00	1	1264	3.5	1000	3.4 = 2.7	2.7	52.5	195	143	62	
108+00 114+00	10	1110	4.8	600	8.8 (8.8) = 6.9	4.1	56.6	210	153	66	
House Plant - USE 50 Ft of Head						5.0	106.6	210	102	45	
114+00 120+00	10	1110	4.8	600	6.9	4.1	110.7	219	108	47	47
120+00 130+00	10	1110	4.8	1000		6.9	117.6	225	107	47	
130+00 140+00	10	912	4	1000	6.7 (8.5) = 4.7	4.7	122.3	242	120	52	
140+00 150+00	8	714	4.8	1000	11 (8.4) = 9.2	9.2	131.5	260	129	56	
150+00 160+00	8	516	3.6	1000	6.7 = 5.2	5.2	136.7	275	138	60	
160+00 170+00	6	318	3.9	1000	10 = 8.4	8.4	145.1	290	145	62	
170+00 180+00	6	198		1000	4.2 = 3.5	3.5	148.6	305	156	68	
180+00 190+00	4	88		1000	6.6 = 5.5	5.5	154.1	320	166	72	

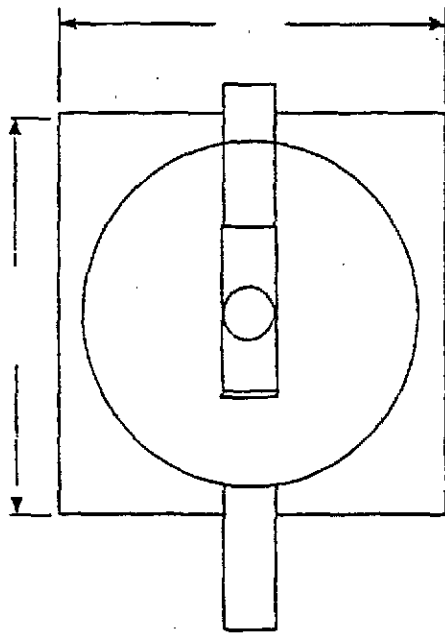
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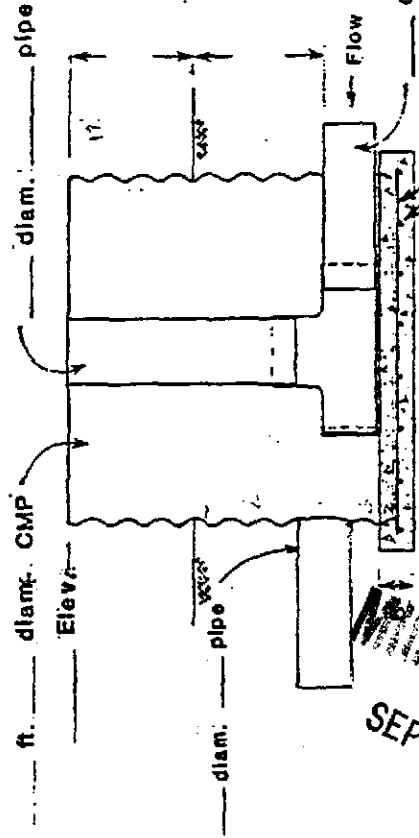
For Power Plant at the House
 Assume using 50 Ft of Head (21.7 psi)
 (1100 gpm) (50 Ft) = 14 whp.

Sheet 4 of 6

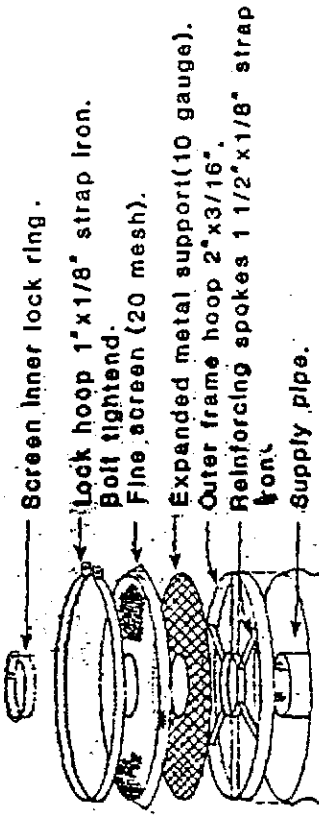
@ 70% (0.746 $\frac{KW}{hp}$) = 7.3 KW



TOP VIEW



CROSS SECTION THROUGH STRUCTURE

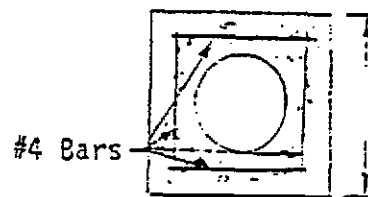
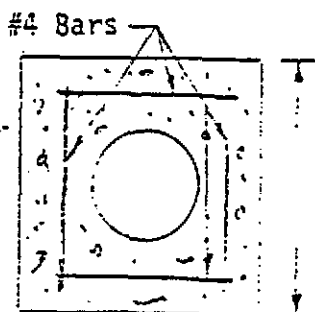
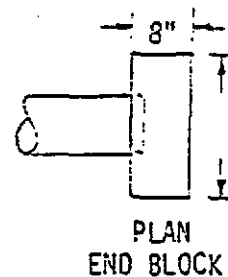
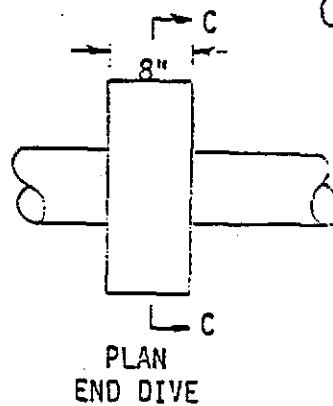
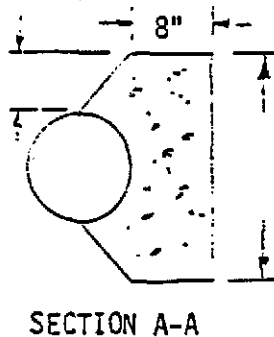
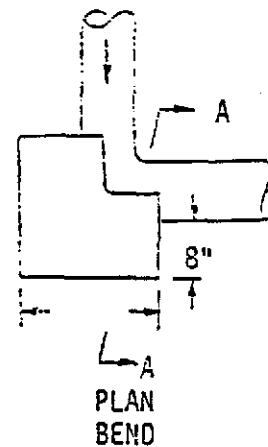
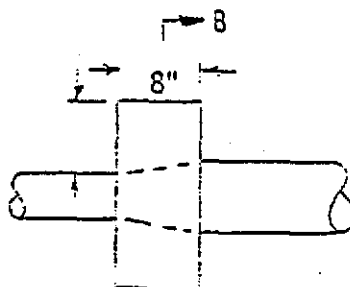
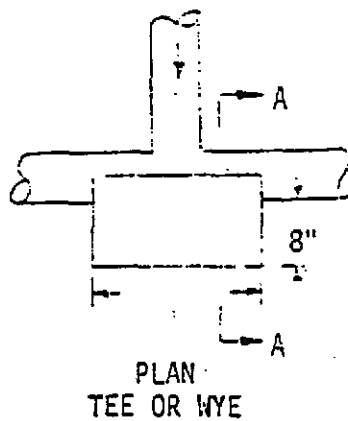


SCREEN ASSEMBLY DETAILS

Project shall be constructed in accordance with construction specification ID-687-D. All CMP shall be 16 gauge minimum.

TURBULENT FLOW TRASH SCREEN	
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
Designed by	Job Class
Drawn by	
Checked by	
Approved by	

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SEP 09 1992



NOTE: Reinforcing steel, #4 @ 6 inch c-c, is required on all blocks which extend more than 6 inches above or below the pipe.

Station	Type of Block	THRUST BLOCK DETAILS	
		Cooperator: _____	
		SCD	Co. _____
		U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	
		Drawn: _____	Approved by: _____
		Checked: _____	Field: _____
		Trans: _____	Time: _____
		Comments: _____	Remarks: _____

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Flower

VI. SYSTEM DESIGN - BY COOPERATOR'S CHOICE

A. Sprinkler System Design Summary

Nozzle Spacing 40 (S_L) Lateral Spacing on Mainline (S_m) 60

Minimum Wetted Dia. = 60 (S_m) ÷ 0.63 Wind Factor = 95 Ft.

Sprinkler Head 1 1/4" @ 40 5.5 GPM 40 → 80 92
(make) (model) (nozzle) (gpm/nozz.) (pressure) (wetted dia.)
(size) (size) (>2S_L)

Application Rate 0.22 in/hr Application Time 1.57 hours/set

Net Application = 0.22 X 0.7 X 23 = 3.55 in.
Application Rate (in/hr) Applic. Eff. hrs/set (16) x (60) = 960 LF

Max. Irr. Cycle = $\frac{\text{Net Application}}{\text{Peak Daily C.U.*}}$ = $\frac{3.55}{.23}$ = 15.4 Days
x 60 = 926 FT

Minimum Number Laterals = $\frac{\text{(No Lateral Sets)}}{\text{(Max. Irr. Cycle) (Moves/day)}}$ = $\frac{1}{() ()}$ =

Designed Laterals: Number Diameter Type Moves/day

System Capacity X = gpm (Total)
(total nozz.) (gpm/nozz.)

B. Lateral Friction

Allowable Friction Loss = $0.2 \times \frac{40}{(\text{nozz. pres.})}$ psi ± $\frac{1}{60} \times \frac{1.3}{(\text{elev})}$ psi = 6.7 psi

Actual Friction Loss (worst condition) = 36 Nozz 6.6 psi

Pressure (P_m) required at the Mainline: 40 psi & 60 FT MOVES USE off sets

	Standard Nozzle	Flow Control Nozzle
Nozzle Pressure	<u>40</u> X 1.0 = <u>40</u>	<u>40</u> X 1.0 = <u>40</u>
Lateral Friction	<u>6.6</u> X 0.75 = <u>5</u>	<u>6.6</u> X 1.0 = <u>6.6</u>
^{2/} Elevation Difference	<u>1.3</u> X 0.50 = <u>.7</u>	<u>1.3</u> X 1.0 = <u>1.3</u>
Nozzle Riser Height	<u>1.1</u> X 1.0 = <u>1.1</u>	<u>1.1</u> X 1.0 = <u>1.1</u>
Flow Control Valve Loss	N/A	<u> </u> X 1.0 = <u> </u>
Total	<u>46.8</u>	<u>49.0</u>

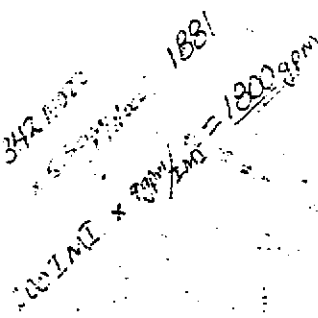
1/ Positive when lateral is going downhill, negative when lateral is going uphill.

2/ Add when lateral is going uphill, subtract when lateral is going downhill

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INSTALLATION, OPERATION AND MAINTENANCE MANUAL

PLEASE READ CAREFULLY
YOUR WARRANTY MAY BE VOID IF
INSTRUCTIONS ARE NOT CAREFULLY
FOLLOWED

WHEN ORDERING PARTS GIVE TURBINE MODEL
AND SERIAL NUMBER.

FOR ANY OTHER INFORMATION CONCERNING
TURBINES OR TURBINE PARTS CONTACT:

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SEP 09 1992

CORNELL PUMP CO.
2323 HARVESTER DRIVE • PORTLAND, OR. 97222
PHONE 503/653-0330

5046

INDEX

MODELS STR2, 6TR2 - F8 w/ PACKING

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Supersedes
Aug, 1980

50 - 11
June, 1982

WARRANTY

Cornell Pump Co. (Cornell) warrants equipment of its manufacture to be free from defects in material and workmanship for a period of two (2) years from the date of shipment. Equipment must have been installed and maintained in accordance with Cornell instructions for the use and service for which it was designed.

Cornell's obligation is limited to repair of the equipment, or replacement of defective parts, at Cornell's factory, or by an authorized service representative with transportation charges prepaid, at the company's option. Goods may not be returned to the factory without prior written authorization.

Equipment and accessories not manufactured by Cornell are warranted only to the extent of the warranty of the manufacturer of such equipment.

Cornell shall not be liable for repair or replacement of parts which are made outside the factory without prior written approval.

Notice must be given within seven (7) days after the defect is found.

No other warranty, written, oral, assumed, or implied, including any implied warranty of merchantability or implied warranty of fitness for a particular purpose, is authorized with respect to Cornell equipment. In no event shall Cornell be liable for incidental or consequential damages.

Due to the widely varying conditions under which Cornell products are used or installed, we offer no warranty, expressed or implied, as to the length of service life of equipment or parts.

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INTRODUCTION

INSPECTIONINSPECTION UPON ARRIVAL:

Turbines are inspected prior to shipment. Check for shipping damage upon receipt. Report damage or shortage immediately to the carrier and to a representative of Cornell Pump Company.

STORAGE REQUIREMENTS:

1. Store turbine off the ground on skids of cribbing so that no water will accumulate.
2. Protect turbine and attachments with a vinyl coated nylon tarpaulin. Lash tarp down evenly to provide drainage that does not form pools. Maintain sufficient air circulation with a 3 inch (7.62cm) minimum clearance between tarp and turbine.
3. Locate turbine in an area which is free from blowing sand and dirt.
4. Do not stack on top of this equipment.
5. Prevent animal entry by keeping connections sealed.
6. Maintain bearing lubricant or rust preventive protection.
7. Periodically rotate shaft to prevent set and lubricate bearings.

INSPECTION AND MAINTENANCE DURING STORAGE:

Inspect turbine and cover every four weeks:

1. Remove protective tarpaulin.
2. Recoat surfaces requiring protection with approved rust preventive.
3. Wipe up spilled or excess rust preventive.
4. Relube bearings with approved lubricant every 6 months.
5. Hand rotate shaft for ten correct-direction revolutions. Leave shaft at least 90 degrees from original.
6. Replace and reseal protective covers.
7. Replace and lash protective tarpaulin.

RECORDS:

Keep an inspection record with equipment.

1. Date of inspection.
2. Signature of person performing inspection and/or maintenance.
3. Results of inspection.
4. Date of maintenance.
5. Description of maintenance performed.

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INSTALLATION

FOUNDATIONDESIGN:

The foundation must be sufficiently rigid to prevent turbine vibration. The most satisfactory foundation is made of reinforced concrete. The foundation design will depend on the specific turbine system support and external piping requirements. Pour foundation well in advance of installation to allow time for drying and curing.

When unit is to be mounted on steel work or a similar structure it should be set directly over, or as near as possible to, supporting beams or walls. It must be supported securely to prevent distortion and misalignment caused by yielding or springing of either structure or base.

SITE:

Allow adequate space for operation, maintenance, and inspection.

PIPING:

Use special care to prevent dirt, pipe scale, or welding residue from entering the turbine during installation. Thoroughly flush penstock system and turbine before piping is connected.

Install piping so that no piping loads are imposed on the turbine. Piping loads can adversely affect turbine component life.

INLET SCREEN:

It is suggested that a inlet screen be placed just before the control valve on the penstock. It should have a clean-out provision to remove any foreign objects that may enter the penstock. This is a very important addition if the quality of the penstock is questionable.

BASE PLATE FOUNDATION CONSTRUCTION:

Construct a template to dimensions of base plate. The template holds foundation bolts in place during foundation pour (Fig. 1).

Each foundation bolt should be surrounded by a pipe with an inside diameter about three times bolt diameter. In this way the pipe is held solidly in place while allowing some later minor adjustment of the bolt (Fig. 2 and 3).

The bolts should extend above the top of the pipe sleeves enough to allow one or two inches (2.5-5.1cm) of grouting between base plate bottom and foundation. Provision for leveling the base plate is by use of support and leveling nuts and washers placed on the foundation bolts (fig. 4) or shims. Wedges or leveling screws (Fig. 5).

The bolt, washer, and pipe are tack-welded together before placement onto the template. Pack rags or stuffing around bolt to center it within the sleeve.

A hooked foundation bolt is useful for installation on existing construction, or where height of pier is limited. This type of bolt has greater mechanical hold and is less sensitive to vibration.

Pour the foundation. After the foundation is cured remove any water and foreign material from foundation. Bolt sleeves and dry entire foundation. If grout must be applied to damp concrete, thoroughly coat with a penetrating sealer at least four hours before pouring grout. Inspect for and remove particles, dirt, or oil-soaked concrete.

PREPARATION:

It is essential that the concrete foundation be fully cured before mounting the turbine unit. Prepare the foundation surface for grout by scarfing with a chipping hammer. Removal is intended to remove low strength, high porosity concrete.

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INSTALLATION

BASE PLATE INSTALLATION:

The turbine is shipped mounted on its base plate. To satisfactorily install base plate it may be necessary to disconnect auxiliary piping or remove turbine entirely.

All base plate surfaces which will be in contact with grouting must be clean. Remove rust, oil, paint, or other foreign substances.

NOTE: Do not use oil-base solvents for base plate cleaning.
The residue may prevent adherence.

Attach wire rope slings to base plate lifting lugs and lift base plate into position over foundation bolts.

LEVELING:

Disconnect the coupling between the turbine and generator before setting the base plate on the foundation.

Check that the leveling adjustment nuts have been run down to the foundation (Fig. 4).

WEDGE LEVELING:

Wedges should be 4 to 6 inches (10-15cm) long, 2 to 3 inches (5.1-7.6cm) wide and thick enough to allow proper grouting clearance (Fig. 5).

To level base plate, place a machinist's level on base plate. Adjust as necessary and begin to tighten nuts of foundation bolts. Continue to check level, re-adjust as necessary, until all nuts are completely tightened and base plate is level.

GROUT:

Build a dam around base plate perimeter. Forms must be of sufficient strength to withstand pressure of grout, and must be sealed and rendered watertight by caulking between forms and foundation. Attach a chamfer strip on inside of forms at grout grade elevation, to provide a neat beveled edge.

If forms are placed on rough concrete surface, seal bottom with a stiff sand and cement mortar, flush with form inside face. This should be done immediately prior to placing grout because shrinkage of mortar may result in leakage.

Apply two heavy coats of good quality paste wax, or one coat of shellac and one heavy coat of wax to the forms. Plastic sheeting is acceptable, but must be stretched tightly to prevent wrinkling.

Cover wedges with caulk or plastic tape, if later removal is desired. Mark wedge positions on mounting flange, to locate after grout pour.

Select a non-shrinking grout, resistant to damage by any chemicals that may be spilled in the vicinity, and compatible with the highest temperature that may be encountered.

After grout has thoroughly hardened, remove forms and any supporting wedges if wedges are removed, fill holes with grout.

Tapping with a steel rod or chisel (not hammer) will detect a void (usually one square inch or more) by making a dull sound rather than a ringing sound. Epoxy grout may be used to fill voids.

When the base plate is leveled begin to tighten bolts. Continue to check levelness and adjust wedges if necessary until bolts are completely tightened and unit is secured level.

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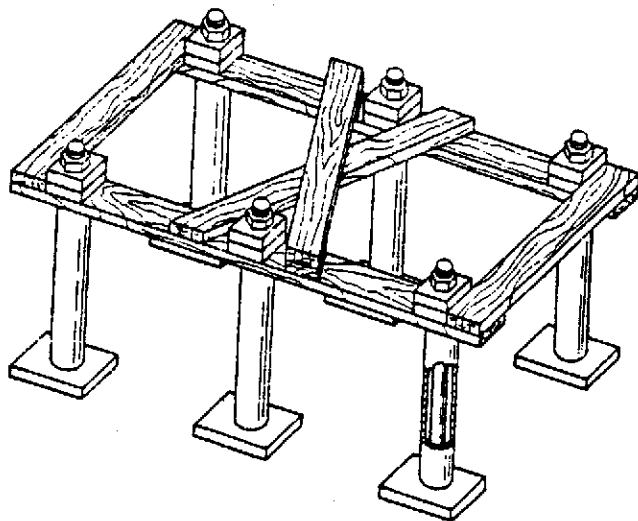


FIGURE 1

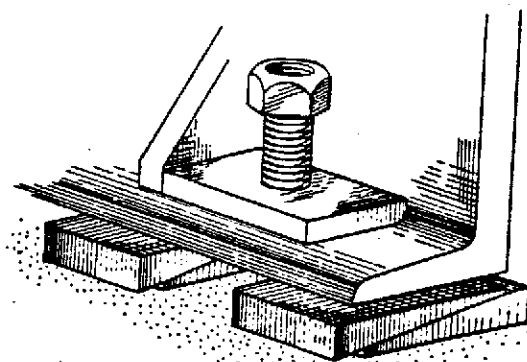


FIGURE 5

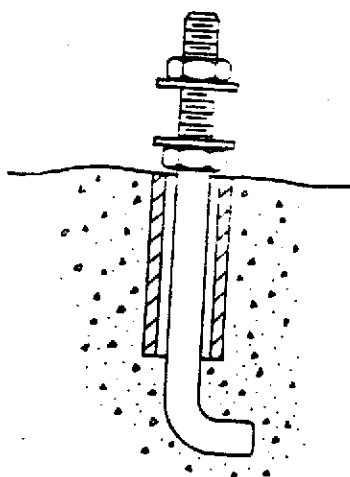


FIGURE 2

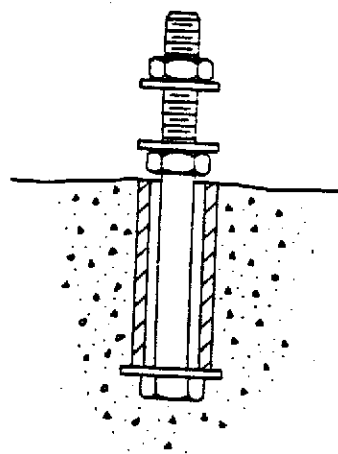


FIGURE 3

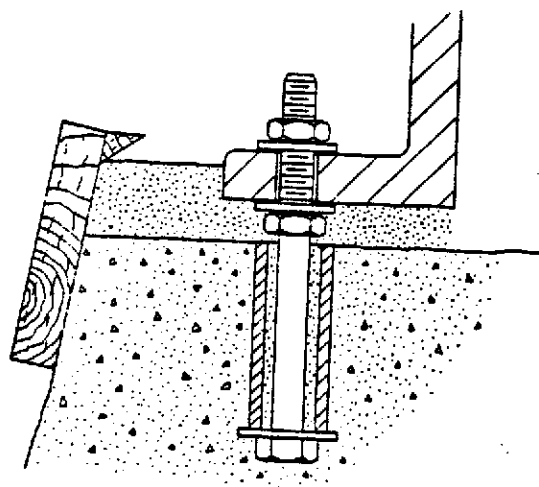


FIGURE 4

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PRE-STARTING INSTRUCTIONS

1. Clean up the unit and check all the piping to verify that it is properly installed. If possible, install an inlet strainer.
2. Check all bolted flange connections to be sure they are tight and make certain that all external connections have been made and function properly.
3. Check the shaft alignment. Refer to the alignment instructions given in this manual. Verify that the coupling is properly installed. DO NOT START TURBINE WITHOUT ALIGNING THE COUPLING.
4. If the turbine is equipped with a mechanical seal a flush line must be installed to insure proper lubrication. DO NOT START TURBINE WITHOUT PROPER SEAL LUBRICATION.
5. Make certain that adequate lubrication is provided to the turbine bearing frame. Use the oil recommended in this manual. DO NOT START TURBINE WITHOUT OIL IN THE BEARING FRAME.
6. Rotate shaft using your hands to make sure it rotates freely. Replace all safety guards and secure all mounting bolts.

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LUBRICATION INSTRUCTIONS
FRAME PUMPS GREASE LUBRICATED

If frame is oil lubricated (denoted by a 'K' on the Serial Number Plate and View Gauge on side of frame) see Lubrication Instructions-Frame Pumps- Oil Lub. Bearings in all frames are greased at the factory before shipment.

Lubrication requirements vary with speed, power, load, ambient temperatures, exposure to contamination and moisture, seasonal or continuous operation and other factors. The brief recommendations which follow are general in nature and must be coupled with good judgement and consideration of the application conditions. For regreasing period, refer to table below. When adding grease, be sure the grease and fittings are absolutely clean.

Grease used for these bearings should be equivalent to one of the following manufacturer's products:

G.E. Long Life Grease No. D682C5
Mobil - Mobilux No. EP2

Shell - Alvania EP2
Texaco - Multifak No. 2

To lubricate frame bearings, remove plastic cover from zerk fittings and be sure the fitting and end of grease gun are clean. Use hand operated grease gun only and pump a small amount of grease into each bearing cavity. The surplus grease will go through the bearing and into the center part of the frame. For regreasing periods and approximate quantity, refer to table below.

First determine frame size (located on Serial Number Plate).

Example: 5HH-65B4 4NNT-F6 4NNT-V.C.-10-4 4x4x14T-F10

RECOMMENDED REGREASING PERIODS FOR FRAMES

phlips EP2

	FRAME SIZE		
	2 - 5 8 - 11	6 - 7 - 8 - VC 60B4 thru 68B4	12 - 12VC 10
Total Running Time	2,000 hours	1,500 hours	1,000 hours
or 8 Hr/Day Service	36 weeks	27 weeks	18 weeks
or 24 Hr/Day Service	12 weeks	9 weeks	6 weeks
APPROXIMATE AMOUNT OF GREASE PER LINE FIT- TING	1/2 Cubic Inch	1-1/4 Cubic Inch	2 Cubic Inches
APPROXIMATELY	3 Pumps With Grease Gun Hand Operated	6 Pumps	12 Pumps

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TURBINE COUPLING ALIGNMENT

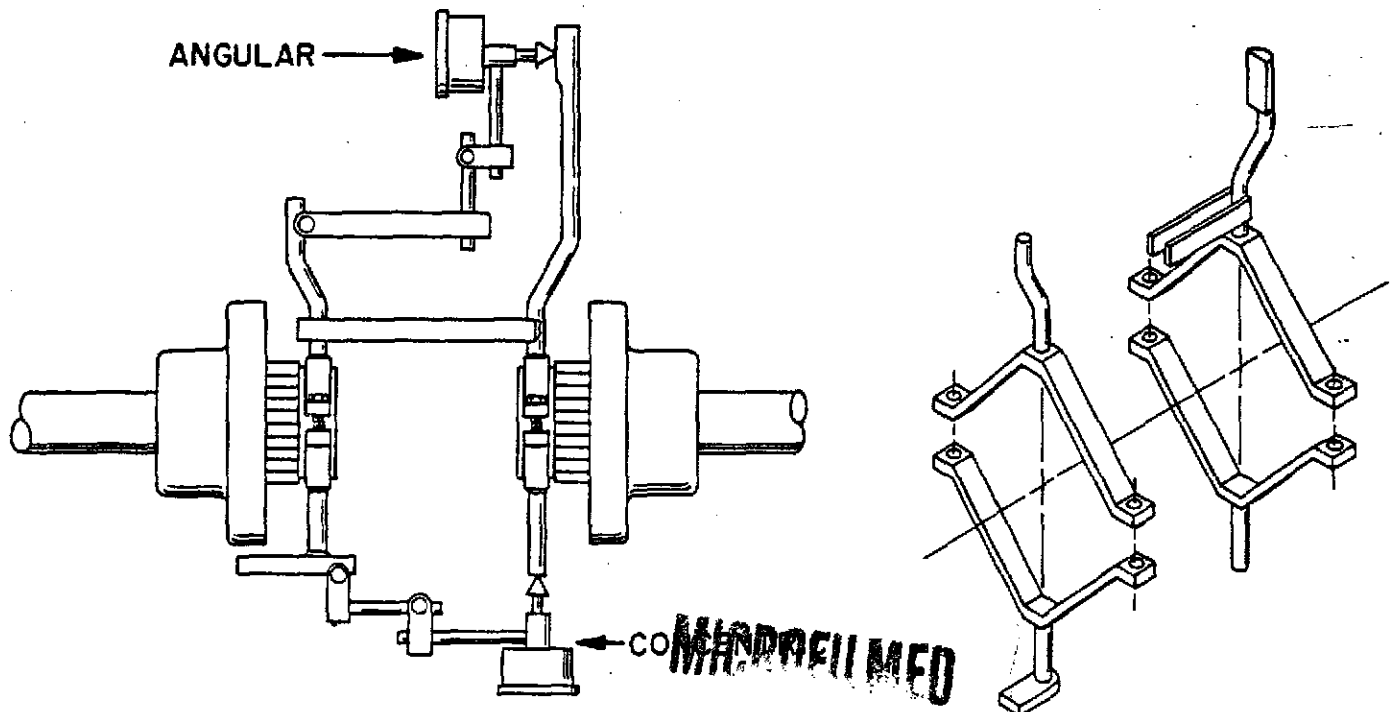
Precise alignment of turbine and generator is mandatory for correct turbine system performance. To prevent excessive stress on the generator and turbine bearings, the coupling, and the shafts, it is necessary to conduct the following alignment procedure prior to initial startup and thereafter at any time the turbine or generator is serviced.

1. Mount a pair of dial indicators so that one reads the angular runout between the two shafts, and the other reads the concentric runout. While this may be done using standard dial indicator extensions, it is recommended that a set of yokes, such as those shown in Figure 1, be used. These yokes are constructed so that a fork on one yoke engages the other yoke, thus allowing both shafts to be easily turned in unison.
2. Rotate the shafts in unison and read the total indicator runout on the dial indicators. Reposition the units on the baseplate, using shims as necessary to achieve angular and concentric alignment within the tolerances given below:

MAXIMUM TOTAL INDICATOR RUNOUT

Operating Speed	Angular	Concentric
Under 1700 RPM	0.004"	0.006"
1700 - 4000 RPM	0.002"	0.003"

3. When the units are properly aligned, tighten the mounting bolts, then double-check the alignment.



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FIGURE 1

PRESSURE TESTING

Pumps Equipped with Packing

WARNING

WARNING - Failure to follow instructions may damage pump and/or result in serious personal injury.

MAXIMUM TEST PRESSURE

Pump Model - See name plate mounted on pump for Model

8NHPP, 8NHPR, 10NHP (Food Pumps) - 50 PSI

8NHT, 10NHT - 100 PSI

All other pumps - 125 PSI or $1\frac{1}{2}$ x shut-off pressure
(whichever is larger)

TEST FLUID

Liquid may be pumpage or water or any liquid compatible with pump materials.

CAUTION

DO NOT OPERATE PUMP WHEN AT TEST PRESSURE

- a. Fill pump gradually with liquid by gravity flow (10 PSI max. pressure).
- b. Vent air from volute and close vent valve.
- c. Raise pressure gradually to required test pressure. See "Maximum Test Pressure".
- d. Allow packing to leak freely (special protection of motor may be necessary).
- e. If packing is tightened to reduce leakage, lubricant may be squeezed out of packing. Loss of packing lubricant may require replacement of the packing.

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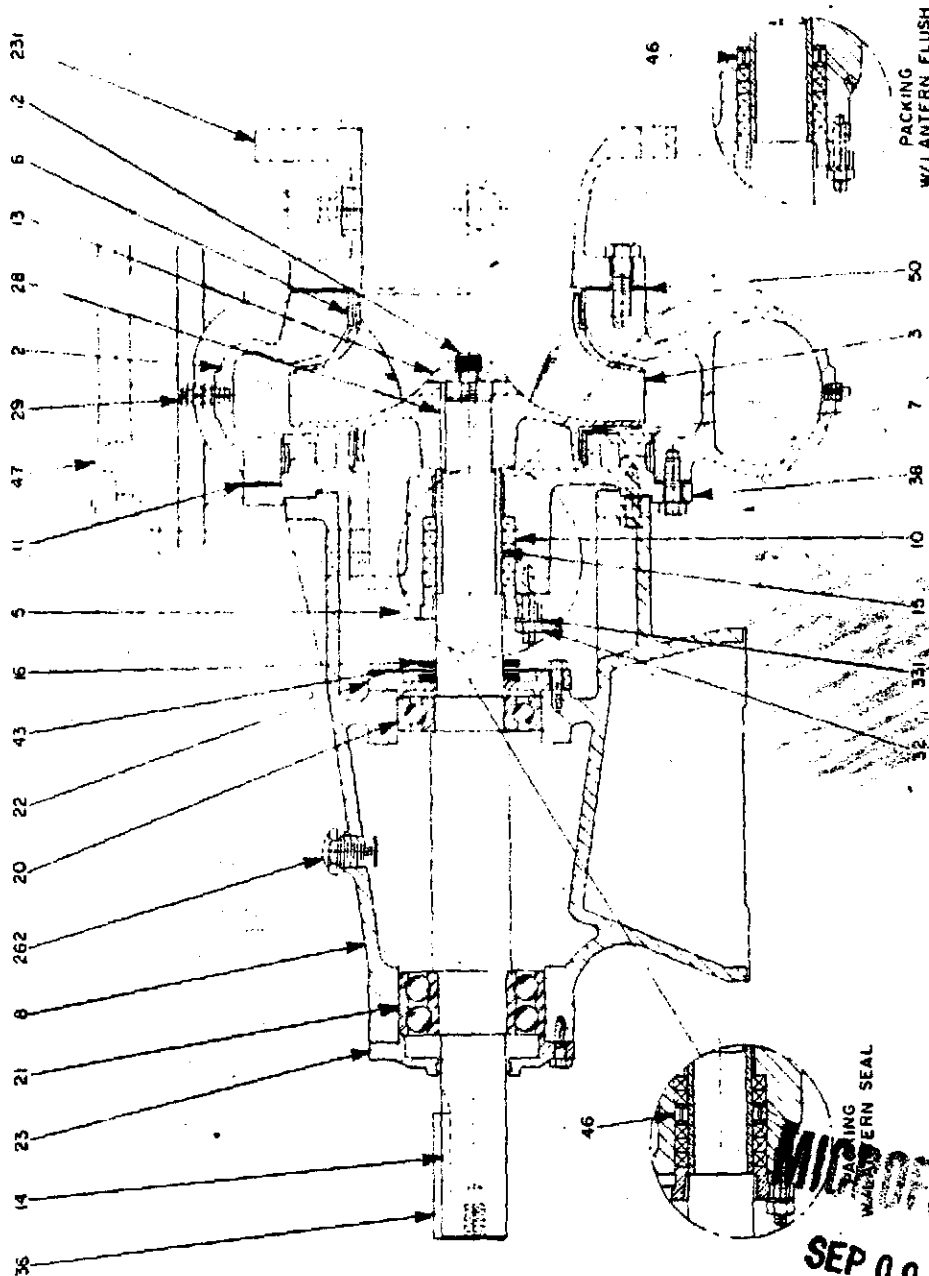
JUNE 1978

3010-295

A12648-4

PARTS LIST

2. Volute
3. Impeller
5. Packing Gland
6. Suction Wear Ring
7. Hub Wear Ring
8. Frame
10. Packing
11. Volute Gasket
12. RUNNER Lock Screw
13. RUNNER Washer
14. Shaft
15. Shaft Sleeve
16. Deflector
20. Bearing (P.E.)
21. Bearing (D.E.)
22. Bearing Cover (P.E.)
23. Bearing Cover (D.E.)
28. Impeller Key
29. Vent Plug
32. Gland Stud & Nut
36. Shaft Key (D.E.)
38. Back Side Plate
43. Shower Curtain Shield
46. Lantern Ring
47. Balance Line
50. Suction Spool Gasket
231. EXHAUST
262. Breather
331. Gland Clip (2)



Note: For Seal Arrangements See

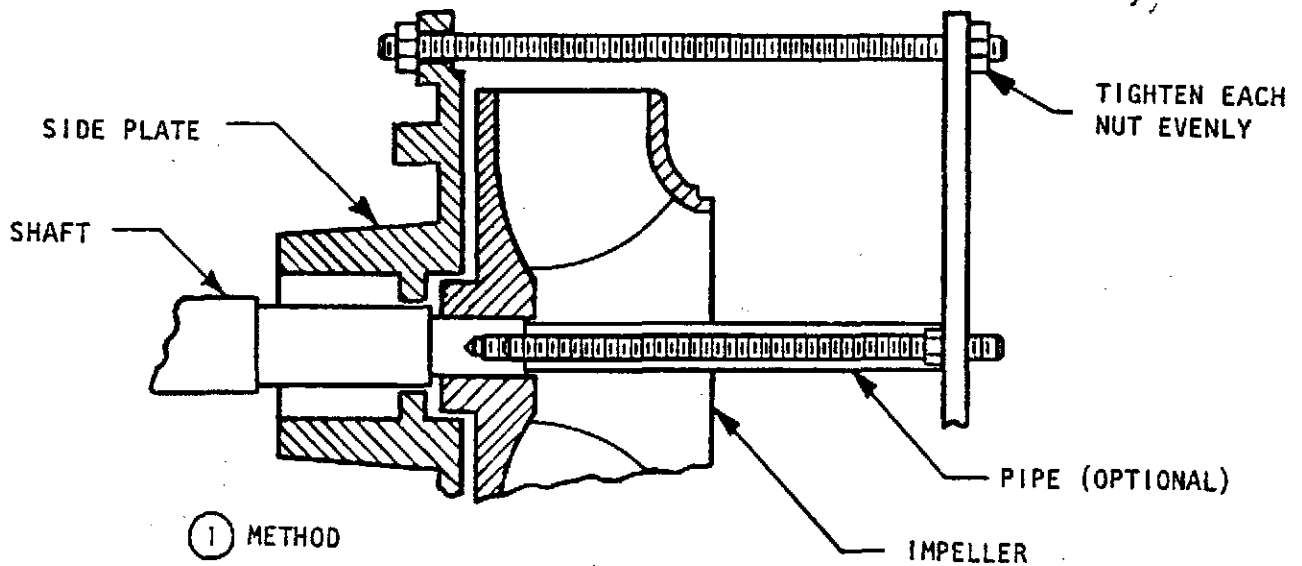
DOUBLE VOLUTE

MODEL "STRZ & GTE2" NO.8 FRAME
GREASE LUBRICATED

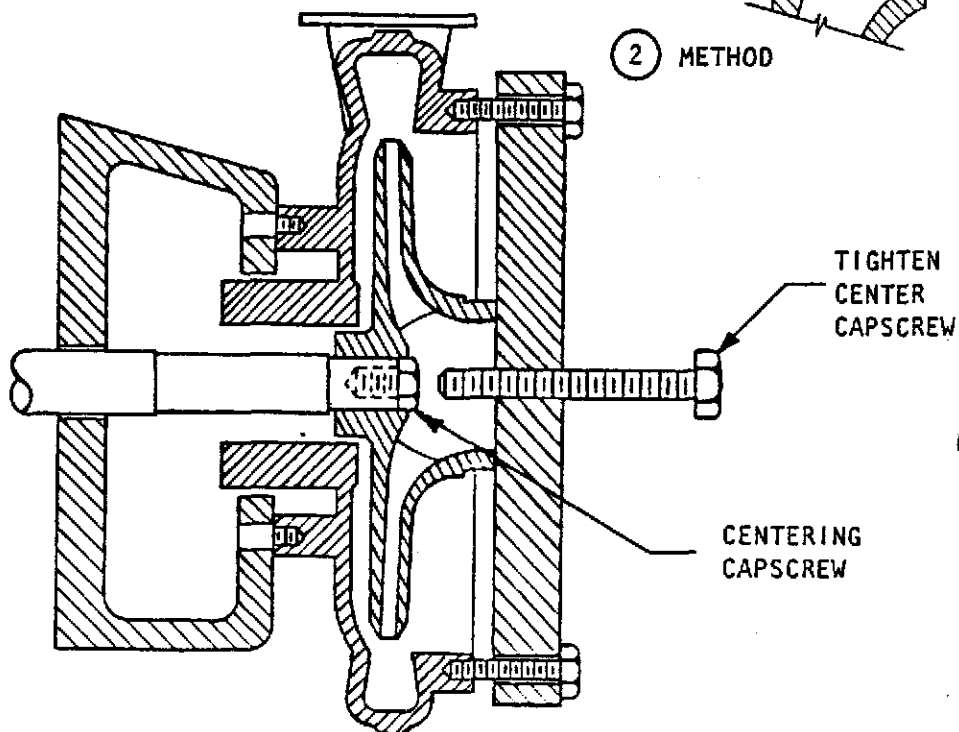
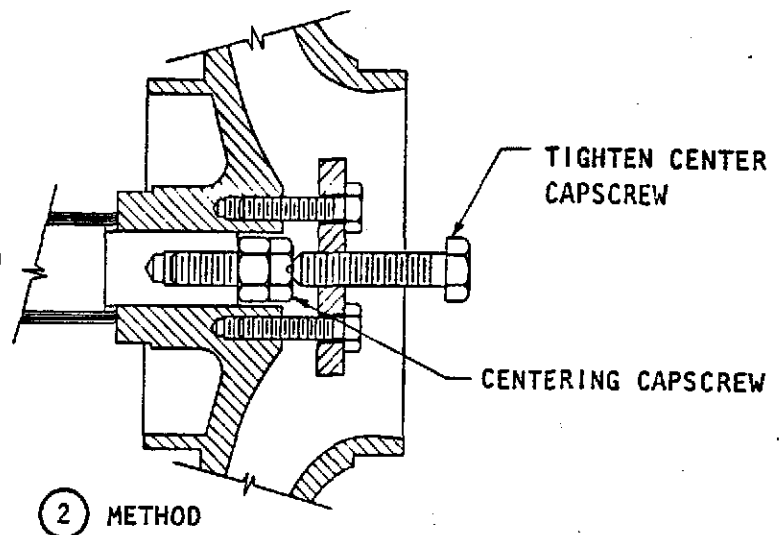
CORNELL MFG. CO. PORTLAND, OREGON

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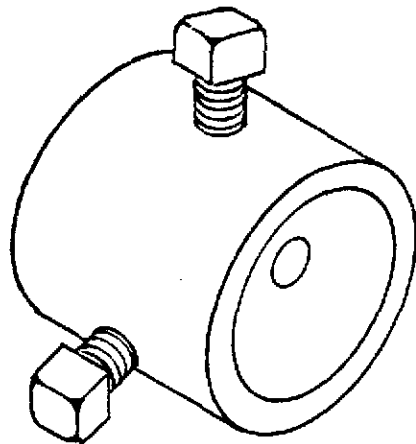
DISMANTLING METHODS



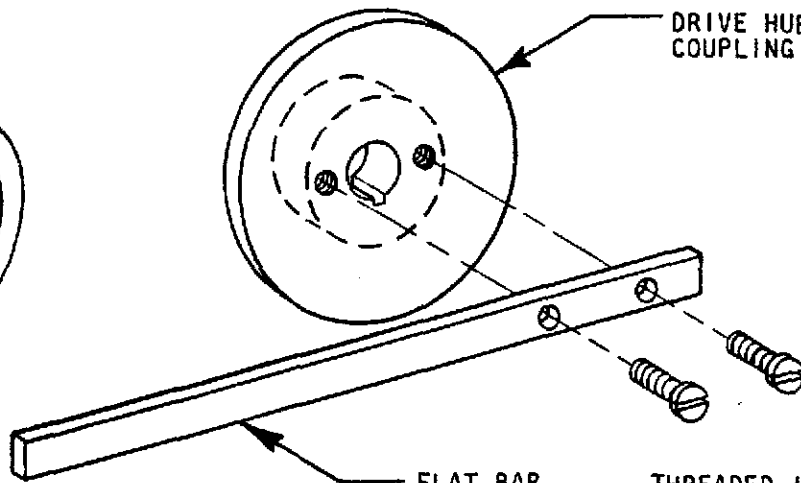
R, H, NW, DELTA AND NON CLOG SERIES
(EXCEPT NL) IMPELLER PULLING METHOD



W AND Y SERIES
IMPELLER PULLING METHOD
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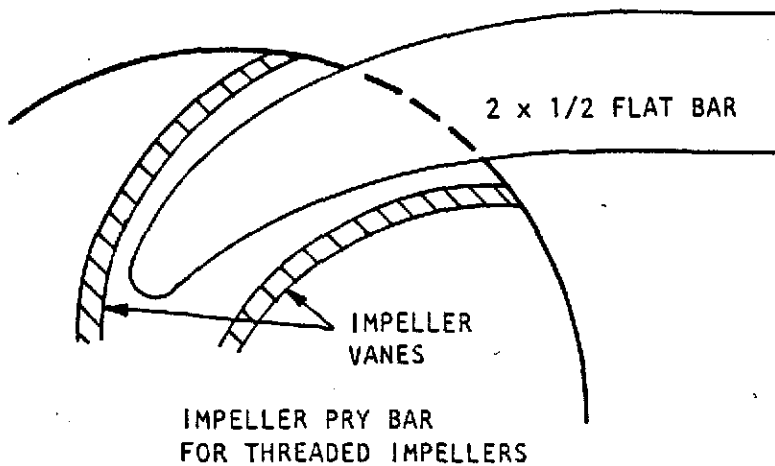
SLEEVE PULLER



DRIVE HUB OR
COUPLING FLANGE

FLAT BAR

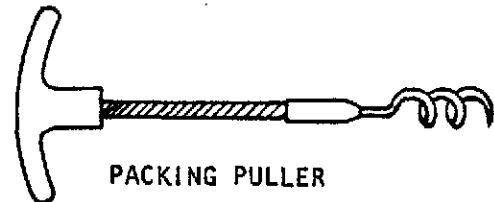
THREADED IMPELLER
PULLING METHOD



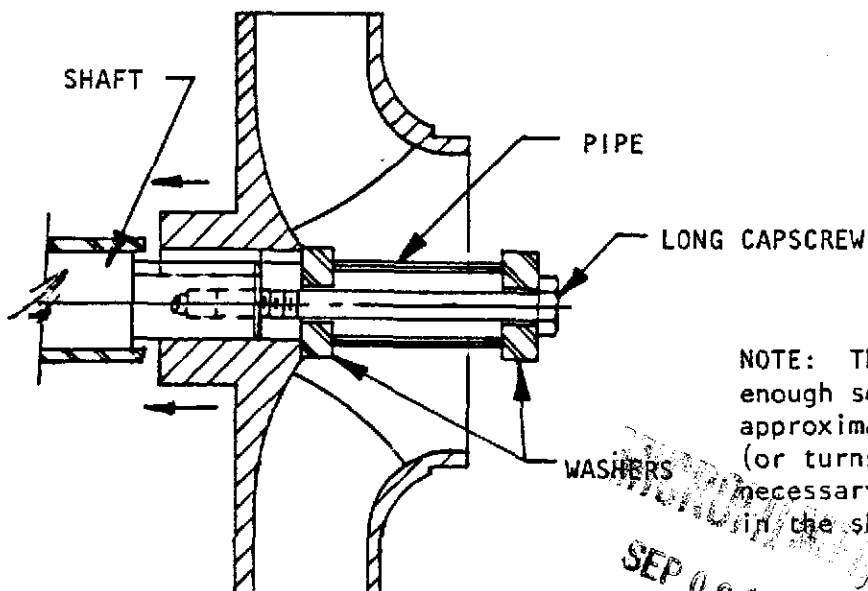
2 x 1/2 FLAT BAR

IMPELLER
VANES

IMPELLER PRY BAR
FOR THREADED IMPELLERS



PACKING PULLER



SHAFT

PIPE

LONG CAPSCREW

WASHERS

INSTALLING IMPELLER METHOD

NOTE: The capscREW must be long enough so it will enter the shaft approximately eight (8) threads (or turns) by hand. This is necessary to protect the threads in the shaft.

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HOW TO DISMANTLE AND REASSEMBLE A CORNELL TURBINE
BACKSIDE PLATE SERIES (Packing)

Some parts may be mentioned in these instructions that do not apply to your turbine. Refer to your specific parts page for parts names.

Dismantling:

1. Remove balance line if applicable.
2. Remove all capscrews from volute. Insert two of these screws into tapped holes in backside plate. Tighten screws to jack the volute free from the backside plate exposing the impeller. Remove volute. Make sure volute doesn't fall onto impeller.
3. Remove and discard the impeller lock screw. Always use a new impeller lock screw purchased from the factory. Remove the impeller washer.
4. Space wedges in pairs 180° apart between impeller and backside plate. Be sure wedges are placed along impeller vanes. Tap opposed wedges at the same time to force off the impeller. See page 3200-401 for alternate method. Use extreme care or damage to impeller, shaft and bearings will result. Completely remove impeller and impeller key.
5. Remove gland nuts and remove gland.
6. Unbolt and remove backside plate from frame.
7. Remove sleeve only if necessary. Install sleeve puller over outside diameter of sleeve and lock puller to sleeve with set screws. See sleeve puller on page 3200-401.1. Remove puller and sleeve with standard gear puller. If parts page shows an "O" ring groove in sleeve, then sleeve can be pulled off by hand.
8. The exhaust wear ring can be removed by drilling the ring longitudinally in three places to relieve compression and collapsing the three sections together. Use care not to drill into the volute casting. Better control is obtained if small pilot holes are first drilled and then enlarged to "cut" the ring. This same technique is used to remove the hub wear ring.

Reassemble:

1. To replace sleeve: Heat new sleeve very uniformly to about 400°F for about ten minutes. Slide it on the shaft quickly. However, if sleeve has an "O" ring it should not be heated. NOTE: Remove burrs on shaft around keyway before replacing sleeve.
2. To repack stuffing box, remove gland and pull out the old packing. Insert an extra sleeve in the stuffing box to insure proper alignment of new packing, which is then slipped into the stuffing box, ring by ring. Stagger the splits in the packing rings 120° apart. To insure proper pressure on each ring, push all the way down and tap lightly.
3. Replace backside plate.
4. Use new gaskets. For emergency use, old gaskets should be moist and flat.
5. Replace impeller key and impeller. Use long capscrew and several washers to press on impeller. (Per 3200-401.1).
6. After replacing impeller, remove long capscrew and replace with proper impeller lock screw with impeller washer. The impeller lock screw should always be new. See page 3200-14 for installation instruction and torque.
7. Replace volute sliding it carefully over register. Bolt volute to back.
8. Replace gland.
9. Reconnect any lines that may have been removed, (balance or etc.)

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HOW TO DISMANTLE AND REASSEMBLE A CORNELL TURBINE
BACKSIDE PLATE SERIES (Mechanical Seal)

Some parts may be mentioned in these instructions that do not apply to your turbine. Refer to your specific parts page for part names.

Dismantling:

1. Remove balance line if applicable.
2. Remove all capscrews from volute. Insert two of these screws into tapped holes in backside plate. Tighten screws to jack the volute free from the backside plate exposing the impeller. Remove volute. Make sure volute doesn't fall onto impeller.
3. Remove and discard the impeller lock screw. Always use a new impeller lock screw purchased from the factory. Remove the impeller washer.
4. Space wedges in pairs 180° apart between impeller and backside plate. Be sure wedges are placed along impeller vanes. Tap opposed wedges at the same time to force off the impeller. See page 3200-401 for alternate method. Use extreme care or damage to impeller, shaft and bearings will result. Completely remove impeller and impeller key.
5. Remove any flush lines to seal gland. Remove gland capscrews evenly until capscrews are free from backside plate.
6. Unbolt and remove backside plate from frame.
7. Remove sleeve only if necessary. Install sleeve puller over outside diameter of sleeve and lock puller to sleeve with set screws. See sleeve puller on page 3200-401.1. Remove puller and sleeve with standard gear puller. If parts page shows an "O" ring groove in sleeve, then sleeve can be pulled off by hand.
8. The exhaust wear ring can be removed by drilling the ring longitudinally in three places to relieve compression and collapsing the three sections together. Use care not to drill into the volute casting. Better control is obtained if small pilot holes are first drilled and then enlarged to "cut" the ring. This same technique is used to remove the hub wear ring.

Reassemble:

1. To replace sleeve: Heat new sleeve very uniformly to about 400°F for about ten minutes. Slide it on the shaft quickly. However, if sleeve has an "O" ring it should not be heated. NOTE: Remove burrs on shaft around keyway before replacing sleeve.
2. Each seal has its own particular assembly procedure. Read instructions for the particular seal type before proceeding or damage to seal parts will result. Where applicable, follow instructions for mechanical seal.
3. Replace backside plate. (Per seal instructions).
4. Use new gaskets. For emergency use old gaskets should be moist and flat.
5. Replace impeller key and impeller. Use long capscrew and several washers to press on impeller (Per 3200-401.1)
6. After replacing impeller, remove long capscrew and replace with proper impeller washer. The impeller lock screw should always be new. See page 3200-14 for installation instruction and torque.
7. Replace volute sliding it carefully over register. Bolt volute to backside plate.
8. Reconnect any lines that may have been removed, (a seal lines, etc.)

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CORNELL PUMP CO.

DISMANTLING AND ASSEMBLING CORNELL FRAME PUMPS
FRAME 8 GREASE LUBRICATION
(Pump End Ball Bearing)

If frame is oil lubed (denoted by 'K' on Serial Number Plate and Sight Gauge on the side of frame) see dismantling and assembly instructions for oil lubrication.

DISMANTLING: Refer to parts page for names of parts.

1. Remove the deflector from the shaft.
2. Remove drive end shaft key.
3. Remove capscrews from both bearing covers and slide the bearing covers off the shaft.
4. The shaft and bearings can now be removed by pressing on the drive end of the shaft. If drive end bearing remains in the frame, press it out toward drive end after removing shaft and pump end bearing.
5. Pull bearings off shaft with bearing puller.

If the bearings are to be saved, keep absolutely clean. If there is reason to believe that they may be contaminated and need cleaning, wash only in clean fluid.

CAUTION:

NEVER hammer the shaft or parts attached to the shaft or you will ruin both the shaft and the bearings.

ASSEMBLY:

1. Press drive end bearing onto shaft. Press pump end bearing into frame. Replace pump end bearing cover.
2. Press shaft into frame through drive end until pump end bearing contacts shaft shoulder.
3. Bolt drive end bearing cover into place. Remove pump end bearing cover and replace deflector and shield. The replace pump end cover and tighten bolts evenly.
4. Replace deflector and lubricate per 3200-901.

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Cornell Pump Co.

IMPELLER LOCK SCREW INSTALLATION

Impeller Lock Screws are always right hand socket head capscrews. To prevent the screws from working loose, a nylon button or alternate friction plastic is used.

TORQUE FOR IMPELLER LOCK SCREWS

First determine size and material of lock screw then torque to the appropriate value listed in the table below.

<u>SIZE</u>	<u>STEEL LOCK SCREW (Black)</u> <u>MAGNETIC</u>	<u>STAINLESS STEEL LOCK SCREW</u> <u>NON-MAGNETIC</u>
3/8-16UNC	35 Ft. Lb.	25 Ft. Lb.
1/2-13UNC	80 Ft. Lb.	40 Ft. Lb.
5/8-11UNC	135 Ft. Lb.	75 Ft. Lb.
3/4-10UNC	260 Ft. Lb.	135 Ft. Lb.
1 - 8UNC	450 Ft. Lb.	260 Ft. Lb.

LUBRICATION

Do not lubricate impeller lock screw or tapped hole or between the lock screw and the impeller washer or between the impeller washer and the impeller. Make sure parts are clean and dry, however it is not necessary to remove the protective coating from the screw. Lubricated bolts can be overstressed with the torques indicated.

DO NOT USE LOCK SCREW TO INSTALL THE IMPELLER

CAUTION

Lock screw failure can damage impeller and volute.

The impeller screw must be of the best material, properly forged and machined to rigid specifications not available from local suppliers.

Buy only lock screws available from Cornell to be sure of quality.

CORNELL PUMP COMPANY

REPRODUCTION

SEP 09 1992

INSTRUCTIONS FOR TURBINES WITH BALANCE LINES

Wear rings and balance lines are vital for a successful turbine operation. They perform two important functions. First, they reduce the pressure at the stuffing box. Second, they reduce axial thrust loads.

These two components operate on the following principle: Liquid moves from the volute through the wear ring clearance into the cavity between the stuffing box and the impeller; from there the liquid returns through the balance line to the turbine exhaust. The pressure differential between impeller inlet and exhaust is continuously driving the liquid through this system.

Wear ring clearance and balance lines are carefully selected to produce the proper pressure in the chamber ahead of the stuffing box. If the wear ring clearance is increased by wear or if the balance line is plugged or pinched the pressure in the chamber will increase. This in turn increases the pressure at the stuffing box and increases the pressure forces acting on the impeller and increases the bearing load.

Wear rings should be replaced if the clearance has increased to about 1/32 per side.

Balance lines should be kept free of obstructions and they should be replaced if they are pinched, bent or corroded.

MICROFILMED

SEP 09 1992

CORNELL PUMP CO.

Supersedes
Jun., 85

3200 - 20.5
June, 1988

LUBRICATION INSTRUCTIONS
ELECTRIC MOTORS

BALL BEARING LUBRICATION

NOTE: IF LUBRICATION INSTRUCTIONS ARE SHOWN ON MOTOR, THEY WILL SUPERSEDE THESE GENERAL INSTRUCTIONS.

Bearings in motors are greased at the factory before shipment.

Lubrication requirements vary with speed, power, load, ambient temperatures, exposure to contamination and moisture, seasonal or continuous operation and other factors. The brief recommendations which follow are general in nature and must be coupled with good judgement and consideration of the application conditions. For regreasing periods refer to table below. When adding grease be sure the grease and fittings are absolutely clean.

Grease used for these bearings should be equivalent to one of the following manufacturer's products:

G.E. Long Life Grease No. D6A2C5
Mobil - Mobilux No. EP2

Shell - Alvania EP2
Texaco - Multifak No. 2

To lubricate electric motor bearings use a hand-operated grease gun only. Pump grease into fitting until new grease appears at pressure relief plug. For minimum possibility of over-greasing and for best results, lubricate when the motor is not running.

Bearings will become unusually hot until excess grease escapes from the relief plug.

End of season: Pump in grease until old grease is expelled from relief plug. Store.

Beginning of season: Start up motor. Let motor run until surplus grease is expelled.

RECOMMENDED REGREASING PERIODS FOR MOTORS

	HORSEPOWER RANGE		
	1½ - 7½	10 - 40	50 - 150
Total Running Time	2,000 hrs.	1,500 hrs.	1,000 hrs.
or 8 Hr/Day Service	36 weeks	27 weeks	18 weeks
or 24 Hr/Day Service	12 weeks	9 weeks	6 weeks



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

May 7, 1992

Sullivan Livestock Co.
P.O. Box 191
Dubois, ID 83423

RE: Application for Permit to Appropriate Water No. 32-7170;
Proposing Diversion of Water From Warm Springs Creek for
Power Purposes

Dear Sirs:

In the spring of 1991, Sullivan Livestock Co. filed an application to divert 8.40 cfs for power purposes from Warm Springs Creek. Notice of the proposed use of water was published, and the application was forwarded to this office in the midsummer of 1991. The Department of Water Resources has not acted on the application because we need some additional information.

It appears that this project is at least partially located on federal lands. As a result, the approval of the federal government is necessary for construction and use of the water. The application also indicates that the generating facility may already be constructed.

Prior to the approval of the application, we request that you supply us any information regarding a FERC license or exemption which has either been obtained or is being sought. If the facility is already constructed, please supply us with has built plans of the facility. If it has not yet been constructed, please supply us with plans which describe the project.

Upon submittal of the above information, the Department will consider the application.

Sincerely,

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region

RECEIVED

SEP 09 1992

SD-34	Source: WARM SPRING CREEK	Basin: 32	STATE
Water Right No.	Current Owner Last, First	Priority Date	Tributary
32-02011	SULLIVAN, MICHAEL F	L 03/14/1907	
32-02060	SULLIVAN, DENNIS R.	L 04/26/1915	SINKS
32-07170	SULLIVAN LIVESTOCK	A 02/19/1991	SINKS

(Enter=Continue)

(GOLD 7=This Query)

(Menu _____)

Rule 4,5,3 date was not requested
because it appears Sullivan Livestock is
the only rt. holder on the creek.
Water Master does not regulate
this creek because it sinks
& there is only Sullivan's on
the system.

24f 5-13-91

MAINTAINED

SEP 09 1992

SD-34

Source: WARM SPRINGS CREEK

Basin: 32

STATE

Water Right No.	Current Owner Last, First	S T G	Priority Date	Tributary	Total Diversion	# Records 1 Use Code Desc
A32-02081	SULLIVAN LIVESTOCK	L	11/28/1939	SINKS	1.400	01 IRR 04 STOCK

(Enter=Continue)

(GOLD7=This Query)

(MENU _____)

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SEP 09 1992

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

Submit for advertising ³⁻¹⁴⁻⁹¹

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY HWT DATE 3-12-91 APPLICATION NUMBER 32 7170

REQUIRED INFORMATION

Sullivan Livestock Co., an Idaho Corp.

- ☒ Name (If applicant is a corporation or partnership, names must be provided for the director, officers, & other partners.)
☒ Address
☒ Source (See USGS Quad for names of water sources)
☒ Point of Diversion (10 acres for spring, lot & block descriptions for subdivisions, local name, flow and/or volume)
☒ County
☒ Quantity (flow and/or volume)
☒ Period of Use
☒ Nature of proposed use (Include description of use.)
☒ Description of diverting works
☒ Time required for beneficial use of water
☒ Place of use or acres irrigated
☒ Map
☒ Signature (If applicant is corp. partnership, or municipality, title of signator is required)
☒ Fee
☒ Yes ☐ No* In form to receipt

ADDITIONAL INFORMATION

- ☐ Overlapping place of use (Describe source & relationship to present application on the back.)
☐ Overlapping point of diversion
☐ Yes ☐ No Field check required
☐ Yes ☐ No Field check by _____
☐ Yes ☐ No Field report attached
☐ Yes ☐ No Critical groundwater area
☐ Yes ☐ No Groundwater management area
☐ Yes ☐ No Send dam safety information
☐ Yes ☐ No Send power requirement letter
☐ Yes ☐ No Send fish farm requirement letter
☒ Yes ☐ No ~~Power residency affidavit~~
☒ Yes ☐ No ~~Power residency form~~
☒ Yes ☐ No Within trustwater boundary (If yes, attach trust water supplementary analysis sheet.)
☒ Yes ☐ No Diversion greater than 5 cfs or 500 acre ft. (If yes, attach large diversion supplementary analysis sheet.)
☐ See reverse side for additional information

RECEIVED
MAY 21 1991

Department of Water Resources

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT

None See note in file - HWT

Date Requested

PROCESSING ☒ Yes ☒ No form for advertising
☒ Yes ☒ No statewide advertising
☒ Yes ☒ No Fee amount, receipt date & No. recorded on application

COPIES TO ☐ Idaho Dept. of Health & Welfare ☒ ~~Idaho Dept. of Fish & Game~~
☒ Idaho Dept. of Fish & Game ☐ U.S. Forest Service
☐ Idaho Dept. of Lands ☒ Water District 31-Shenton
☐ Adjudication Bureau Unit ☐ Other

FINAL REGIONAL PROCESSING REVIEW

☒ Yes ☐ No Affidavit of publication received
☒ Yes ☐ No Application published correctly. If not, record action taken.

☒ Yes ☐ No Publication dates & paper, recorded on application
☐ Yes ☒ No Protests received
Final date for protest 4-22-91
☐ Yes ☐ No Protests, dates, resolution of protest, recorded on application
☐ Yes ☒ No Recommendations attached
☒ Yes ☒ No Measuring device required
☐ Yes ☒ No Access port required
☐ Yes ☒ No Will water be delivered by watermaster? If yes, what Dist. _____
☒ Yes ☒ No Special conditions of approval or cover letter below. _____

See below for additional information
Date of priority recommended 2-19-91
By HWT Date 5-3-91

STATE OFFICE REVIEW

See below for additional information
By _____ Date _____

ADDITIONAL INFORMATION

Tele-con between BLM + ID Fish + Game indicate they
have no negative comments on this applic. Don Shenton, water master
was also contacted + has no negative comment either.
Applicant must contact FERC + complete Federal requirements.

LOCAL PUBLIC INTEREST

Comments received from:

<u> </u> City	<u> </u> Idaho Fish & Game	<u> </u> Irrigation District
<u> </u> County	<u> </u> Idaho Health & Welfare	<u> </u> Canal Company
<u> </u> Reservations	<u> </u> Division of Environment	<u> </u> Other <u> </u>

Project impacts/implications report

COMMENTS

32-07170

SULLIVAN LIVESTOCK CO.
AN IDAHO CORP.
P.O. BOX 191
DUBOIS, ID 83423

Source: WARM SPRING CREEK

Tributary: SINKS

Diversion Pt: NESESW Sec 7 T 10N R 33E

Use: POWER (8.400 CFS)

Total Diversion: (8.400 CFS)

Date Filed: 2/19/ 1991

In: T10N R33E S20

NESE

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SEP 09 1992

The permit(s) will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code and/or the new public interest criteria of Sec. 42-203C, Idaho Code. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 on or before APRIL 22, 1991.

R. Keith Higginson, Director

Published 4/ 4/1991 & 4/11/1991

MICROFILMED

SEP 09 1992

27-Feb-1991

SULLIVAN LIVESTOCK CO
AN IDAHO CORP
PO BOX 191
DUBOIS ID 83423

RE: Application No. 32-07170

Dear Water Right Applicant:

The Department of Water Resources acknowledges receipt of your water right permit. This office is currently in the process of advertising the application in POST-REGISTER on April 4 & 11, 1991. The advertisement will be published for two consecutive weeks, and a period of ten days following the second publication will be allowed for the submittal of protests.

If the application is protested, you will be sent a copy of the protest. The protest must be resolved before the application is approved or denied. If the protest is not resolved voluntarily, this Department will conduct a conference and/or hearing on the matter.

If the application is not protested, it will be forwarded to our state office in about five weeks. State office personnel will conduct a complete review prior to final processing of the application and will notify you of the outcome of this review. When a permit is issued, you will be sent a copy. A typical processing time for an unprotested application is about eight weeks.

Please feel free to contact this office if you have any questions regarding this procedure.

Sincerely,

HAROLD W. JONES
Water Rights Supervisor

HWJ/rb

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SEP 09 1992

SIMPSON, GAUCHAY & GARDNER

ATTORNEYS AT LAW

497 NORTH CAPITAL AVENUE, SUITE 200

P. O. BOX 50484

IDAHO FALLS, IDAHO 83405-0484

CRAIG W. SIMPSON
KENT W. GAUCHAY
STEVEN A. GARDNER

TELEPHONE
(208) 523-2000
FACSIMILE
(208) 522-4295

RECEIVED

February 19, 1991

FEB 19 1991

Department of Water Resources
Eastern District Office

Idaho Department of Water Resources
150 Shoup Ave., Suite 15
Idaho Falls, ID 83401

RE: Application for Permit - Public Water

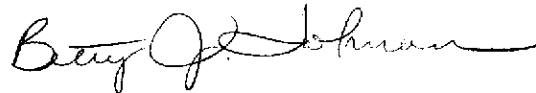
Gentlemen:

Enclosed herewith is Application for Permit to Appropriate Public Water, which has been prepared by this office on behalf of Sullivan Livestock Company. Also enclosed is the filing fee in the sum of \$205.00, Sullivan Livestock Company check no. 2645.

Should there be any questions concerning the information, or if any further information is required, please call Kent Gauchay at the above listed telephone number. Mr. Gauchay serves as legal counsel to Franklin W. Sullivan and Sullivan Livestock Company, and any discussion on this matter should be directed to him.

Sincerely,

SIMPSON, GAUCHAY & GARDNER



Betty J. Tolman
Secretary

Enclosure

SEP 09 1992