

Considered: _____

WATER PERMIT NO. 5476-3

Phone: 622-7017

Name of Applicant: City of Aberdeen

Post Office Address: P.O. Box 1420, 123 South Lincoln

Amount of Water Claimed: 2.22 cfs Total Acres: NA

Source of Water Supply: well (elm aquifer)

Water to be used for: municipal County: Brown

About 6 miles North of Aberdeen

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F. & C/.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY Date Received: 9/27/90 Fee: \$525 Remarks Water reserved

by Future Use No. 192-3

Corrected Application Received 10/3/90 Period of Annual Use Jan. 1 - Dec. 31

WATER QUALITY APPROVAL RECEIVED _____ APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point: NE1/4 NE1/4 Sect. 6 T124N-R63W

Land to be Irrigated: _____

			X		
		6			

Well Log: Driller: _____ Licensed YES _____ NO _____

Depth of Well: 61' REMARKS _____

Type of Map: Plan PREPARED BY: Francis Brink Reviewed and the Number

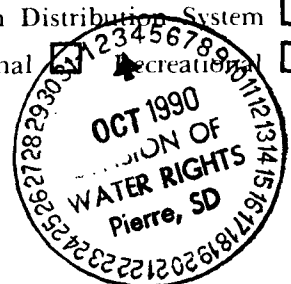
Assigned on 10/5/90 By Eric Gronlund

Mail to: Water Rights Div.
523 E. Capitol
Pierre, SD 57501
(605) 773-3352

No. 5476-3 Hydrologic Unit 1016003
Map No. _____ Basin James River
Newspaper American News, Box 4430, Aberdeen 57402-1420

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use of water: Industrial ☐ Commercial ☐ Municipal ☒ Other Common Distribution System ☐
Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
Domestic ☐ (above 18gpm) Other ☐



Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐
☐ Amend Permit No. _____ with old priority date retained
Change diversion point(s) ☐ Add diversion point(s) ☐ Other ☐ _____
☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____
☒ Construction to use water reserved by Future Use Permit No. 192-3

1. Name of Applicant City of Aberdeen, South Dakota Phone No. 622-7017
P.O. Box 1420
Post Office Address 123 South Lincoln, Aberdeen State S.D. 57402-1420
(Street, RR or Box) (City) Zip Code

2. Amount of water claimed (c.f.s) 2.22 cfs

3. Source of water supply Elm Aquifer

4. Location of point of diversion NE1/4 NE1/4 Sec. 6-124-63

_____ County Brown

5. Counties where water will be used City of Aberdeen in Brown County

6. Annual period during which water is to be used Jan. 1 - Dec. 31

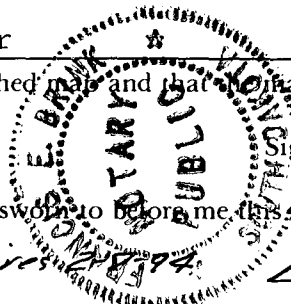
7. Give a brief description of proposed project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Construct one well into Elm Aquifer at above described point of diversion on City owned property. Formation sampling and production test well data submitted to DWNr on 5-4-89 and 6-19-89. Water will be pumped directly to Water Treatment Plant in Sec. 15 T124N-R63W through an existing 24-inch pipeline. Location of well is shown on attached Exhibit A.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
County of Brown) ss

I, Timothy G. Rich, Mayor the applicant, certify that I have read this application, have examined the attached map and that all matters stated are true and that I intend, and am able to complete the necessary construction.



Subscribed and sworn to before me, this 22nd day of October 19 90

My Commission Expires 12/31/94 Francis E Brink

Notary Public

Appl. No.
5476-3

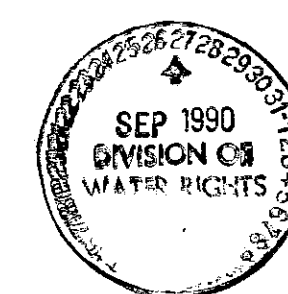
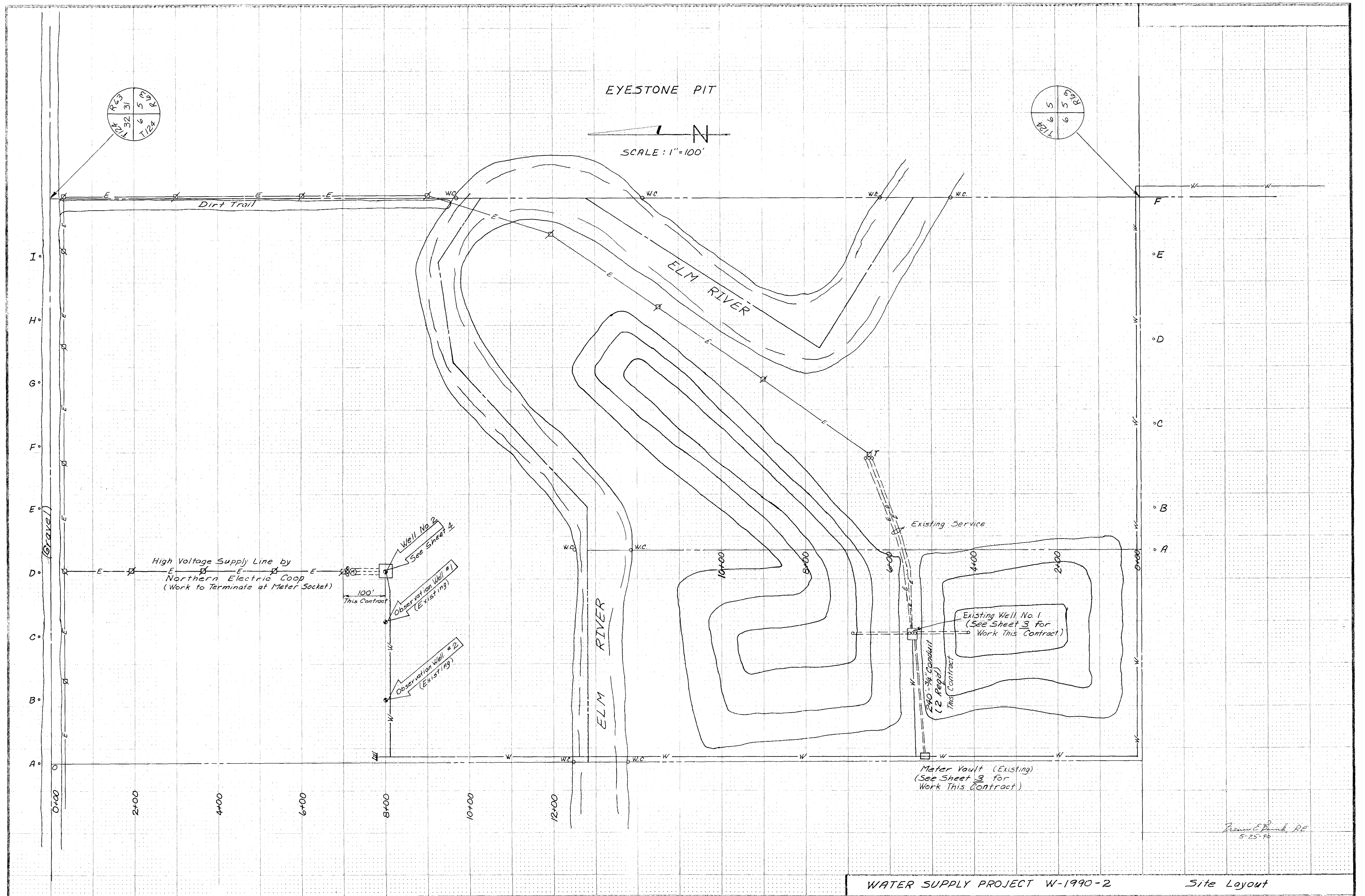
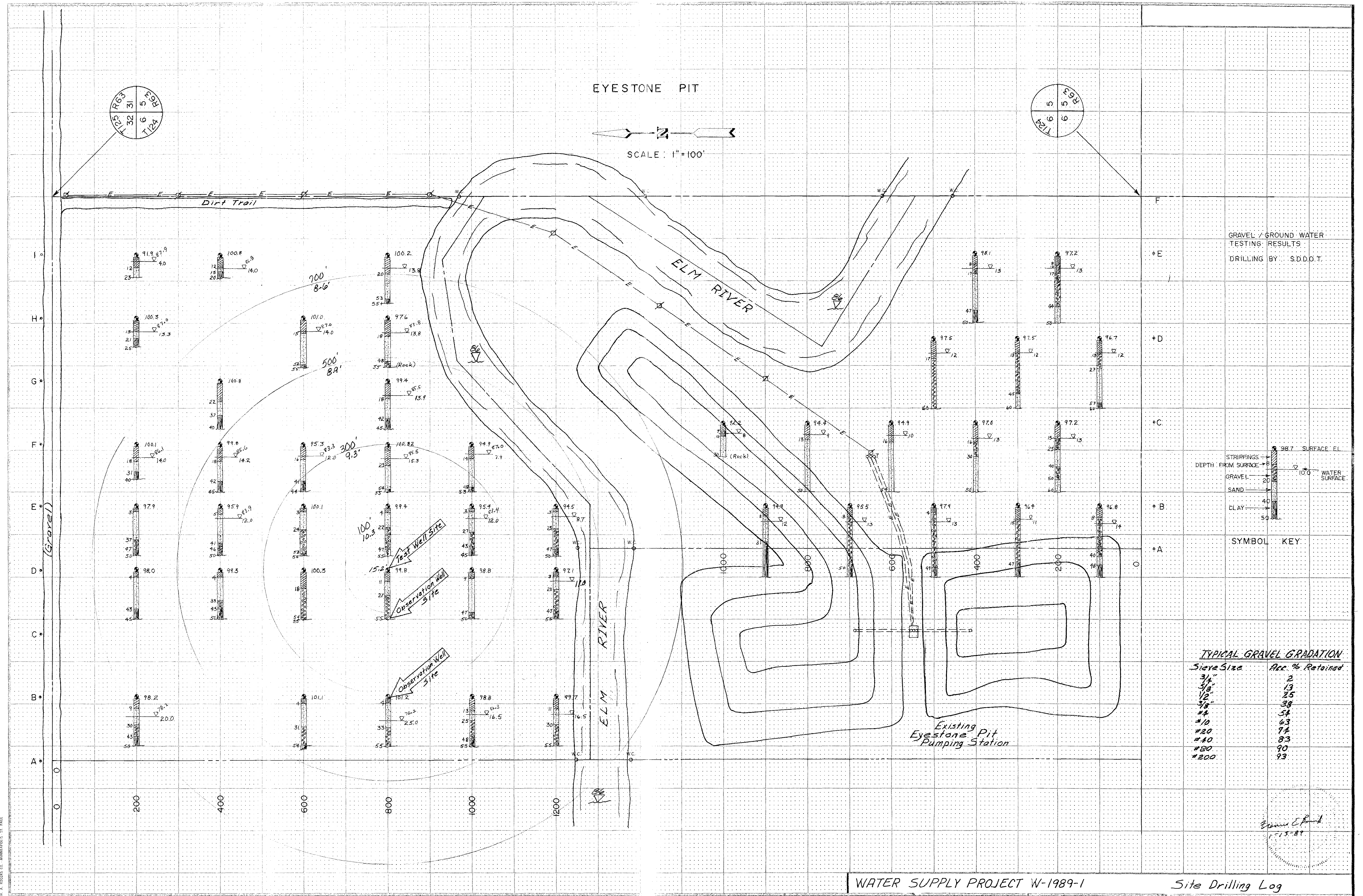


EXHIBIT A
To Water Permit Application From Future Use 1983
City of Aberdeen
September 17, 1990



**SOUTH DAKOTA
WATER PERMIT No. 5476-3**

Date of first receipt of application September 27, 1990.

Date of return to applicant for corrections, amendments or changes
September 28, 1990.

Date of receipt of corrected application October 3, 1990.

The Water Management Board approved Water Permit Application No. 5476-3 on December 5, 1990 for City of Aberdeen, P.O. Box 1420, Aberdeen, SD 57402-1420 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 5476-3 authorizes construction and placement to beneficial use, 2.22 cubic feet of water per second (1600 acre feet annually) from one well (Elm Northern Brown Aquifer) 61 feet deep located in the NE1/4 NE1/4 Section 6, T124N, R63W. This water was appropriated and reserved by future use permit No. 192-3.
2. The water appropriated shall be used for the purpose of supplying city's water needs and may not exceed the amount of water needed for beneficial use for municipal purposes.
3. The water is to be used during the following described annual period: January 1 - December 31.
4. The date from which applicant may claim right is May 4, 1956.
5. One-fifth of the construction is to be completed on or before June 5, 1993.
6. All construction is to be completed on or before December 5, 1995.
7. Water is to be put to beneficial use on or before December 5, 1999.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

WATER MANAGEMENT BOARD

By: _____

John Hatch
Chief Engineer, Water Rights Division
Department of Water and Natural Resources

MAR 27 1991

(date)

Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 16 inch Depth 61'
- b) Casing Type Steel Diameter 12-inch Thickness 49.56 #1ft
- c) Screen Type Stainless Steel Diameter 12-inch Thickness Wire Wound
- d) Gravel Pack Thickness 2-inch Length of Gravel Pack 20 Ft
- e) Depth to Top of Water Bearing Material 15'
- f) Depth of Water (ground surface to water level) 19'
- g) Distance to nearest existing domestic well:
- On applicants property 1200' On property owned by others 1 Mile

2. Dugout Information Estimates

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam please give their name and address

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Outlet Dimensions:
Pipe diameter _____

Spillway width _____

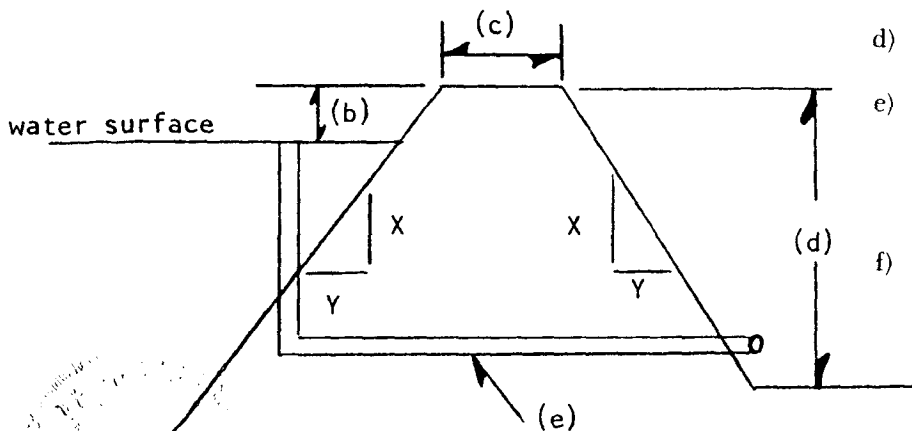
f) X & Y Slope
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



Timothy H. Kiel
Signature of Applicant Mayor, City of Aberdeen

Pump Test well Data, Brown County
City of Aberdeen Test

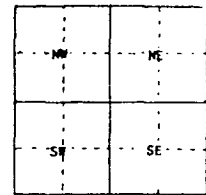
4/24/89

DRB.

well	Date	Time	H ₂ O level
BN 77L	4/24/89	20:01	14.14
	4/25/89	07:14	14.14
	4/25/89	09:23:30	14.14
	4/25/89	10:10:00	14.14
	4/25/89	15:25:00	14.14 PB
	4/26/89	07:04:00	14.14 PB
	4/28/89	07:10:00	14.14 PB

Phone (701) 232-8928

↑
N



WELL DRILLING
PUMP SALES & SERVICE

DRILLERS LOG

Drilled for Alvord, J N City by _____ Office

Location of property _____

Test hole No. 7 Location of test hole _____ Well No. _____

Size of test hole 6 7/8 Date started 4-13-89 Date completed 4-13-89 Total Hours 2 1/2

[illegible]

Gravel pack #20
Screen.
pcpl

Signed

Driller



Property
Well site

SAND ANALYSIS

BY: _____

Job Name _____ Date _____

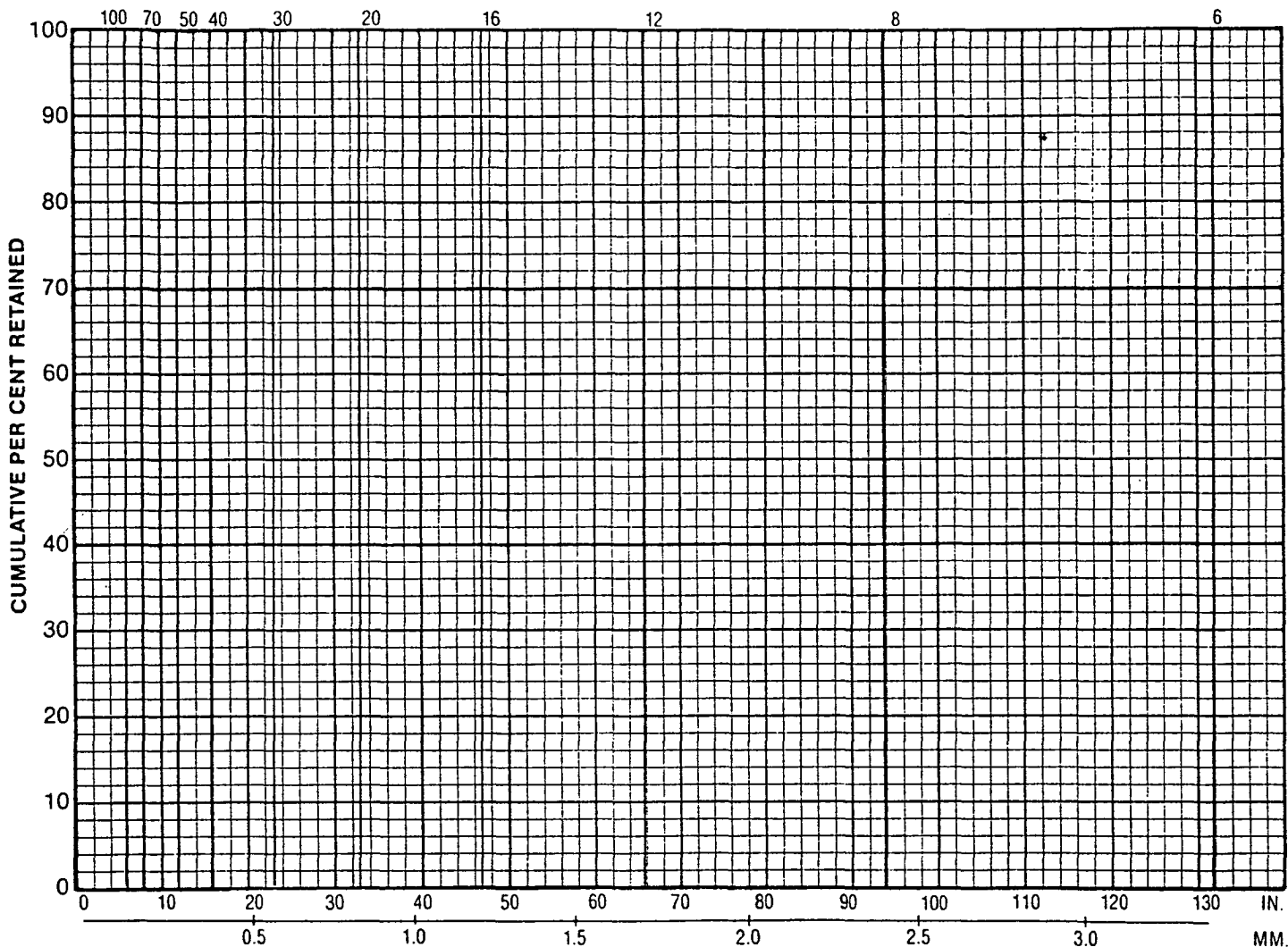
City Abbeville SD State _____ Zip _____

Driller _____ Phone _____

Engineer _____ Phone _____

Remarks _____

U.S. STANDARD SIEVE NUMBERS



SLOT OPENING AND GRAIN SIZE IN THOUSANDTHS OF AN INCH AND MM.

U.S. SIEVE NO.	SLOT OPENING		SAMPLE DEPTHS		
	IN.	MM.	41	46	
6	.132	3.36			
8	.094	2.38	42		
12	.066	1.68	58		
16	.047	1.19	68		
20	.033	0.84	76		
30	.023	0.60	84		
40	.016	0.42	92		
50	.012	0.30	98		
70	.008	0.21			
100	.006	0.15			

Comments _____

SCREEN RECOMMENDATIONS: DIAM. _____

SLOT	SETTING	LENGTH

Owner Aberdeen S.D. CityWell No. #1 18" production

Location _____

Date started 4-24-89Static 19.15

PUMPING TEST

By



Box 2131 • FARGO, ND 58107 • Phone (701) 232-8

Time 7-25-89	Time in Minutes	Pumping Level	Drawdown	GPM 605		Time	Time in Minutes	Pumping Level	Drawdown	GPM 605	
8:34:20	0	19.15	0			9:30	780	27.25	8.10		
8:32	1	25.55	6.4			10:30	840	27.30	8.15		
8:32	2	25.70	6.55			11:30	900	27.35	8.20		
8:33	3	25.80	6.65			12:30 ^{PM}	960	27.35	8.20		
8:34	4	25.80	6.65			1:30	1020	27.40	8.25		
8:35	5	25.80	6.65			2:30	1080	27.45	8.30		
8:36	6	25.80	6.65			3:30	1140	27.45	8.30		
8:37	7	25.80	6.65			4:30	1200	27.45	8.30		
8:38	8	25.75	6.60			5:30	1260	27.50	8.35		
8:39	9	25.75	6.60			6:30	1320	27.55	8.40		
8:40:20	10	25.80	6.65			7:30	1380	27.60	8.45		
8:48:20	15	25.85	6.70			8:30	1440	27.60	8.45		
8:51:20	20	25.85	6.70			9:30	1500	27.65	8.50		
8:56:20	25	25.90	6.75			10:30	1560	27.65	8.50		
9:01:20	30	26.00	6.85			11:30	1620	27.70	8.55		
9:06:20	35	26.00	6.85			12:30 ^{PM}	1680	27.70	8.55		
9:11:20	40	26.05	6.90			1:30	1740	27.70	8.55		
9:16:20	45	26.10	6.95			2:30	1800	27.75	8.60		
9:31:20	60	26.20	7.05			3:30	1860	27.75	8.60		
9:46:20	75	26.30	7.15			4:30	1920	27.75	8.60		
10:01:20	90	26.35	7.20			5:30	1980	27.80	8.65		
10:31:20	120	26.35	7.20			6:30	2040	27.80	8.65		
11:01:20	150	26.45	7.30			7:30	2100	27.80	8.65		
11:31:20	180	26.50	7.35			8:30	2160	27.85	8.70		
12:31	240	26.65	7.50			9:30	2220	27.85	8.70		
1:31	300	26.75	7.60			10:30	2280	27.90	8.70		
2:31	360	26.85	7.70			11:30	2340	27.90	8.75		
3:31	420	26.90	7.75			12:30 ^{PM}	2400	27.95	8.80		
4:31	480	26.95	7.80			1:30	2460	27.95	8.80		
5:31	540	27.05	7.90			2:30	2520	27.95	8.80		
6:30	600	27.10	7.95			3:30	2580	27.95	8.80		
7:30	660	27.15	8.00			4:30	2640	28.00	8.85		
8:30	720	27.15	8.00			5:30	2700	28.00	8.85		

Owner Aberdeen S.D. City
Well No. #1 12" production

Well No.

Location

Date started

Static

PUMPING TEST

By

LTP Enterprises, Inc.
Leonard T. Pulkrabek

PAGE #2

Box 2131 • FARGO, ND 58107 • Phone (701) 232-8951

[illegible]

Owner Aberdeen S.D. City of
 Well No. H 2 OB
 Location 100' West 12" production
 Date started _____
 Static 19.25

PUMPING TEST



#2

Box 2131 • FARGO, ND 58107 • Phone (701) 232-86

Time	Time in Minutes	Pumping Level	Drawdown	GPM	Time	Time in Minutes	Pumping Level	Drawdown	GPM
	0		0		8:30	780	22.24	3.1	
8:30	1	21.55	1.20		10:30	840	22.29	3.05	
8:30	2	21.51	1.26		11:30	900	22.34	3.10	
8:30	3		1.39		12:30	960	22.37	3.13	
8:30	4	21.40	1.52		1:30	1020	22.43	3.19	
8:30	5	21.35	1.53		2:30	1080	22.48	3.24	
8:30	6	21.34	1.59		3:30	1140	22.50	3.26	
8:30	7	21.31	1.64		4:30	1200	22.53	3.29	
8:30	8	21.27	1.64		5:30	1260	22.54	3.30	
8:30	9	21.25	1.67		6:30	1320	22.60	3.36	
8:40	10	21.25	1.70		7:30	1380	22.65	3.40	
8:40	15	21.21	1.76		8:30	1440	22.67	3.42	
8:40	20	21.20	1.84		9:30	1500	22.69	3.44	
8:40	25	21.19	1.89		10:30	1560	22.71	3.46	
8:40	30	21.18	1.94		11:30	1620	22.73	3.48	
8:40	35	21.17	1.97		12:30	1680	22.75	3.50	
8:40	40	21.16	2.00		1:30	1740	22.78	3.50	
8:40	45	21.15	2.04		2:30	1800	22.78	3.53	
8:40	60	21.15	2.12		3:30	1860	22.78	3.53	
8:40	75	21.14	2.19		4:30	1920	22.80	3.55	
8:40	90	21.13	2.26		5:30	1980	22.80	3.55	
8:40	120	21.12	2.31		6:30	2040	22.83	3.58	
8:40	150	21.53	2.28		7:30	2100	22.85	3.60	
8:40	180	21.59	2.34		8:30	2160	22.87	3.62	
8:40	240	21.71	2.46		9:30	2220	22.87	3.64	
8:40	300	21.81	2.56		10:30	2280	22.91	3.66	
8:40	360	21.89	2.64		11:30	2340	22.93	3.68	
8:40	420	21.98	2.73		12:30	2400	22.95	3.70	
8:40	480	22.05	2.80		1:30	2460	22.96	3.71	
8:40	540	22.11	2.86		2:30	2520	22.97	3.72	
8:40	600	22.17	2.92		3:30	2580	22.98	3.73	
8:40	660	22.22	2.98		4:30	2640	22.99	3.74	
8:40	720	22.24	3.0		5:30	2700	23.0	3.75	

Owner

City of Aberdeen S.D.

Well No.

#2 FB

Location

West of 12" 100'

Date started

4-25-89

Static

19.25

PUMPING TEST

By



2#

Box 2131 • FARGO, ND 58107 • Phone (701) 232-89

Time	Time In Minutes	Pumping Level	Drawdown	GPM		Time	Time In Minutes	Pumping Level	Drawdown	GPM	
6:30	2760	23.1	3.75	605							
7:30	2820	23.01	3.76								
8:30	2880	23.03	3.78								
9:30	2940	23.05	3.80								
10:30	3000	23.07	3.82								
11:30	3060	23.09	3.84								
PM 12:30	3120	23.10	3.85								
1:30	3180	23.12	3.87								
2:30	3240	23.13	3.88								
3:30	3300	23.14	3.89								
4:30	3360	23.15	3.90								
5:30	3420	23.16	3.91								
6:30	3480	23.17	3.92								
7:30	3540	23.17	3.92								
8:30	3600	23.17	3.92								
9:30	3660	23.18	3.93								
10:30	3720	23.18	3.93								
11:30	3780	23.19	3.94								
AM 12:30	3840	23.19	3.94	—							
1:30	3900	23.20	3.95								
2:30	3960	23.21	3.96								
3:30	4020	23.22	3.97								
4:30	4080	23.23	3.98								
5:30	4140	23.24	3.99								
6:30	4200	23.27	4.02								
7:30	4260	23.28	4.04								
8:30	4320	23.30	4.06								

Owner Aberdeen City ofWell No. #3 OBLocation 290' West 12" productionDate started 4-24-89Static 19.25 G.H.

PUMPING TEST

By



Box 2131 • FARGO, ND 58107 • Phone (701) 232-89

Time	Time in Minutes	Pumping Level	Drawdown	GPM		Time	Time in Minutes	Pumping Level	Drawdown	GPM
8:30	0	19.25	0	605		9:30	780	21.50	2.25	
8:31	1	19.55	.30			10:30	840	21.54	2.29	
8:32	2	19.72	.47			11:30	900	21.57	2.32	
8:33	3	19.83	.58		AM	12:30	960	21.61	2.36	
8:34	4	19.92	.67			1:30	1020	21.64	2.39	
8:35	5	19.98	.73			2:30	1080	21.68	2.43	
8:36	6	20.04	.79			3:30	1140	21.70	2.45	
8:37	7	20.07	.82			4:30	1200	21.72	2.47	
8:38	8	20.10	.85			5:30	1260	21.74	2.49	
8:39	9	20.13	.88			6:30	1320	21.78	2.53	
8:40	10	20.15	.90			7:30	1380	21.82	2.57	
8:45	15	20.22	.97			8:30	1440	21.85	2.60	
8:50	20	20.38	1.13			9:30	1500	21.87	2.62	
8:55	25	20.33	1.08			10:30	1560	21.89	2.64	
8:00	30	20.36	1.11			11:30	1620	21.93	2.68	
9:05	35	20.39	1.14		PM	12:30	1680	21.96	2.71	
9:10	40	20.43	1.18			1:30	1740	21.98	2.73	
9:15	45	20.45	1.20			2:30	1800	21.98	2.73	
9:30	60	20.51	1.26			3:30	1860	21.99	2.74	
9:45	75	20.58	1.33			4:30	1920	22.01	2.76	
10:00	90	20.64	1.39			5:30	1980	22.03	2.78	
10:30	120	20.72	1.47			6:30	2040	22.06	2.81	
11:00	150	20.79	1.54			7:30	2100	22.07	2.82	
11:30	180	20.84	1.59			8:30	2160	22.08	2.83	
12:30	240	20.95	1.70			9:30	2220	22.10	2.85	
1:30	300	21.05	1.80			10:30	2280	22.12	2.87	
2:30	360	21.11	1.86			11:30	2340	22.14	2.89	
3:30	420	21.17	1.92		AM	12:30	2400	22.19	2.92	
4:30	480	21.22	1.97			1:30	2460	22.19	2.94	
5:30	540	21.31	2.06			2:30	2520	22.21	2.96	
6:30	600	21.36	2.11			3:30	2580	22.23	2.98	
7:30	660	21.40	2.15			4:30	2640	22.25	3.00	
8:30	720	21.45	2.20			5:30	2700	22.25	3.00	

Owner City of Alameda Co.

Well No. #3 00

Location 12" 290'

Date started 4-25-89

Static 19.25

五

By



Box 2131 • FARGO, ND 58107 • Phone (701) 232-8992

FORM # 15

Owner Aberdeen S.D.

Well No. 12"

Location _____

Date started 4-28-89

Static 19.15

PUMPING TEST

By



#1

Box 2131 • FARGO, ND 58107 • Phone (701) 232-89

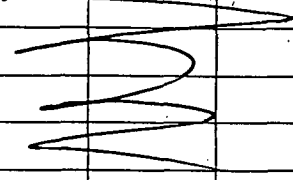
Friday
4-28

Friday
4-28-89

5:55 PM

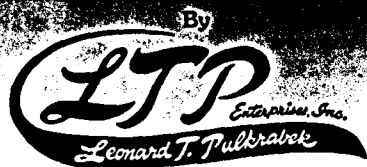
Time	Time in Minutes	Pumping Level	Drawdown	GPM	Time	Time in Minutes	Pumping Level	Drawdown	GPM
8:30	0	28.30	9.15						
8:31	1	22.70	3.55						
8:32	2	22.50	3.35						
8:33	3	22.35	3.20						
8:34	4	22.30	3.15						
8:35	5	22.25	3.10						
8:36	6	22.20	3.05						
8:37	7	22.20	3.05						
8:38	8	22.15	3.00						
8:39	9	22.15	3.00						
8:40	10	22.15	3.00						
8:45	15	22.05	2.90						
8:50	20	22.00	2.85						
8:55	25	21.95	2.80						
9:00	30	21.95	2.80						
9:05	35	21.90	2.75						
9:10	40	21.90	2.75						
9:15	45	21.85	2.70						
9:30	60	21.80	2.65						
9:45	75	21.95	2.60						
10:00	90	21.70	2.55						
10:30	120	21.60	2.45						
11:00	150	21.50	2.35						
11:30	180	21.40	2.25						
12:30	240	21.30	2.15						
1:30	300	21.25	2.10						
2:30	360	21.20	2.05						
2:00 pm	465	19.05							

Recovery



Owner City of Aberdeen S.D.
 Well No. #3 OB
 Location 290' West of #1 12"
 Date started 4-28-89
 Static 19.25

PUMPING TEST



By #3

Box 2131 • FARGO, ND 58107 • Phone (701) 232-8

Time	Time in Minutes	Pumping Level	Drawdown	GPM	Time	Time in Minutes	Pumping Level	Drawdown	GPM
8:30	0	22.50	3.25						
8:31	1	22.39	3.14						
8:32	2	22.20	2.95						
8:33	3	22.10	2.85						
8:34	4	22.00	2.75						
8:35	5	21.95	2.70						
8:36	6	21.90	2.65						
8:37	7	21.85	2.60						
8:38	8	21.83	2.58						
8:39	9	21.82	2.57						
8:40	10	21.80	2.55						
8:45	15	21.75	2.50						
8:50	20	21.69	2.44						
8:55	25	21.67	2.42						
9:00	30	21.63	2.38						
9:05	35	21.61	2.36						
9:10	40	21.60	2.35						
9:15	45	21.57	2.32						
9:30	60	21.50	2.25						
9:45	75	21.44	2.19						
10:00	90	21.42	2.17						
10:30	120	21.35	2.10						
11:00	150	21.31	2.06						
11:30	180	21.27	2.02						
12:30	240	21.16	1.91						
1:30	300	21.08	1.83						
2:30	360	21.05	1.80						
2:00pm	4650	20.08							

Recovery
Z

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

412383

Pierre, October 4, 19 90

RECEIVED OF City of Aberdeen, Box 1420 Aberdeen SD 57402-1420

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>5476-3</u> to Appropriate Water, to construct works and to put water to beneficial use	525	00
Fee for Application for Permit No. _____ to Appropriate Water for Future Use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	525 00

By

John Hatch
Chief Engineer



CITY OF ABERDEEN

123 South Lincoln • P.O. Box 1420 • Aberdeen, SD 57402-1420 • (605) 622-7017

ENGINEERING DEPARTMENT

May 4, 1989

Mr. John Hatch, P.E.
Chief Engineer
Water Rights Division
SDDWNR
Joe Foss Building
Pierre, South Dakota 57501



Re: Test Pump Results - Aberdeen Well
E₂NE_{1/4} 6-124-63

Dear John:

We recently completed test pumping the new well constructed by L.T.P. for the City across the river from the Eyestone Pit. I have enclosed some information for one of the men to look over so I may possibly obtain some recommendations for the pumping well.

The well was drilled to 61' and has a 12" dia. 0.100 slot SS Screen with #20 pack in the bottom 20'. Static water surface was down 19.2 below ground surface and final drawdown after a 72 hour pump test was 9.2'. Static level on the river was approximately 14' below the well site at the time of test. We pumped from the Eyestone pit between 11-21-88 to 3-13-89 with a total drawdown in the pit of around 12 feet. This may account for the lower than normal static water level at the well site. If so, it would suggest that the river doesn't account for much recharge to the Elm Aquifer in this area. We see little or no seepage into the pit from the river when we have the pit pumped down, and saw little evidence of recharge during the pump test.

Attached is the plot of drawdowns in the well and Observation Wells for the 72 hour pump test at 600 gpm. I have extrapolated the results to a year for both 600 and 1000 gpm. Well efficiency looks to be around 85%. The maximum on this well will have to be 1000 gpm to keep entrance velocities below 0.1 fps.

Mr. John Hatch, P.E.
Chief Engineer
Water Rights Division
SDDWNR
Joe Foss Building
Pierre, South Dakota 57501
May 4, 1989
Page Two

It would be helpful to have staff's opinion about another well on the site. It appears to me that there will be significant interference between any two wells on this parcel, but a second well for reliability might be justified. I'll plan to stay some extra time next week if needed to review this a little with them. We need to incorporate some of this information in a CDBG application so I'll be a little rushed. Give it your best shot. See you next week. Thanks for having Dave help us ----- it was appreciated.

Very truly yours,



Francis E. Brink, P.E.
City Engineer

FEB:hh

w/enclosures



CITY OF ABERDEEN

123 South Lincoln • P.O. Box 1420 • Aberdeen, SD 57402-1420 • (605) 622-7017

ENGINEERING DEPARTMENT

September 25, 1990



Mr. John Hatch, P.E.
Chief Engineer
Water Rights Division
SDDWNR
Joe Foss Building
Pierre, SD 57501

RE: Application for Permit to Appropriate Water
City of Aberdeen

Dear John:

Attached please find the City of Aberdeen's application for a Water Permit for the newly constructed well at the Eyestone Pit. I discussed this a week or so ago with Ron and he computed the fee for me.

If there are questions on the application, I can discuss it next week and get additional information for the staff if necessary. Please let me know if there are any problems with the application. Thanks.

Very truly yours,

Francis E. Brink, P.E.
City Engineer

FB/raw

w/attachments

SOUTH Dakota Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

September 28, 1990

Francis E. Brink, City Engineer
City of Aberdeen
P.O. Box 1420
123 South Lincoln
Aberdeen, SD 57402-1420

Dear Mr. Brink:

This letter is in regards to the City of Aberdeen's water permit application for 2.22 cfs from the Elm Aquifer. The signature of the mayor must be notarized in accordance with ARSD 74:02:01:06. I have transposed the information provided onto a new application form, please have this form signed and properly notarized.

The amount of water claimed by construction to use water reserved by Future Use Permit No. 192-3 is 2.22 cubic feet of water per second. What is the yearly volume of water per year that this well will provide to the city's water supply? The general rule of thumb is that wells are pumped sixty percent of the time, in the city's particular case this would calculate to 964 acre-feet annually. Ultimately, it is to the city's benefit to consider withdrawals from future use permits on a yearly volume basis. Also, the application filing fee may be reduced dependent on the yearly water volume.

Finally, I have enclosed some new water permit application forms. It appears the forms you used in preparing this application are outdated.

I will await a signed and notarized application and clarification on what the city's annual water use in acre-feet will be from this well. If you have any questions, we can discuss them at the meeting on October 3rd or feel free to contact me at your convenience.

Sincerely,

Eric Gronlund
Water Rights Division
605 773-3352

enc.

Water Rights Division - DWNR
Conversation File Documentation

NAME OF PERSON OR FILE: City of Aberdeen

ADDRESS: PO Box 1420

COUNTY:

DATE: October 3, 1990

TELEPHONE:

RE: Discussion with Francis Brink

COMMENTS:

At the Board meeting on October 3, 1990, Francis Brink gave me Aberdeen's application to develop water reserved for beneficial use by Permit No. 192-3. Mr. Brink also stated that the City wants the capability to divert 2.22 cfs continuously. In response to my letter, he felt that using the 60% utilization of the well may limit the city if an emergency arose which would require continuous pumping of the well for an extended period of time. I stated that if that was his wish, we would proceed with processing their permit for 2.22 cfs continuously.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME:

Eric H. Hunsaker

Report on Water Permit Application No. 5476-3
City of Aberdeen
October 11, 1990

This application proposes to construct and put to beneficial use 2.22 cfs from one well, approximately 61 feet deep, located in the NE 1/4 NE 1/4 of section 6, T124N R63W in Brown County. The water was appropriated and reserved by Future Use Permit No. 192-3. The water will be used by the city for municipal purposes.

AQUIFER - ELM NORTHERN BROWN (E-NB)

The Elm Northern Brown (E-NB) is an alluvium mantled outwash (sand and gravel) under predominantly water table conditions in this area. The E-NB aquifer underlies 187,200 acres and contains an estimated 702,000 acre feet of recoverable water in Brown County (Hedges, 1982). The E-NB aquifer is hydraulically connected to the Elm Southern Brown aquifer to the south and to the Elm River. Results from an aquifer test conducted by the city (see permit application) indicated the aquifer has a high specific capacity of 65 gpm/foot of drawdown and that leakage from the Elm River was not apparent from test. Undoubtedly leakage is occurring but the duration of the test and possible siltation of the river channel would mask this effect. The flow duration curve for the Elm River at Westport suggest there is a groundwater contribution to the river (Koch, 1976).

The Division of Water Rights monitors 2 observation wells, BN-77L and BN-82F, in this general area. Water levels in these well show good response to wet (recharge) and dry climatic conditions. Water levels rise during wet years and gradually decline during dry years. A total fluctuation of 13 to 7 feet respectively between highest and lowest readings ever recorded has been observed for these wells (Water Rights, 1990). In general, it appears the E-NB aquifer discharges ground water into the Elm River because ground water levels are generally higher than the river stage. Also ground water is moving generally from the west to the east and from north to south with the river being a sink.

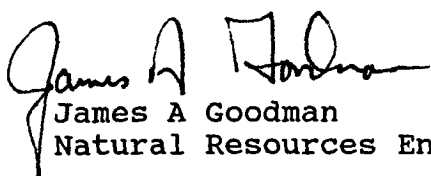
REVIEW OF EXISTING WATER RIGHTS/PERMITS

There are seven water permits/rights for ground water from the E-NB aquifer in this area. The City of Aberdeen holds Future Permits Nos. 192-3 and 3427-3 for 11 cfs and 10 cfs respectively and Water Right No. 3009-3 (2551-3) for 5.0 cfs from Eyestone Pit (#1). One to two miles north there are two active irrigation Water Rights Nos. 1364-3 and 122-3 authorizing a total of 6.92 cfs for irrigation of 521.3 acres. There are two other Permit Nos. 3988-3 and 2657-3 which are in the process of being cancelled due to abandonment or non-use.

Interference is not expected to be a problem. The aquifer test shows that significant drawdowns do not extend very far from the site. The only potential effect would be on the existing city diversion and this can be managed by the city. This application will use water authorized by Future Use Permit No. 192-3 which has priority over all other ground water users in the area except Water Right No. 122-3. There are domestic wells in the area, however, drawdowns created by pumping this new well will not adversely affect the water supply from the aquifer.

CONCLUSIONS

1. Water is available from the E-NB aquifer.
2. Interference is not expected to be a problem. The aquifer is under water table conditions and the only potential effect is on the Eyestone Pit diversion which can be managed by the city.
3. Water for this application has been reserved by Future Use Permit No. 192-3. This will leave 8.78 cfs remaining under this future use plus the 10 cfs authorized under Future Use Permit No. 3427-3.
4. This is an existing well and has been constructed in accordance with SD Well Construction Standard 74:02:04:30.
5. No attempt was made to quantify the potential effect of this diversion upon the flows of the Elm River. Because of the hydrologic character of the river and testing in the area this diversion is not expected to adversely effect downstream water users.


James A Goodman
Natural Resources Engineer

BIBLIOGRAPHY

- Hedges, L.S., 1982, EVALUATION OF GROUND WATER RESOURCES EASTERN SD AND UPPER BIG SIOUX RIVER, SD AND IOWA, for US Army Corps of Engineers, SD DWRN, SDGS, Vermillion, SD, 57069.
- Koch, N.C., 1976, GEOLOGY AND WATER RESOURCES OF BROWN COUNTY, SD, SDGS Bulletin 25, SD DWRN, SDGS, Vermillion, SD, 57069.
- Water Rights, 1990, OBSERVATION WELL RECORDS FOR THE E-NB AQUIFER IN BROWN COUNTY, SD DWRN, Div. of Water Rights, Pierre, SD, 57501.

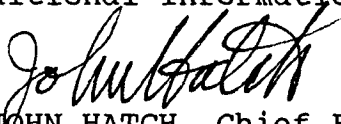
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5476-3, City of Aberdeen

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 5476-3, City of Aberdeen, P.O. Box 1420, Aberdeen SD.

The Chief Engineer is recommending APPROVAL of Application No. 5476-3 because 1) the proposed diversion can be developed without unlawful impairment of existing rights, 2) the proposed use is a beneficial use and 3) in the public interest with the following qualification:

The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.

See report on application for additional information.


JOHN HATCH, Chief Engineer
October 25, 1990



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

October 29, 1990

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.

Timothy G. Rich, Mayor
City of Aberdeen
Box 1420
Aberdeen SD 57402-1420

Dear Mr. Rich:

Water Permit Application No. 5476-3 for municipal use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the American News printed at Aberdeen SD. For your information, a copy of the notice is enclosed. Copies of the report and the Chief Engineer's recommendation are also enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice of Intent to Appropriate Water and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. We must receive Proof of Publication before the application can be considered by the Water Management Board.

Sincerely,

Eric Gronlund
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

October 29, 1990

American News
Box 4430
Aberdeen SD 57402-4430

ATTN: Legal Publications:

Enclosed is a Notice of Hearing on Application No. 5476-3 to be published twice. Please publish the first notice on or before November 8, 1990 with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is City of Aberdeen, Box 1420, Aberdeen SD 57402-1420.

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. The permit application cannot be considered by the Water Management Board until proof of publication has been received.

Sincerely,

Eric Gronlund
Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

CUT HERE

FIRST TRANSMITTAL NOTICE

TO: Eric Gronlund
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to
Appropriate Water by Application No. _____ which was first published in our issue
of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name _____

Newspaper _____

Instruction to Newspaper - Publish first Notice on or before November 8, 1990 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 5476-3 to Develop Reserved Water

Notice is given that City of Aberdeen, Box 1420, Aberdeen SD 57402-1420 has filed an application for a water permit to construct and place to beneficial use, 2.22 cubic feet of water per second (1600 acre-feet annually) from one well (Elm Northern Brown Aquifer) 61 feet deep located in the NE1/4 NE1/4 Section 6-T124N-R63W. This water was appropriated and reserved by future use Permit No. 192-3. The water will be used by the city for municipal purposes.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 5476-3 because 1) existing rights will not be unlawfully impaired, 2) it is a beneficial use of water, and 3) it is in the public interest.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposing the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 26, 1990. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Chief Engineer will act on this application in accordance with the above recommendation and no hearing will be held if the applicant does not contest the Chief Engineer's recommendation and no petition is filed opposing the application. If the applicant contests the recommendation or an interested person opposes the application, then the application will be considered by the Water Management Board. Petitions filed in support of the application will not require the Board to hear the application. The Board may conduct a hearing no sooner than 10:00 am, on December 5, 1990 at the Hilton Inn, Deerfield Room, 445 Mt. Rushmore Road, Rapid City SD and the hearing may be rescheduled for a later date. If the hearing is rescheduled, notice will be given of the time and place. The above hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 26, 1990.

The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. This hearing is an adversary proceeding. Any person filing a petition opposing the application and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact the Water Rights Division to request copies of information pertaining to this application or to assure access to the hearing by the handicapped.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.



PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
 County Brown) ss.

I, Viola Benson

certify that the attached printed Notice was taken
 from the American News

A newspaper which during the whole time of publication of
 said notice herein after stated, has been and is printed and
 published in the city

of Aberdeen

County of Brown and State of South Dakota;
 that the said notice was published in said newspaper on the
 following two dates:

Nov 8, 1990

Nov 15, 1990

Viola Benson
 (Signature)

Accounting

(Title)

11-15-90

(Date Signed)

Cost of Printing: \$65.45

(No. 402 - Nov. 8, 15 - 2T) **NOTICE OF HEARING on** **Application No. 5476-3** **to Develop Reserved Water**

Notice is given that City of Aberdeen, Box 1420, Aberdeen, SD 57402-1420 has filed an application for a water permit to construct and place to beneficial use, 2.22 cubic feet of water per second (1600 acre-feet annually) from one well (Elm Northern Brown Aquifer) 61 feet deep located in the NE 1/4 NE 1/4 Section 6-T124N-R63W. This water was appropriated and reserved by future use Permit No. 192-3. The water will be used by the city for municipal purposes.

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The Chief Engineer will act on this application in accordance with the above recommendation and no hearing will be held if the applicant does not contest the Chief Engineer's recommendation and no petition is filed opposing the application. If the applicant contests the recommendation or an interested person opposes the application, then the application will be considered by the Water Management Board. Petitions filed in support of the application will not require the Board to hear the application. The Board may conduct a hearing no sooner than 10:00 am, on December 5, 1990 at the Hilton Inn, Deertfield Room, 445 Mt. Rushmore Road, Rapid City, SD and the hearing may be rescheduled for a later date. If the hearing is rescheduled, notice will be given of the time and place. The above hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 26, 1990.

The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. This hearing is an adversary proceeding. Any person filing a petition opposing the application and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact the Water Rights Division to request copies of information pertaining to this application or to assure access to the hearing by the handicapped.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17, 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.



DEPARTMENT OF WATER & NATURAL RESOURCES

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

MAR 27 1991

Timothy G. Rich, Mayor
City of Aberdeen
PO Box 1420
Aberdeen SD 57402-1420

Dear Mr. Rich:

Enclosed is Water Permit No. 5476-3 as approved by the Water Management Board authorizing you to construct your water diversion system and put the water to beneficial use, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date April 3, 1991

TO: Water Rights Division, DWNR
Joe Foss Building
Pierre SD 57501-3181

FROM: City of Aberdeen P.O. Box 1420 Aberdeen, SD 57402-1420
name address city

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 5476-3.

Water Permit No. 5476-3 states that the diversion system is to be constructed by December 5, 1995, and that the water it put to beneficial use by December 5, 1999.

The diversion system was completed on October 1, 1991.

Applying the water to beneficial use was completed on October 30, 1991.

You may schedule an inspection so that the Water License may be issued.

signature Francis E. Brink, P.E.
City Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

August 8, 1995

Permit No. 5476-3

Permit No. 5571-3

Robin Bobzien, Public Works Director
City of Aberdeen
123 S Lincoln
Aberdeen SD 57401

Dear Mr. Bobzien:

I am writing in reference to an inspection I completed on May 11, 1995, for two of the city's water permits. Steve Gerdes was very helpful in assisting with the inspection.

Permit No. 5571-3 increases the filtration plant diversion rate from 12.0 cubic feet of water per second (cfs) to 24.7 cfs (16 million gallons per day) and Permit No. 5476-3 is for one well located just North of the Eyestone Pit in the NE1/4 NE1/4 section 6-T124N-R63W. The purpose of the inspection is to license each permit for the amount of water that has been put to beneficial use.

Based on the inspection and file review, the following action or information is needed:

Permit No. 5571-3

- The legal description of the pumping point from the Elm River was incorrectly advertised during publication of the notice of hearing. I have enclosed a copy of the notice for your reference. The notice incorrectly referenced direct diversions being from a dam in the NE1/4 section 4-T125N-R64W (correct location is the SW1/4 section 15-T124N-R63W.) This notice will need to be readvertised to ensure that all legal publication requirements are met. We will pay the cost for readvertising the notice. A copy of the readvertisement will be sent to the city for your review prior to publication.

Permit No. 5476-3

- Steve Gerdes informed me that the well authorized by this permit is capable of diverting 1,000 gpm (2.22 cfs) as allowed by the permit. However, Mr. Gerdes did not have access to any of the specifications for the pump equipment in the well. I was directed to contact you to get specifics concerning the type of motor/pump, model No., horsepower, etc. Please forward this information to me so I can complete the inspection report.

August 8, 1995
Robin Bobzien, Public Works Director
Page 2 of 2

- Another important issue to be addressed is the annual volume of water used from this well. When licensing a water permit which places water to beneficial use from a future use permit, the volume of water not developed is placed back into the future use permit. This water may then be developed at a later date under another water permit. Permit No. 5476-3 places water to beneficial use which was reserved under Future Use Permit No. 192-3. According to No. 5476-3, up to 1,600 acre-feet may be used annually (2.22 cfs pumped continuously for one year.) Please advise whether you want No. 5476-3 licensed for 1,600 acre-feet or if you would like No. 5476-3 licensed for a lesser volume with the difference returned to the future use permit. Attached for your reference is a conversation document dated October 3, 1990, concerning this issue.

Upon receipt of the requested information, licensing of the water permits will proceed. A licensing fee of \$50.00 will be assessed for each permit. You may remit the fees now or wait for a formal request at a later date.

If you have any questions concerning the inspection or this letter, please let me know (605) 773-3352. I will try to assist you in any way possible. I would also like to thank Mr. Gerdes for taking some time to answer my questions and for showing me the pumping equipment at the filtration plant.

Sincerely,



Ron Duvall
Natural Resources Engineer
Water Rights Program

enclosure



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

January 2, 1996

Robin Bobzien, Public Works Director
City of Aberdeen
123 S Lincoln
Aberdeen SD 57401

Dear Mr. Bobzien:

I am writing to follow-up on correspondence with you dated August 8, 1995. Enclosed is a copy of the letter for your review with the specified enclosures.

To date, I have not received a response to the letter. In order to license Water Permit Nos. 5571-3 and 5476-3, we need to complete readvertisement of No. 5571-3 as mentioned in the letter and I also need the requested information concerning the well authorized by No. 5476-3.

We will proceed with the readvertisement in the near future. A copy of the readvertisement will be forwarded to you for your review prior to publication.

Please contact me if you have any questions or need assistance at (605) 773-3352. Thank you for your attention to this matter.

Sincerely,

Ron Duvall
Natural Resources Engineer
Water Rights Program

enclosures

c: Bruce Nelson, Finance Officer



CITY OF ABERDEEN

123 South Lincoln • P.O. Box 1420 • Aberdeen, SD 57402-1420 • (605) 622-7017

ENGINEERING DEPARTMENT

January 30, 1996

Ron Duvall, Natural Resources Engineer
Water Rights Program
Department of Environment and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181



Dear Mr. Duvall:

I first must apologize, that we have not responded to your letter of August 8, 1995. All of the paper work was prepared and I had thought that I had sent it out. However, that part of the job did not get taken care of.

Enclosed you will find the performance curves for Eyestone well listed as permit # 5476-3. Hopefully this will clarify any questions you had regarding the pumping capacity of the well.

Another issue you raised in you letter was the annual volume of water used from this well. As per our conversation of mid-August, we would prefer to leave the permitted usage of 1600 ac-ft as is, in case some problems require that usage. According to your documents, Fran Brink had expressed this wish in 1990 and the City's position has not changed.

If there are any other questions or comments, please let me know. I will attempt to respond in a more timely manner in the future.

Sincerely,

Robin Bobzien, PE
City Engineer/PWA

APPLICATION

Three Phase Motor Specifications Table 3

MOTOR MODEL PREFIX					Rated Input		Maximum Input (S.F. Load)		Max. Lbs.	Line to Line	Efficiency %			Power Factor %			Locked Rotor	KVA	Fuse Size	
	HP	Volts	KZ	S.F.	Amps	Watts	Amps	Watts	Thrust	Res.	S.F.	F.L.	%	S.F.	F.L.	%	Amps	Code	Crt. Bkr. or Std.	Dual Ele.
2366536	15	200	60	1.15	47.8	13700	54.5	15800	3500	.22-.27	81.0	81.5	80.2	84.9	82.8	76.5	306	H	150	60
2366036	15	230	60	1.15	41.6	13700	47.4	15800	3500	.27-.33	81.0	81.5	80.2	84.9	82.8	76.5	266	H	125	60
2366136	15	460	60	1.15	20.8	13700	23.7	15800	3500	1.07-1.32	81.0	81.5	80.2	84.9	82.8	76.5	133	H	60	30
2366236	15	575	60	1.15	16.6	13700	19.0	15800	3500	1.70-2.10	81.0	81.5	80.2	84.9	82.8	76.5	106.4	H	50	25
2366546	20	200	60	1.15	61.9	18100	69.7	20900	3500	.14-.17	82.0	82.3	81.6	86.8	84.8	79.5	416.3	J	200	80
2366046	20	230	60	1.15	53.8	18100	60.6	20900	3500	.20-.25	82.0	82.3	81.6	86.8	84.8	79.5	362	J	175	70
2366146	20	460	60	1.15	26.9	18100	30.3	20900	3500	.76-.94	82.0	82.3	81.6	86.8	84.8	79.5	181	J	80	35
2366246	20	575	60	1.15	21.5	18100	24.2	20900	3500	1.22-1.52	82.0	82.3	81.6	86.8	84.8	79.5	144.8	J	70	30
2366556	25	200	60	1.15	77.1	22500	86.3	25700	3500	.11-.14	82.8	83.0	82.0	87.0	85.0	79.2	552	J	225	100
2366056	25	230	60	1.15	67.0	22500	75.0	25700	3500	.15-.19	82.8	83.0	82.0	87.0	85.0	79.2	480	J	200	90
2366156	25	460	60	1.15	33.5	22500	37.5	25700	3500	.59-.73	82.8	83.0	82.0	87.0	85.0	79.2	240	J	100	45
2366256	25	575	60	1.15	28.8	22500	30.0	25700	3500	1.01-1.25	82.8	83.0	82.0	87.0	85.0	79.2	192	J	80	35
2366566	30	200	60	1.15	90.9	26900	104.0	31100	3500	.10-.12	82.5	83.0	82.6	87.5	85.4	80.3	602.6	J	300	125
2366066	30	230	60	1.15	79.0	26900	90.4	31100	3500	.12-.15	82.5	83.0	82.6	87.5	85.4	80.3	524	J	250	100
2366166	30	460	60	1.15	39.5	26900	45.2	31100	3500	.48-.60	82.5	83.0	82.6	87.5	85.4	80.3	262	J	125	50
2366266	30	575	60	1.15	31.6	26900	36.2	31100	3500	.78-.95	82.5	83.0	82.6	87.5	85.4	80.3	209.6	J	100	40
2366176	40	460	60	1.15	53.5	35600	62.0	42350	3500	.32-.40	83.2	83.4	82.9	85.8	83.6	77.6	397	J	150	70
2366276	40	575	60	1.15	42.8	35600	49.6	42350	3500	.60-.74	83.2	83.4	82.9	85.8	83.6	77.6	317.6	J	125	70
2366186	50	460	60	1.15	67.7	45100	77.0	52200	3500	.25-.32	82.5	83.0	82.7	85.2	84.0	80.0	414	H	200	90
2366286	50	575	60	1.15	54.2	45100	61.6	52200	3500	.39-.48	82.5	83.0	82.7	85.2	84.0	80.0	331.2	H	150	70
2366196	60	460	60	1.15	80.5	53500	91.0	61700	3500	.231-.258	84.2	84.5	84.0	85.0	83.3	78.0	518	H	250	100
2366296	60	575	60	1.15	64.4	53500	72.8	61700	3500		84.2	84.5	84.0	85.0	83.3	78.0	414	H	200	80
2391006	40	460	60	1.15	53.0	37000	60.0	42000	10000	.264-.282	82.0	81.3	79.3	87.3	86.4	83.7	342	H	175	70
2391106	40	575	60	1.15	42.4	37000	48.0	42000	10000	.424-.468	82.0	81.3	79.3	87.3	86.4	83.7	274	H	125	60
2391016	50	460	60	1.15	66.0	44000	75.0	51000	10000	.184-.216	84.4	84.0	82.5	85.5	84.5	81.0	433	H	200	90
2391116	50	575	60	1.15	52.8	44000	60.0	51000	10000	.300-.332	84.4	84.0	82.5	85.5	84.5	81.0	346	H	150	70
2391026	60	460	60	1.15	77.0	53000	89.0	61000	10000	.150-.166	85.5	85.0	83.5	87.5	86.7	83.6	560	J	225	100
2391126	60	575	60	1.15	61.6	53000	71.2	61000	10000	.240-.268	85.5	85.0	83.5	87.5	86.7	83.6	448	J	200	80
2391036	75	460	60	1.15	97.0	66000	110.0	76000	10000	.114-.126	85.2	85.0	83.6	87.1	86.0	82.7	750	J	300	125
2391236	75	575	60	1.15	77.6	66000	88.0	76000	10000	.180-.198	85.2	85.0	83.6	87.1	86.0	82.7	600	J	225	105
2391046	100	460	60	1.15	128.0	87000	148.0	102000	10000	.078-.090	86.5	86.0	84.2	86.8	85.1	81.0	1000	J	400	175
2391246	100	575	60	1.15	102.4	87000	118.4	102000	10000	.118-.130	86.5	86.0	84.2	86.8	85.1	81.0	800	J	300	150
2391056	125	460	60	1.15	165	109000	189	125000	10000	.085-.095	86.3	86.0	84.2	83.6	82.0	77.0	1300	K	500	225
2391056	125	575	60	1.15	132	109000	151	125000	10000	.053-.105	86.3	86.0	84.2	83.6	82.0	77.0	1040	K	400	175
2391266	150	460	60	1.15	193	128000	221	146000	10000	.073-.080	88.0	87.6	86.0	85.0	83.0	78.0	1600(1)	K	600	250
2391266	150	575	60	1.15	154	128000	177	146000	10000	.064-.078	88.0	87.6	86.0	85.0	83.0	78.0	1280(1)	K	450	200
2391276	175	460	60	1.15	218	150000	250	173000	10000	.068-.075	87.2	87.0	85.7	87.0	86.0	82.8	1850(1)	K	700	300
2391276	175	375	60	1.15	174	150000	200	173000	10000	.063-.077	87.2	87.0	85.7	87.0	86.0	82.8	1480(1)	K	500	225
2391286	200	460	60	1.15	245	169000	286	194000	10000	.066-.072	88.2	88.0	87.2	87.2	86.6	84.3	2100(1)	K	800	350
2391286	200	575	60	1.15	196	169000	229	194000	10000	.057-.069	88.2	88.0	87.2	87.2	86.6	84.3	1680(1)	K	600	300

(1) For 6 Lead Wye connected motor $\div$ by 3.

Overload Protection Of Three Phase Submersible Motors

The characteristics of submersible motors are different from standard motors and special overload protection is required. If the motor is stalled, the overload protector must trip within approximately 10 seconds to protect the motor windings. For three phase submersible motors, the installer must use Subtrol or the quick trip protection tabulated below. All recommended overload selections are of the compensated type.

For submersible motors ambient compensation is necessary to provide adequate locked rotor protection at low air temperatures and to avoid nuisance tripping at high air temperatures.

The tables below list correct selections and settings for several manufacturers. Approval of other types may be requested from Franklin Electric.

60 HERTZ 4" MOTORS							
HP	Volts	NEMA Starter Size	Heaters For Overload Relays			Adjustable Relays See Note 3	
			Furnas (Note 1)	Allen Bradley	G.E. (Note 2)	Set	Max.
1/2	200	00	K31	J16	L380A	3.13	3.4
	230	00	K29	J15	L343A	2.76	3.0
	460	00	—	J8	L174A	1.38	1.5
	575	00	—	J5	—	1.10	1.2
3/4	200	00	K36	J19	L510A	4.23	4.6
	230	00	K33	J18	L463A	3.68	4.0
	460	00	K23	J11	L232A	1.84	2.0
	575	00	K21	J8	L193A	1.47	1.6
1	200	00	K37	J21	L618A	5.06	5.5
	230	00	K36	J19	L561A	4.42	4.8
	460	00	K26	J12	L282A	2.21	2.4
	575	00	K23	J10	L211A	1.75	1.9
1.5	200	00	K43	J24	L825A	6.81	7.4
	230	00	K41	J22	L750A	5.89	6.4
	460	00	K29	J15	L380A	2.94	3.2
	575	00	K27	J13	L310A	2.39	2.6
2	200	0	K50	J26	L111B	8.46	9.2
	230	0	K43	J25	L910A	7.36	8.0
	460	00	K33	J18	L463A	3.68	4.0
	575	00	K29	J15	L380A	2.94	3.2
3	200	0	K54	J29	L135B	11.2	12.2
	230	0	K52	J28	L122B	9.75	10.6
	460	0	K37	J20	L618A	4.88	5.3
	575	0	K33	J18	L463A	3.86	4.2
5	200	1	K61	J34	L220B	18.4	20.0
	230	1	K61	J32	L199B	16.0	17.4
	460	0	K49	J25	L100B	8.00	8.7
	575	0	K42	J23	L825A	6.44	7.0
7.5	200	1	K68	J38	L322B	27.0	29.3
	230	1	K67	J36	L293B	23.5	25.5
	460	1	K55	J29	L147B	11.8	12.8
	575	1	K52	J27	L122B	9.38	10.2
10	460	1	K58	J32	L181B	14.8	16.1
	575	1	K55	J30	L147B	11.9	12.9
15	200	3(1)	K76	J43	L622B	50.1	54.5
	230	2	K75	J42	L520B	43.6	47.4
	460	2(1)	K64	J35	L265B	21.8	23.7
	575	2(1)	K61	J33	L220B	17.5	19.0
20	200	3	K78	J45	L787B	64.1	69.7
	230	3(1)	K77	J44	L710B	55.8	60.6
	460	2	K69	J38	L352B	27.9	30.3
	575	2	K64	J35	L293B	22.3	24.2
25	200	3	K86	J71	L950B	79.4	86.3
	230	3	K83	J46	L866B	69.0	75.0
	460	2	K72	J40	L426B	34.5	37.5
	575	2	K69	J37	L352B	27.6	30.0
30	200	4(1)	K88	J72	L107C	95.7	104.0
	230	3	K87	J71	L107C	83.2	90.4
	460	3(1)	K74	J41	L520B	41.6	45.2
	575	3(1)	K72	J39	L390B	33.3	36.2
40	460	3	K77	J44	L710B	57.0	62.0
	575	3	K74	J42	L593B	45.6	49.6
50	460	3	K83	J46	L866B	70.8	77.0
	575	3	K77	J44	L701B	56.7	61.6
60	460	4(1)	K85	J71	L107C	83.7	91.0
	575	4(1)	K78	J45	L787B	67.0	72.8

60 HERTZ 6" MOTORS							
HP	Volts	NEMA Starter Size	Heaters For Overload Relays			Adjustable Relays See Note 3	
			Furnas (Note 1)	Allen Bradley	G.E. (Note 2)	Set	Max.
5	200	1	K61	J34	L220B	18.4	20.0
	230	1	K61	J32	L199B	16.0	17.4
	460	0	K49	J25	L100B	8.00	8.7
	575	0	K42	J23	L825A	6.44	7.0
7.5	200	1	K68	J38	L322B	27.0	29.3
	230	1	K67	J36	L293B	23.5	25.5
	460	1	K55	J29	L147B	11.8	12.8
	575	1	K52	J27	L122B	9.38	10.2
10	200	2(1)	K72	J40	L426B	34.0	37.0
	230	2(1)	K70	J38	L390B	29.6	32.2
	460	1	K58	J32	L181B	14.8	16.1
	575	1	K55	J30	L147B	11.9	12.9
15	200	3(1)	K76	J43	L622B	50.1	54.5
	230	2	K75	J42	L520B	43.6	47.4
	460	2(1)	K64	J35	L265B	21.8	23.7
	575	2(1)	K61	J33	L220B	17.5	19.0
20	200	3	K78	J45	L787B	64.1	69.7
	230	3(1)	K77	J44	L710B	55.8	60.6
	460	2	K69	J38	L352B	27.9	30.3
	575	2	K64	J35	L293B	22.3	24.2
25	200	3	K86	J71	L950B	79.4	86.3
	230	3	K83	J46	L866B	69.0	75.0
	460	2	K72	J40	L426B	34.5	37.5
	575	2	K69	J37	L352B	27.6	30.0
30	200	4(1)	K88	J72	L107C	95.7	104.0
	230	3	K87	J71	L107C	83.2	90.4
	460	3(1)	K74	J41	L520B	41.6	45.2
	575	3(1)	K72	J39	L390B	33.3	36.2
40	460	3	K77	J44	L710B	57.0	62.0
	575	3	K74	J42	L593B	45.6	49.6
50	460	3	K83	J46	L866B	70.8	77.0
	575	3	K77	J44	L701B	56.7	61.6
60	460	4(1)	K85	J71	L107C	83.7	91.0
	575	4(1)	K78	J45	L787B	67.0	72.8

FOOTNOTES:

NOTE 1: Furnas intermediate sizes between NEMA starter sizes apply where (1) is shown in tables, size 1 3/4 replacing 2, 2 1/2 replacing 3, and 3 1/2 replacing 4. Heaters listed apply to Innova 45 designs and Definite Purpose Class 16 starters through their available range, and to standard starters in larger sizes. Overload relay adjustments should be set no higher than 100%, unless necessary to stop nuisance tripping with measured amps in all lines below nameplate maximum.

NOTE 2: General Electric heaters are type CR123 usable only on type CR124 overload relays. Adjustment should be set no higher than 100%, unless necessary to stop nuisance tripping with measured amps in all lines below nameplate maximum.

NOTE 3: Adjustable overload relay amp settings apply to approved types listed below. Approval of other types may be requested from Franklin Electric. Relay adjustment should be set at the **specified SET amps**, and only if tripping occurs with amps in all lines measured to be within nameplate maximum amps should the setting be increased, **not to exceed** the MAX value shown. Some approved types may only be available for part of the listed motor ratings. When relays are used with current transformers, relay setting is the

specified amps divided by the transformer ratio. Approved manufacturer types include:

Westinghouse types FT13, K7D, K27D, K67D.
 Seimens-Allis types 0LR0800, 1000, 1250, 2000, 3200, 4000, 4500, 0633, 0803, 1003, 1103, 1253, 1353.
 Seimens types 3VA5900-15, -2A, -2C, -2E, -2N and 3VA4300-8AN, -8AP, -8AQ, -8AR, -8AS.
 Telemecanique type LRI-D.
 Square D Class 9065 type TUPE and type MR.
 Klockner-Moeller Z0-6.7, -12, -22.5; Z2-10, -16, -24, -40, -80; Z4-70, -100, -140, -180, -240.
 RTE Delta type DQ.
 S & S Controls types CT, CT1, CTA1.
 ASEA type RVH 40.

Other relay types from these and other manufacturers may or may not provide acceptable protection, and they should not be used without approval of Franklin Electric.

NOTICE: WARRANTY ON THREE PHASE SUBMERSIBLE MOTORS IS VOID UNLESS SUBTROL OR PROPER QUICK TRIP PROTECTION IN ALL 3 MOTOR LINES IS USED.

WHERE WOULD THE SUBMERSIBLE PUMP MOTOR BE WITHOUT FRANKLIN ELECTRIC?



"We made the best submersible pump motor in the world in 1948. Still do."

—Edward J. Schaefer, Chairman, Franklin Electric.

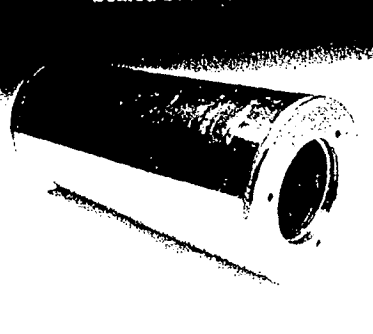
Take a good look at the submersible pump motor achievements first engineered by Franklin Electric. From the first commercially-successful submersible in 1948 to the Subtrol Protective System 30 years later, *virtually every significant improvement in submersible pump motor design has been made by Franklin.* Including many features that have been duplicated by others.

A few noteworthy examples: Franklin first sealed the stator and designed water-bloc lead connectors to combat moisture. We introduced the first super stainless motor for high-corrosion environments. We created an unlimited supply of lubricant by perfecting water lubrication. We struck back at lightning with dependable, built-in lightning arrestors. And we're continuing our record of innovation with the new Subtrol micro-processor protection system (Page 8).

Franklin is the unquestioned leader in submersible pump motor technology. And we're going to remain in that position with an on-going commitment to research and development that's second to none.

DATE	INNOVATIONS
1948	First High Torque, Capacitor Start, 1 Phase, 3-Wire Submersible Motor.
1950	First Submersible Motor Designed for the Water Systems Industry.
1953	First Filter Check Valve System.
1953	First Pre-Filled, Water Lubricated Submersible Motor.
1954	First Splined Drive Shaft.
1955	First Protection Against Rapid Cycling for Submersibles.
1955	First Network of Field Motor Service Shops.
1958	First NEMA Standard Motors, 4"/1958. Followed by 900H, 6" and 8".
1962	First Non-Splice Packaged Drop Cable.
1972	First Solid State 2-Wire Submersible Motor with Starting Switch.
1975	First Anti-Track Resin System.
1976	First 8" 100 HP Submersible Motor.

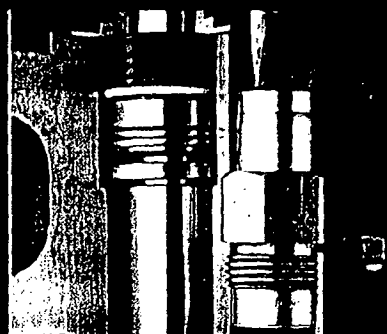
Hermetically Sealed Stator (1949).



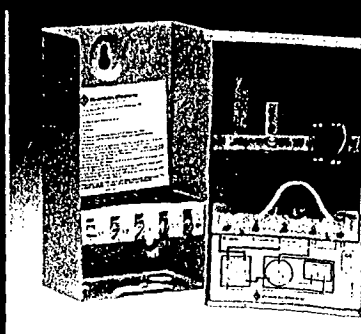
Water Lubricated Carbon Bearings (1949).



Water-Bloc Lead Connector (1954).



Quick Disconnect Control Box (1962).



Super Stainless Motor (1971).



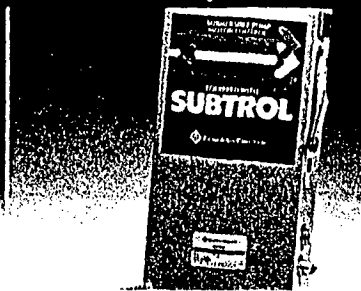
Built-In Lightning Arrestor (1972).



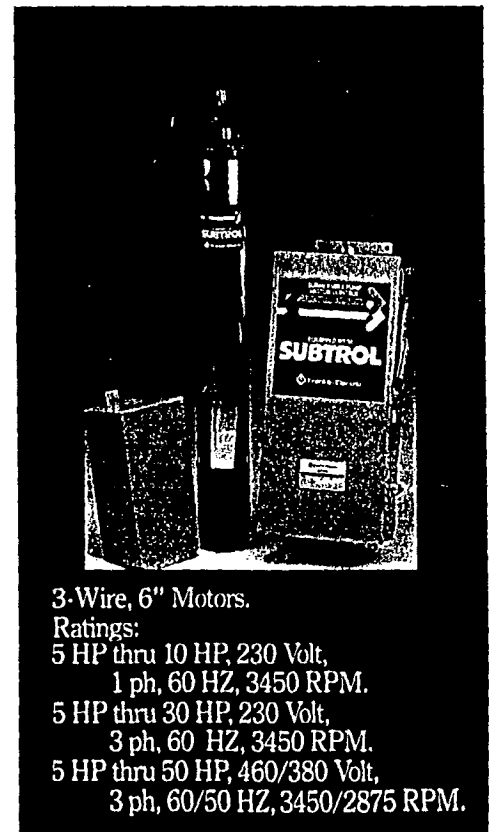
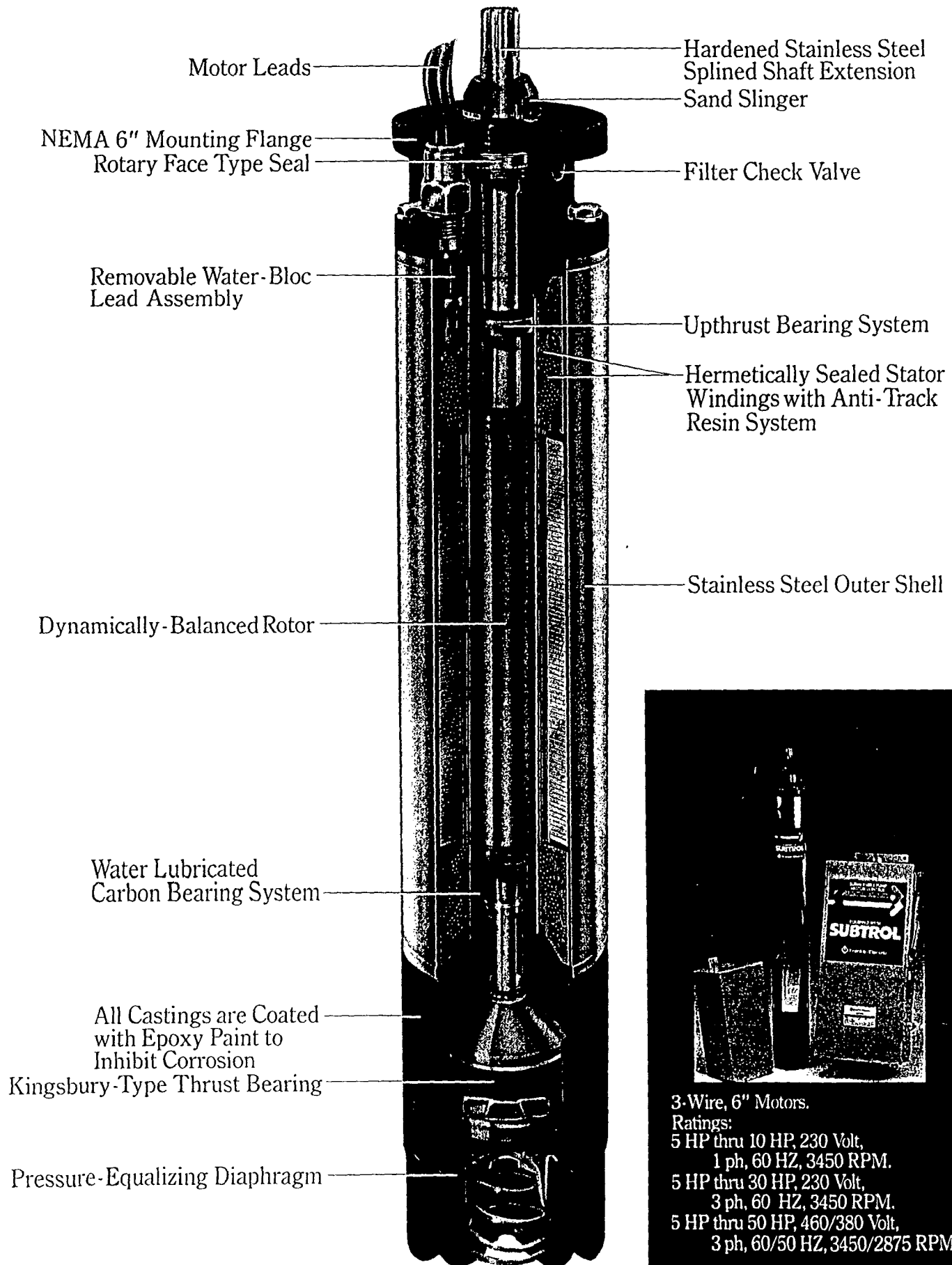
Biac 2-Wire Starting Switch (1975).



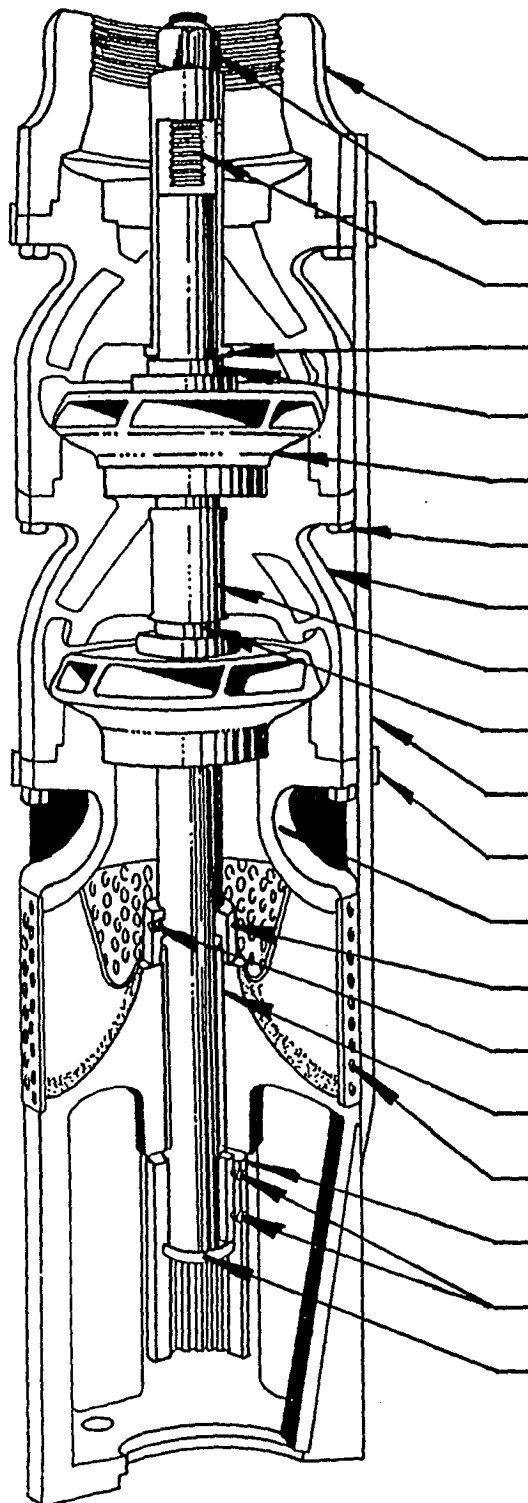
3-Phase Submersible Motor Protection System (1978).



THE SUPER 6 INCH.



SECTION : 2
 PAGE : 29
 EFFECTIVE: 10-1-89
 REPLACES : NEW



REF NO.	DESCRIPTION	MATERIAL	
		STANDARD	SPECIAL
1	DISCHARGE ADAPTER	CAST IRON	
2	LOCK NUT	STN. STEEL	
3	THRUST SCREW	BRONZE	
4	THRUST BEARING	BRONZE	
5	IMPELLER LOCK COLLET	STEEL	
6	IMPELLER	BRONZE	
7	CAP SCREW	STEEL	
8	BOWL	CAST IRON	
9	INTERMEDIATE BOWL BEARING	BRONZE	
10	BOWL SHAFT	STN. STEEL	
11	CABLE GUARD	STN. STEEL	
12	CLAMP	STN. STEEL	
13	INLET ADAPTER	CAST IRON	
14	SAND COLLAR	BRONZE	
15	SET SCREW	STN. STEEL	
16	INLET BEARING	BRONZE	
17	STRAINER SCREEN	STN. STEEL	
18	SUBMERSIBLE MOTOR COUPLING	STN. STEEL	
19	SET SCREW	STN. STEEL	
20	THRUST DISK	STN. STEEL	

IN ORDERING REPLACEMENT PARTS, SPECIFY PART DESCRIPTION AND PUMP SERIAL NUMBER.



DEMPSTER INDUSTRIES INC.

APPROVED

by

Zeller Bros. Const., Inc.

Bruce Zeller

7/23/90

Section 4

Page 7.1

Curve No. 360809

Effective October, 1989

Supersedes

3500 RPM
SINGLE STAGE PERFORMANCE

Model 8CCH
(Formerly Berkeley 805H)
Standard Construction

1 STAGES REQUIRED

Shutoff Head: A Trim 151', B Trim 132'

TDH
FEET

150

125

100

75

50

BRAKE
HORSEPOWER

30

20

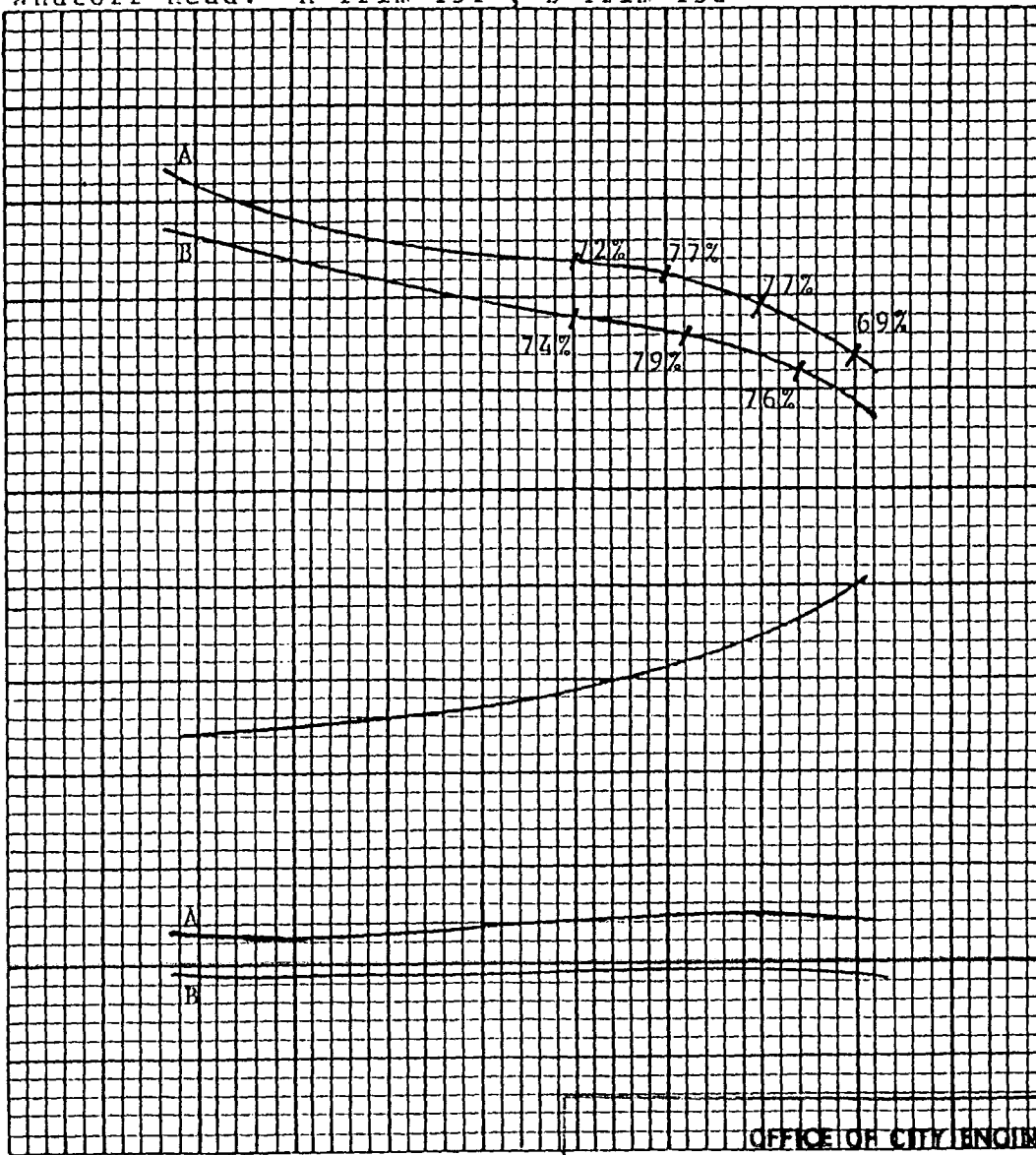
10

30

20

10

NPSHR
FEET



OFFICE OF CITY ENGINEER

Aberdeen, South Dakota 57401

U.S. GALLONS PER MINUTE

LITERS PER SECOND

CUBIC METERS PER HOUR

A=6.19

B=5.88

Project W-7990-2

Rec'd 7-24-90

☒ No Exceptions Noted

☐ Exceptions Noted

☐ Returned For Correction

☐ Record Copy

Pump hydraulic performance is based on handling cold clear, fresh non-aerated water, free of foreign materials. Review does not relieve Contractor from responsibility for errors, omissions, or deviation from contract requirements.

Customer: _____

Reviewed by *James Smith*

Date 7-31-90



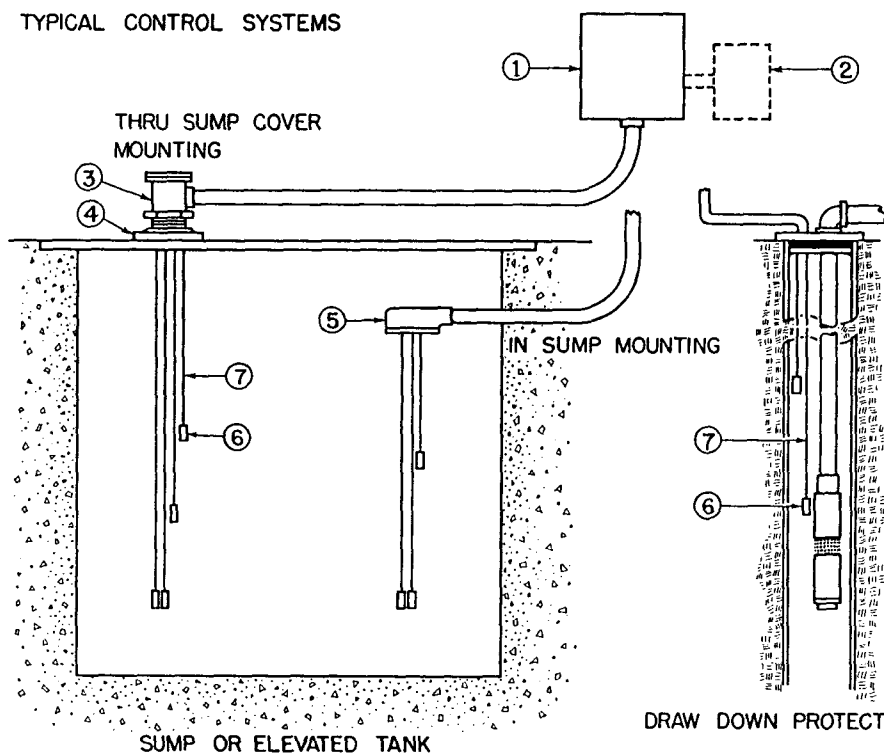
BERKELEY PUMPS
Pumpton Division—Transamerica Delaval, Inc.

WARRICK ELECTRODE TYPE LIQUID LEVEL CONTROL

PRICE LIST	8000
DATE	7-1-86
PAGE	9
SUPERSEDES	
All Previously Issued	
8000 Price Lists	

The control actuates pumps to maintain liquids at any desired high, low, or intermediate level. The system may be used with any non-flammable, electrically conductive liquid with electrodes located as far as 500 feet from the control. Applications: Pump down control, sump pump or drawdown protection. Pump up control, storage tank on discharge side of pump. (Contact function may be changed in the field.) Electrical Rating: Useable to 1 HP, single phase (1150 watt max., 230 volt max.); or in single pole pilot service to magnetic starter for polyphase and for single phase applications over 1 HP.

TYPICAL CONTROL SYSTEMS



- (1) Control Relay with enclosure
- (2) Magnetic motor starter (if required. Use for single phase motors over 1 HP, and all polyphase motors.)
- (3) Electrode support fitting for through sump cover mounting, Type E. (Specify number of electrodes.)
- (4) 125# Standard Flange for mounting Type E fitting on sump cover.
- (5) Electrode support fitting for insump mounting. Type UA. (Accommodates 3 electrodes.)
- (6) Electrodes - One electrode for each function (list below) required by the installation:
 - (a) Common, or ground (Required when operating in non-conductive sump in which electrode circuit cannot be grounded.)
 - (b) Pump stop
 - (c) Pump start
 - (d) Pump No. 2 start (for duplex systems)
 - (e) High liquid level alarm (When required)

When ordering electrode type liquid level control system, please specify: Component required, nature of liquid, voltage and frequency of power supply, special features required by application (i.e., weatherproof, turbulent sump mounting, etc.).

Price includes control relay in NEMA - 1 Enclosure. Other enclosures are available. (Refer to Factory) Stock relays are available for 115, 230 or 460 V. Operates on either 50 or 60 cycles. Stock secondary transformer voltage is 300 volts, which is suitable for most high-to moderate conductivity liquids. Higher secondary voltage may be required for low conductivity condensate water. (Refer to Factory)

Sym.	Description	Catalog Number
1	Relay w/NEMA 1 Enclosure Model 1G1DI 115V Primary 300V Secondary	S20805
	Relay w/NEMA 1 Enclosure Model 1G2DI 230V Primary 300V Secondary	S20806
	Relay w/NEMA 1 Enclosure Model 1G4DI 460V Primary 300V Secondary	S20807
6	Type "W" Electrode Shielded Stainless Steel	S20808
7	Black Suspension Wire Stranded 3/64" Dia.	S21798
	White Suspension Wire Stranded 3/64" Dia.	S21799
5	Conduit Support Fitting For Three Wire Suspension In Sump - 1/2" Conduit	S20810

Type E Support Fittings Male NPT cast iron body, weatherproof

Type	Quantity of Electrodes	Male NPT (In.)	Support Fitting (3) Catalog Number	Flange (4) Catalog Number
3E-1A	1	1	S20811	B50109
3E-2A	2	2	S20812	B50110
3E-3A	3	2	S20813	B50111
3E-4A	4	2½	S20814	B50112
3E-5A	5	3	S20815	B50113

ALL PRICES F.O.B. FACTORY OR FACTORY BRANCH. NON-RETROACTIVE AND SUBJECT TO CHANGE WITHOUT NOTICE.

Litho in U.S.A.

Duplication of SCAWA System
 Not Needed
 AB 7-31-90

Permit No. 5476-3
James River - Water District

Report of Examination of Works and/or Application of Water to Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, May 11, 1995, made a thorough examination of the water use system constructed by the City of Aberdeen of 123 S Lincoln, Aberdeen SD 57401 holder of Permit No. 5476-3, bearing the priority of May 4, 1956 authorizing the diversion of 2.22 cu. ft. per second of the waters of Elm Northern Brown aquifer for municipal purposes, in Brown County.

I have to report on the conditions of the same as follows:

A. Works used to divert the water:

Franklin submersible
Model No. 2366056
25 horsepower

Berkeley
Model 8CCH
Capacity - 1,000 gpm

B. Works used to transport water to place of use:

City distribution system

C. Works used to apply water to beneficial use:

City distribution system

The system is in the following condition **good**. The point of diversion is located **900 feet S and 900 feet W from the NE corner section 6-T124N-R63W (NE1/4 NE1/4)**. The works are capable of diverting and conveying to the place of use **2.22** cu. ft. per second of water which is to be used for **municipal purposes**. Water has been put to beneficial use the license should be issued for **2.22** cfs.

Applicable permit qualifications have been complied with: Yes ☒ No

Exceptions to compliance are: **none** Date report completed: **February 7, 1996**



Ron Duvall
Natural Resources Engineer
DENR, Water Rights Program

FIELD INVESTIGATION REPORT FOR PERMIT NO. 5476-3

DATE OF INVESTIGATION:	May 11, 1995
NAME & ADDRESS OF INVESTIGATION CONTACT/ RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE	Steve Gerdes, city employee at treatment plant
NAME & ADDRESS OF PERMIT HOLDER	City of Aberdeen 123 S Lincoln Aberdeen SD 57401
DIVERSION POINT LEGAL LOCATION	900 feet S and 900 feet W from the NE corner section 6-T124N-R63W (NE$\frac{1}{4}$ NE$\frac{1}{4}$)

Other permit(s) associated with the project: **none**

WELL INFORMATION:

- 1) Well Drilling Firm: **LTP Enterprises, Inc.**
- 2) No. of Wells **1**
- 3) Depth(s) **61** feet
- 4) Well log is available **Y**

Casing:

- 1) Diameter **12** inches
- 2) Length **41** feet
- 3) Type **Steel**

Screen:

- 1) Type **Stainless steel**
- 2) Length **20** feet
- 3) Static water level **19** feet

Pump:

- 1) Make **Berkeley**
- 2) Model **8CCH**
- 3) Capacity **1,000** GPM

Motor:

- 1) Make **Franklin submersible**
- 2) Model No. **2366056**
- 3) Horsepower rating **25** hp

DISTRIBUTION LINES OR CANALS:

- 1) Type **city distribution system**

PERMIT QUALIFICATIONS:

- 1) Special qualifications being abided by **Y**
- 2) All structures, wells and lands on map **Y**

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5476-3

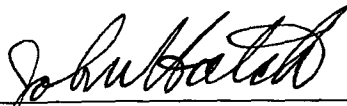
(1) The City of Aberdeen, 123 S Lincoln, Aberdeen SD 57401 made Application No. 5476-3, October 3, 1990 for a water permit to divert 2.22 cubic feet of water per second from groundwater (one well), Brown County, South Dakota for municipal purposes. Permit No. 5476-3, with a priority date of May 4, 1956 (based on Future Use Permit No. 192-3) was approved December 5, 1990 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 5, 1995 and for the application to beneficial use of said water on or before December 5, 1999.

The permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on April 4, 1991. The "*Notice*" stated the diversion system was completed on October 1, 1991 and the water placed to beneficial use on October 30, 1991.

(2) It is certified that the applicant has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 2.22 cubic feet of water per second for beneficial use. The location of the diversion point is 900 feet south and 900 feet west from the northeast corner of Section 6-T124N-R63W (NE 1/4 NE 1/4).

(3) The applicant has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 the City of Aberdeen, 123 S Lincoln, Aberdeen SD 57401 the holder and/or owner of Water Permit No. 5476-3 is issued a license to appropriate water, the right to use 2.22 cubic feet of water per second from groundwater (one well) with a priority date of May 4, 1956 from the location specified in (2) of this license, for the purpose of municipal use. This license is subject to any limitations or qualifications listed in Water Permit No. 5476-3 and subject to South Dakota State Law.



JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

OCT 15 1996

date

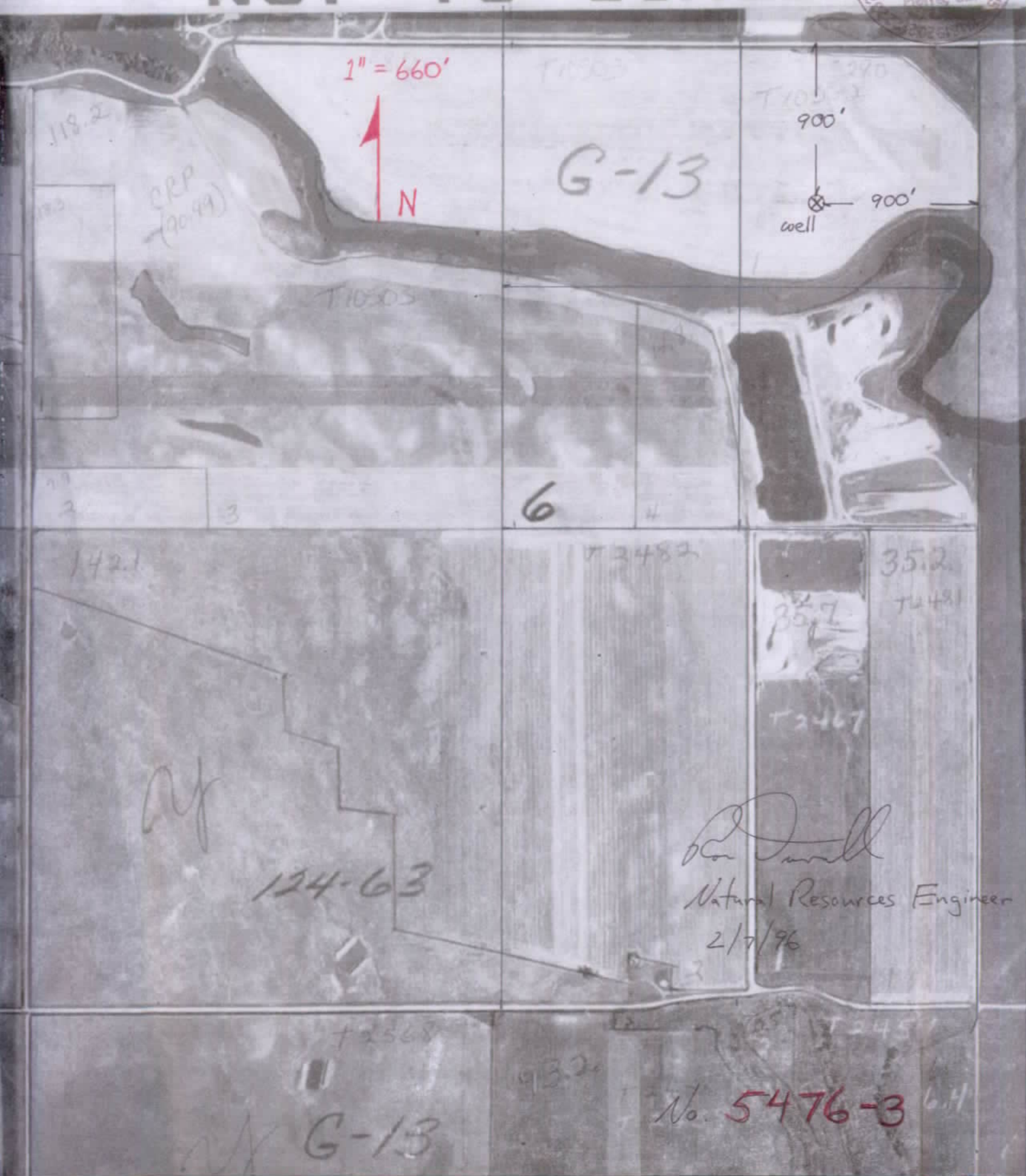


Aberdeen

✓ well site identified on
map for No. 5476-3



NOT TO SCALE





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

June 27, 1996

5476-3
5571-3

Bruce Nelson, Finance Officer
City of Aberdeen
123 S. Lincoln
Aberdeen, SD 57401

Dear Mr. Nelson:

The inspection of your water use system and the inspection of the extent of application of water to beneficial use, as developed under Water Permit Nos. 5476-3 and 5571-3, have been completed. Your final water right documents, the Water Licenses, can now be issued.

Statutes require that we charge a \$50.00 fee per license for the inspection and issuance of the Water Licenses. Upon receipt of the \$50.00 fee per license from you (\$100.00 total), we will begin processing your Water Licenses.

Please remit fee to:
Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify your permit numbers. This will insure proper handling of the fee.

RECEIPT

415033

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ July 31, 19 96

RECEIVED OF City of Aberdeen, Box 1420, Aberdeen, SD 57402-1420

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use _____		
Fee for Application for Permit No. _____ to Appropriate Water, for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>5476-3</u>	50	00
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

By John Hatch
Chief Engineer



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

OCT 15 1996

Bruce Nelson, Finance Officer
City of Aberdeen
123 S Lincoln
Aberdeen SD 57401-1420

Dear Mr. Nelson:

Enclosed are Water License Nos. 5476-3, 5571-3 and Reissued Water Permit No. 5571-3. The receipts which were assessed for the investigation and issuance of the licenses are also enclosed. Water License Nos. 5476-3 and 5571-3 are the final documents which complete the process of obtaining water rights.

As long as the City of Aberdeen uses the water beneficially, as stated in the Water Licenses, State Water Laws provide that the City has a continuing right to use the water.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
605 773-3352

ks

enclosures