

WATER PERMIT NO. 5803-3

Phone: 773-3387

Name of Applicant: SD Department of Game, Fish and Parks

Post Office Address: 523 E Capitol, Pierre SD 57501

Amount of Water Claimed: 720 AF Total Acres: _____

Source of Water Supply: runoff - Furlong Creek (tributary of James River)

Water to be used for: fish & wildlife production & recreational use County: HT

About 1 1/2 miles NW of Menno

PRIORITY Date Received: 2-11-94 Fee: NA Remarks: Reconstruct-

ion of Menno Dam

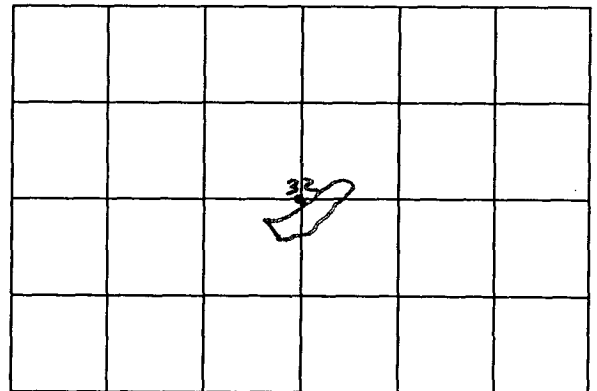
Corrected Application Received: _____ Period of Annual Use: Jan 1 - Dec 31

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

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

Diversion Point: N 1/2 SW 1/4 Sec 32-T98N-R57W

Land to be Irrigated: _____



Well Log: Driller: _____ Licensed YES _____ NO _____

Depth of Well: _____ REMARKS: _____

Type of Map: topo PREPARED BY: _____ Reviewed and the Number

Assigned on: 2-14-94 By: Karen Schlaak

No. 5803-3 Hydrologic Unit 10160011
 Map No. _____ Basin James River
 Newspaper Hutchinson Herald, Box 537, Menno

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 ☒ Fish & Wildlife habitat

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐☐ Amend Permit No. _____ with old priority date retainedChange 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. _____1. Name of Applicant South Dakota Dept. of Game, Fish & Parks Phone No. 773-3387Post Office Address 523 E. Capitol Pierre SD State 57501
(Street, RR, or Box) (City) Zip Code2. Amount of water claimed (c.f.s) 700 acre-feet of storage to outlet elevation of 1261.9 above MSL3. Source of water supply Furlong Creek - a tributary to the James River4. Location of point of diversion Dam location - N1/2, SW1/4 Sec 32, T98N, R57W
NE1/4 NE1/4, S1/2 N1/2 SW1/4, NW1/4 SE1/4, S1/2 NW1/4
 Impounded water in the NE1/4, the NW1/4 and the SW1/4 of Sec 32,
T98N, R57W County Hutchinson5. Counties where water will be used Hutchinson6. Annual period during which water is to be used January 1 - December 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)

Reconstruction of Lake Menno dam and spillway structures to
 provide fish & wildlife habitat and recreational opportunities.

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 Hughes)^{ss}

I, South Dakota Dept. of Game, Fish & Parks the applicant, certify that I have read
 this application, have examined the attached map and that the matters stated are true and that I intend, and am able to
 complete the necessary construction.

Signed Richard R. [Signature]Subscribed and sworn to before me this 14th day of February 19 94[Signature]
Notary Public

My Commission expires on July 18, 2001.

**SOUTH DAKOTA
WATER PERMIT NO. 5803-3**

Date of first receipt of application February 11, 1994.

Date of return to applicant for corrections, amendments or changes February 16, 1994.

Date of receipt of corrected application May 3, 1994.

The Water Management Board approved Water Permit Application No. 5803-3 on June 28, 1994 for South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 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. 5803-3 authorizes impoundment of 720 acre-feet of runoff and Furlong Creek water by reconstructing Menno Dam. The dam site is located in the N 1/2 SW 1/4 Section 32 with water impounded in the N 1/2 SW 1/4, S 1/2 NW 1/4, NE 1/4 NE 1/4, S 1/2 NE 1/4, NW 1/4 SE 1/4 Section 32; all in T98N-R57W. Water is to be stored annually to an elevation of 1261.9 feet mean sea level.
2. The water appropriated shall be used for the purpose of supplying water for recreational use and to provide habitat for fish and wildlife production and may not exceed the amount of water needed for beneficial use for recreational and fish and wildlife production 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 3, 1994.
5. One-fifth of the construction is to be completed on or before December 28, 1996.
6. All construction is to be completed on or before June 28, 1999.
7. Water is to be put to beneficial use on or before June 28, 2003.
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. Water Permit No. 5803-3 authorizes storage of up to 720 acre-feet of water annually.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

WATER MANAGEMENT BOARD

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

NOV 14 1994
date

Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack Thickness _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Dugout Information Estimates

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

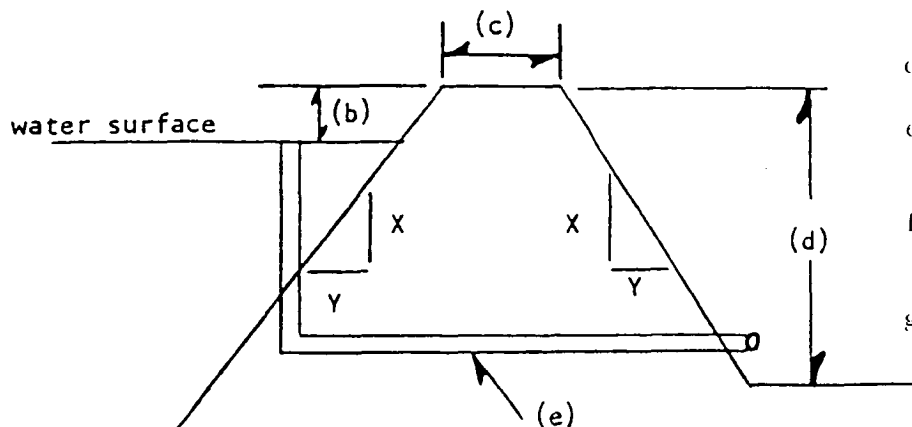
3. Water Storage Dams

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

Banner Associates, Inc.

409 22nd Ave. S. P.O. Box 298
Brookings, SD 57006



- b) Freeboard 16'
- c) Crest Width 20'
Crest Length 676'
- d) Height ~~50~~ 53'
- e) Primary Outlet Capacity 5983 cfs
If Pipe, diameter _____
- f) Secondary Spillway Capacity 26,517 cfs
Spillway width 200
- g) X & Y Slope
Upstream 1:3.0
Downstream 1:2.5
- Surface Area of Impoundment 48
- Storage 720 acre feet
- Drainage area above dam 13.4 sq.miles

Richard Beungson
Signature of Applicant



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182



February 11, 1994

Mr. John Hatch, Chief Engineer
Division of Water Rights
S.D. Department of Environment & Natural Resources
Foss Building, 523 E. Capitol
Pierre, SD 57501

Dear Mr. Hatch:

Attached is an application to appropriate water and supplemental materials for the reconstruction of Lake Menno Dam in Hutchinson County. The project is a cooperative effort between local citizens and the Department of Game, Fish and Parks (GF&P).

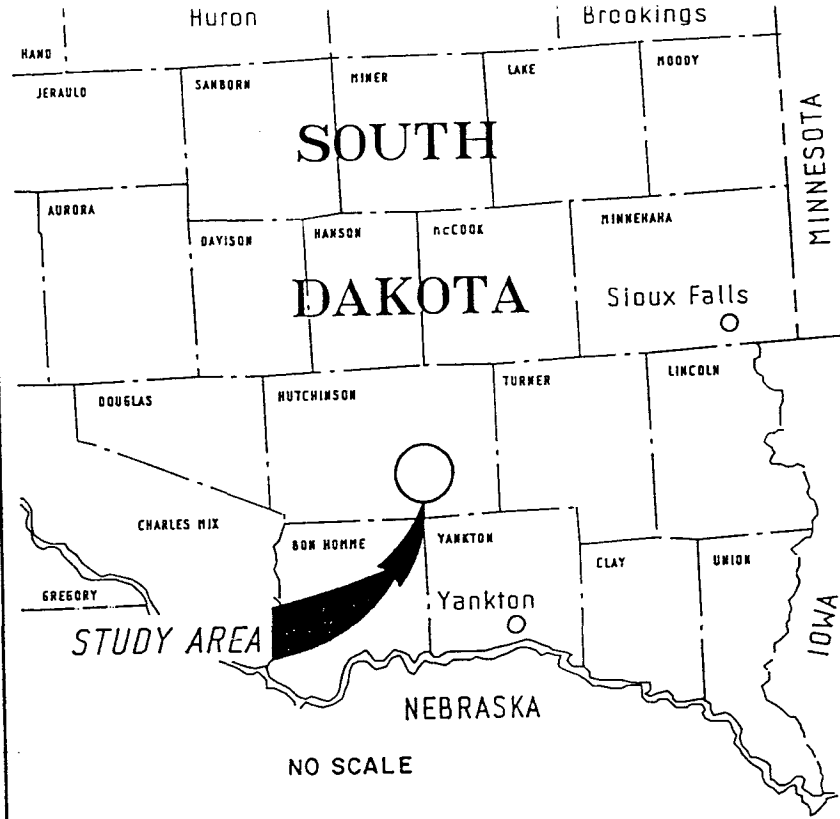
We can provide copies of the easements with adjacent landowners if you need them for your files. We will provide final project plans and specifications as soon as we receive them from the consulting engineer.

Thank you for your assistance on this matter. If you have any questions or wish to discuss this matter further, please call me at 773-6208.

Sincerely,

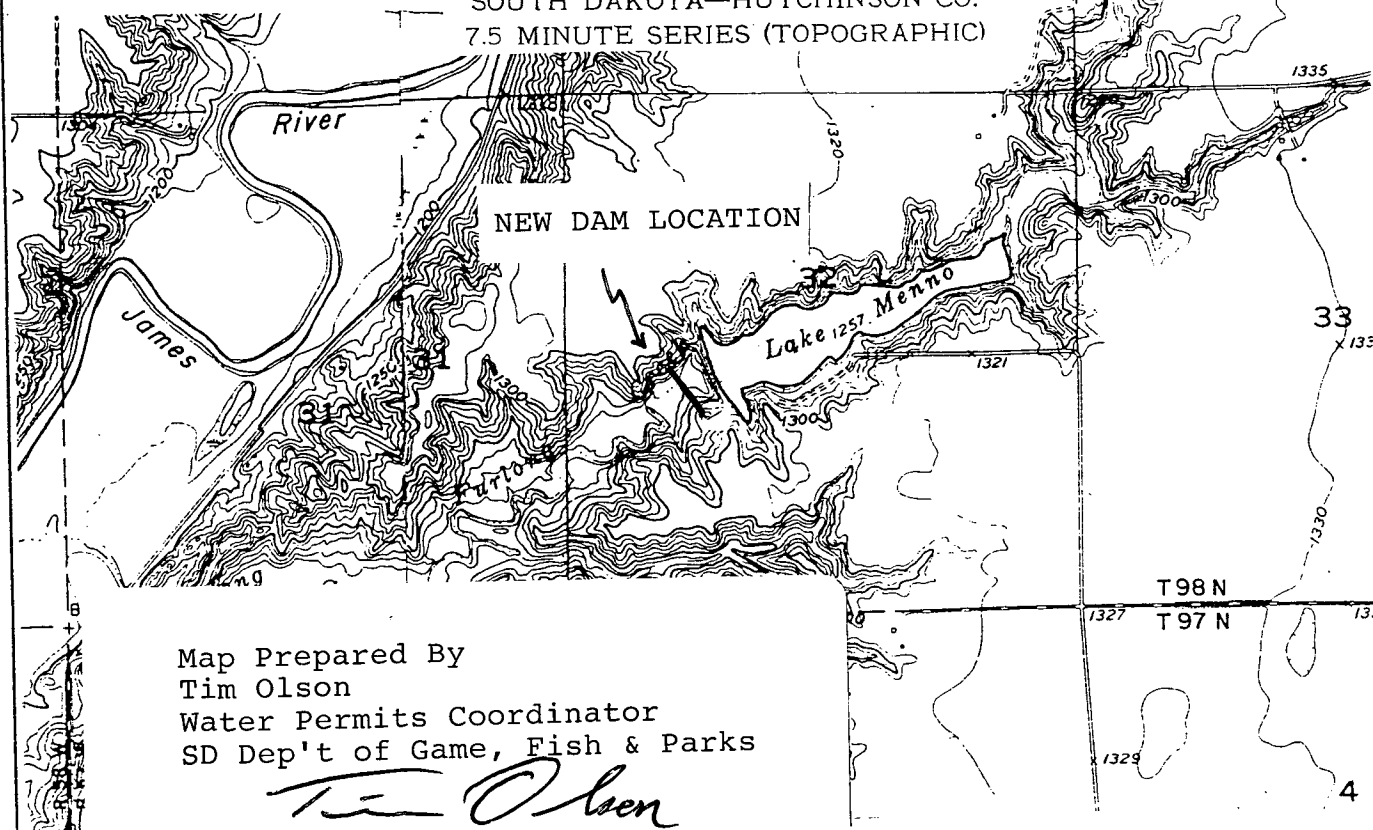
Timothy J. Olson
Water Permits Coordinator

encs.



NO SCALE

WOLF CREEK QUADRANGLE
SOUTH DAKOTA—HUTCHINSON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Map Prepared By
Tim Olson
Water Permits Coordinator
SD Dep't of Game, Fish & Parks

Tim Olson

OLIVER 2.5 MI.

SCALE: 1" = APPROX. 2000'

BANNER

LAKE MENNO DAM - FEASIBILITY STUDY

LOCATION AND VICINITY MAP

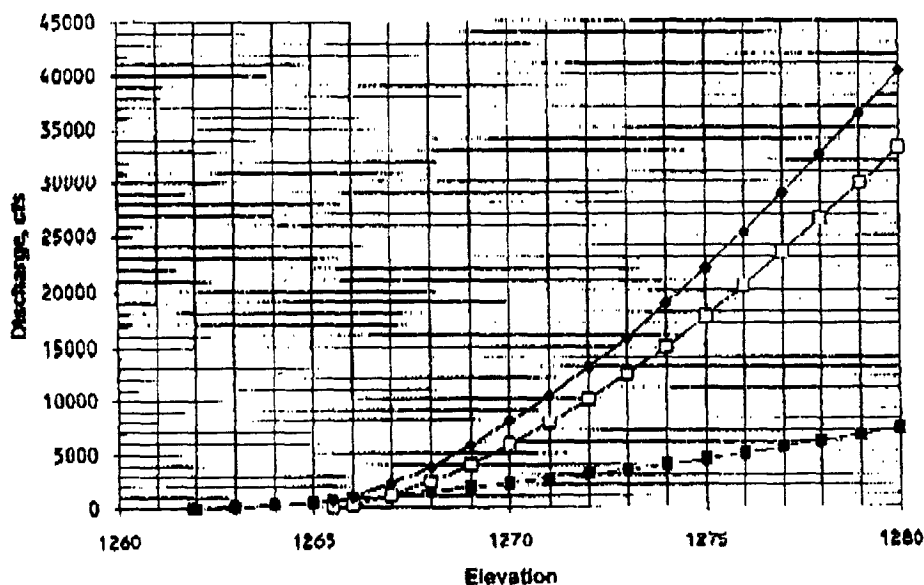
FIGURE:

1-1

MEMO_SPW.XLS

Q=CLH**1.5		L = 30		L = 200		Primary Crest =	1261.9
		C = 3.087		C = 3		Emerg. Crest =	1265.5
Elev	Principal		Secondary		Combined		
	H	Q	H	Q	Q		
1261.9	0	0	0		0		
1262	0.1	3	0		3		
1263	1.1	107	0		107		
1264	2.1	282	0		282		
1265	3.1	505	0		505		
1265.5	3.6	633	0	0	633		
1266	4.1	769	0.5	212	981		
1267	5.1	1067	1.5	1102	2169		
1268	6.1	1395	2.5	2372	3767		
1269	7.1	1752	3.5	3929	5681		
1270	8.1	2135	4.5	5728	7863		
1271	9.1	2542	5.5	7739	10281		
1272	10.1	2973	6.5	9943	12916		
1273	11.1	3425	7.5	12324	15749		
1274	12.1	3898	8.5	14869	18767		
1275	13.1	4391	9.5	17569	21960		
1276	14.1	4903	10.5	20414	25318		
1277	15.1	5434	11.5	23399	28833		
→ 1278	16.1	5985	12.5	26517	32499		
1279	17.1	6549	13.5	29761	36310		
1280	18.1	7131	14.5	33129	40260		

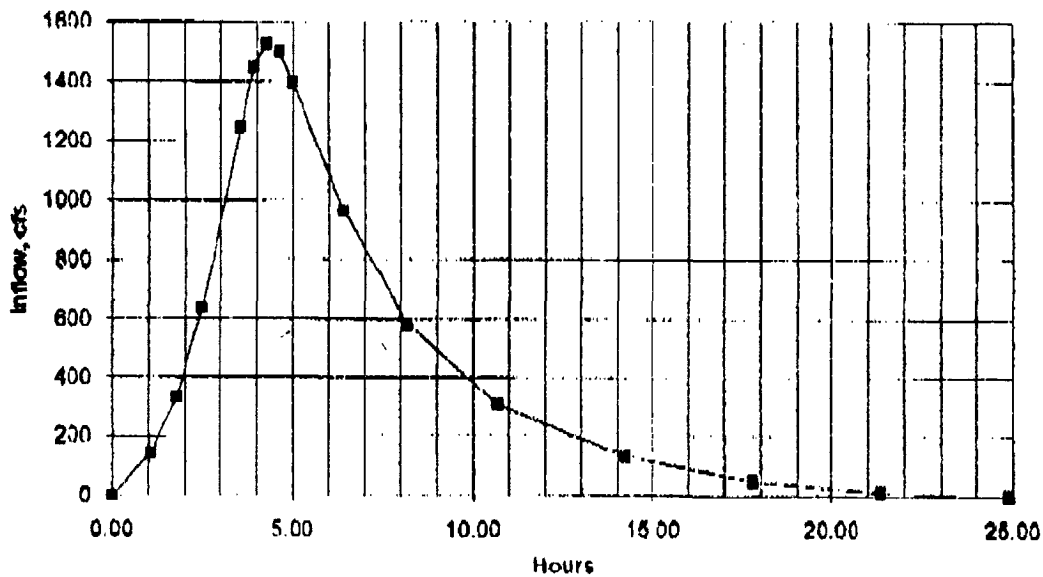
Menno Spillway Discharges



MEN_FLOS.XLS

MENNO LAKE - FLOOD INFLOW HYDROGRAPHS									
A=	13.4	square miles							
S=	30	feet per mile			Source:				
Si=	9.33	soil index			"Techniques for Estimating Flood Peaks, Volumes, and Hydrographs on Small Streams in South Dakota" USGS / WRI 80-80				
Freq(yr)	Q(cfs)	V(ac-ft)							
100	1523	724							
50	1095	553							
25	743	417							
10	407	270							
Flood Hydrograph									
	$t = 44.91(V/Q)t_i$								
	$q_i = (Q/60)q'$								
			100-year		50-year		25-year		
	t'	q'	t (hrs)	q (cfs)	t (hrs)	q (cfs)	t (hrs)	q (cfs)	
1	0	0	0.00	0	0.00	0	0.00	0	
2	3	5.8	1.07	142	1.13	102	1.28	88	
3	5	13	1.78	330	1.89	237	2.10	181	
4	7	25	2.49	634	2.65	456	2.94	310	
5	10	49	3.56	1244	3.78	895	4.20	607	
6	11	57	3.91	1447	4.16	1041	4.62	708	
7	12	60	4.27	1538	4.54	1095	5.04	743	
8	13	59	4.62	1497	4.92	1077	5.46	731	
9	14	56	4.08	1306	6.20	1004	6.88	681	
10	18	38	6.40	984	6.81	894	7.55	471	
11	23	23	8.18	584	8.70	420	9.85	285	
12	30	12	10.67	305	11.35	219	12.59	149	
13	40	5.2	14.23	132	15.13	95	16.79	84	
14	50	2	17.79	51	18.91	37	20.98	25	
15	60	0.5	21.34	13	22.69	9	25.18	6	
16	70	0	24.90	0	26.47	0	29.38	0	

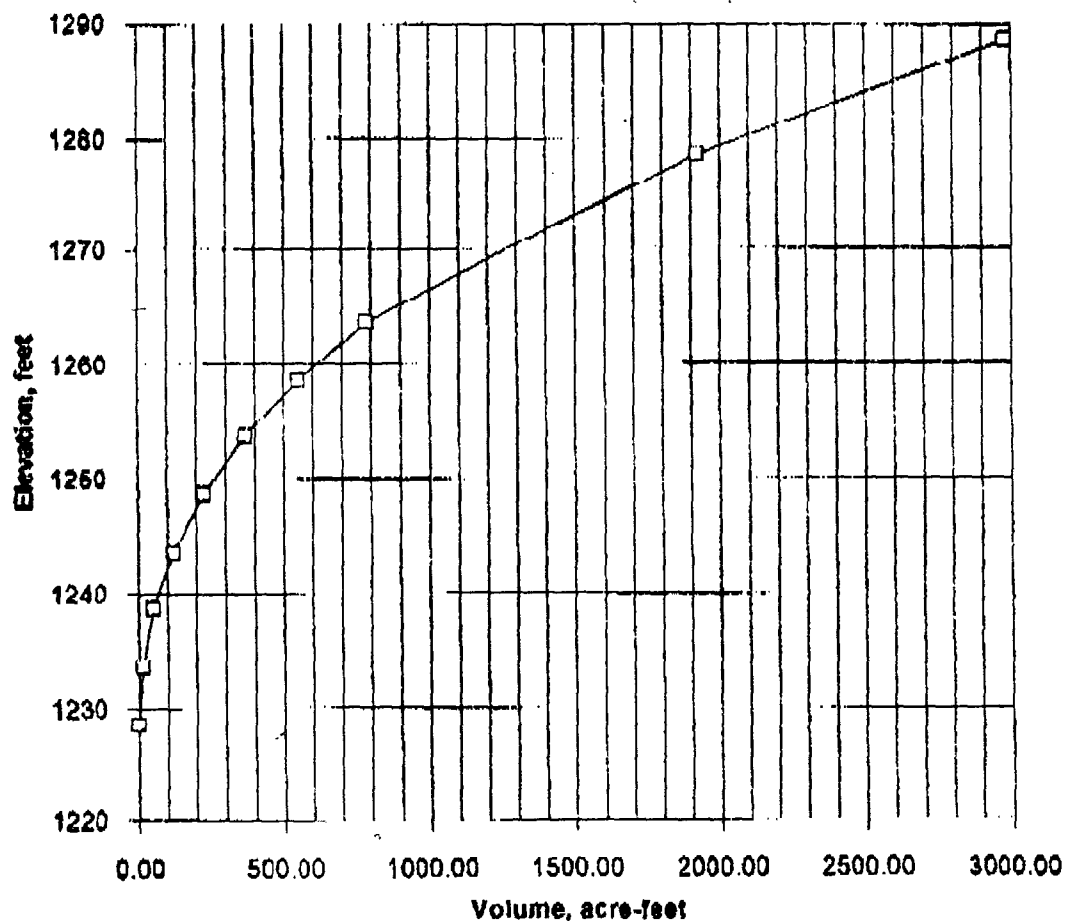
Menno 100-yr Hydrograph



MEN_E-C.XLS

MENNO LAKE: ELEVATION-CAPACITY CURVE DATA							
Old Elev.	Diff	New Elev.	Volume Acre-feet		New Elev.	Volume Acre-feet	
1230.00	-1.37	1228.63	0.66		1230.00	4.59	
1235.00	-1.37	1233.63	15.00		1235.00	24.95	
1240.00	-1.37	1238.63	51.30		1240.00	70.07	
1245.00	-1.37	1243.63	119.80		1245.00	148.49	
1250.00	-1.37	1248.63	224.50		1250.00	263.62	
1255.00	-1.37	1253.63	366.90		1255.00	417.32	
1260.00	-1.37	1258.63	550.90		1260.00	614.11	
1265.00	-1.37	1263.63	781.60		1265.00	885.72	
1280.00	-1.37	1278.63	1921.80		1280.00	2066.60	
1290.00	-1.37	1288.63	2980.00		1290.00	3125.00	

Menno Lake Elevation-Capacity Curve



FROM: Gronlund, Eric

TO: Tim Olson

DATE: 02-15-94

TIME: 11:15

CC: Eric Gronlund

SUBJECT: Menno Dam application

PRIORITY: R

ATTACHMENTS:

The water permit application for Menno Dam indicates the legal description of area impounded by construction of the dam to be the NE1/4, NW1/4, and the SW1/4 Section 32, T98N, R57W.

The map submitted does not show any water impounded in NW1/4 Section 32 but does show a portion on the NW1/4 SE1/4 Section 32 being inundated.

I believe the proper description of the area impounded is the N1/2 SW1/4, NW1/4 SE1/4, and S1/2 NE1/4 Section 32, T98N, R57W.

Please let me know if you concur.

=====

Microsoft Mail v3.0 IPM.Microsoft Mail.Note
From: Olson, Tim
To: Gronlund, Eric
Subject: RE: Menno Dam application
Date: 1994-02-17 09:59
Priority:
Message ID: OD5926A3
Conversation ID: OD5926A3

Eric,

I kind of suspected that the legal desc. for the impounded water might need some refinement when I submitted the paperwork . My intention was to indicate only the quarter sections where water was to be stored - those being the NE, the NW and the SW quarter sections. After scaling off the map again, to be safe I guess we should include storage in the NW 1/4 , SE1/4. I also concur with the N1/2, SW1/4 and the S1/2, NE1/4. However, there will be impounded water in the S1/2 , NW1/4 . The reason I originally included the entire NE1/4 was to address the full service storage condition and higher "bounce" conditions which will most likely back water up into the NE1/4, NE1/4. I will stop down later with a map so we can take a look at it together. Thanks.

From: Gronlund, Eric
To: Tim Olson
Cc: Eric Gronlund
Subject: Menno Dam application
Date: Tuesday, February 15, 1994 11:15AM
Priority: High

The water permit application for Menno Dam indicates the legal description of area impounded by construction of the dame to be the NE1/4, NW1/4, and the SW1/4 Section 32, T98N, R57W.

The map submitted does not show any water impounded in NW1/4 Section 32 but does show a portion on the NW1/4 SE1/4 Section 32 being inundated.

I believe the proper description of the area impounded is the N1/2 SW1/4, NW1/4 SE1/4, and S1/2 NE1/4 Section 32, T98N, R57W.

Please let me know if you concur.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

February 16, 1994

Tim Olson
SD Dept. of Game, Fish and Parks
523 E Capitol
Pierre SD 57501

Dear Mr. Olson:

In regard to the water permit application for reconstruction of Lake Menno Dam, the following information needs to be submitted in order to process the application.

1. The preliminary Plans and Specifications did not include numerous sheets listed on the "Index of Sheets". This information is necessary for processing the application.
2. A written preliminary risk assessment of the downstream hazard potential needs to be provided to aid in the determining of the hazard classification of the dam.
3. If the proposed structure is a Category I dam, an Emergency Preparedness Plan must also be submitted.

Upon receipt of the above, further processing of your application will continue. If you have any questions on the required information, please contact Gale Selken.

Sincerely,

Karen Schlaak
Environmental Scientist
605 773-3352

Water Rights Division - DENR
Conversation File Documentation

NAME OF PERSON OR FILE: WP Appl. No. 5803-3, SD GF&P

ADDRESS: COUNTY:

DATE: 2/17/94 TELEPHONE:

RE: Meeting with Tim Olson regarding Menno Dam application

COMMENTS:

Tim and I sat down to discuss the area that would be impounded by the reconstruction of Menno Dam. The area of the impoundment was determined to be the NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, and the S $\frac{1}{2}$ NW $\frac{1}{4}$ Section 32, T98N, R57W.

Tim stated that he knew the application would be kept on hold until final P & S, risk assessment are submitted.

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 Gendron



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

March 3, 1995

Keith Skogstad
Office of Facility Services
Joe Foss Building
523 East Capitol, Suite 205
Pierre, SD 57501-3182

Dear Mr. Skogstad:

We have reviewed the Final Design (#2 Review) plans and specifications for the Repair of Lake Menno Dam, in Hutchinson County. The recent changes to the plans and specifications reflect more of a change to the bid procedure than actual design of the dam; therefore, our May 13, 1994, approval to the original design is still in effect. We do agree with the change to ductile iron pipe for the low level outlet; however, Sheet C1 still indicates the upstream portion of the low level outlet as an 18 inch Reinforced Concrete pipe. We will need a set of Final plans and specifications for our file when they are ready for bid.

Water Permit No. 5803-3 was issued to the Department of Game, Fish & Parks on June 28, 1994, for the storage of water in Lake Menno Dam.

If you have any questions, please feel free to contact us.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
(605) 773-3352

c: Jeff Peters, Dept. of Game, Fish & Parks
Richard Salonen, Banner Associates, Inc.

Menno Dam Water Permit Application #5803-3

		Normal	Max.
Proposed Top of Dam Elev.	- 1277.9		
Primary Spillway	- 1261.9		
Secondary Spillway	- 1265.5		
Embankment Height	- 50 ft.	Old Dam 365	630, 1900
	53	New Dam 720	19,000

Flood Routing

	Primary	Secondary
Width	30 ft.	200 ft.
Crest Elev.	1261.9	1265.5
50-year Elev.	1265.3	- - -
100-year Elev.	1266.0	1266.0
50% PMF Elev.	1276.7	1276.6

Top of Dam Elev. 1277.9

Drainage Area = 13.4 mi.² $Q_{25} = 743$ cfs
 Slope = 30 ft/mile $Q_{50} = 1095$ cfs
 S: Index = 3.33 $Q_{100} = 1523$ cfs
 50% PMF = 30,000 cfs

Spillway Capacity

Primary @ 1278 = 5983 cfs
 Secondary @ 1278 = 26,517 cfs

Total = 32,500 cfs

The 50 year flood ($Q_{50} = 1095$ cfs) is routed thru the Primary 3.4 ft. deep without using the Secondary. The 100 year flood ($Q_{100} = 1523$ cfs) is routed thru the Primary 4.1 ft. deep & the Secondary 0.5 ft. deep. The 50% PMF ($Q = 30,000$ cfs) is routed thru the Primary 14.8 ft. deep & the Secondary 11.1 ft. deep, leaving 1.2 ft. of freeboard between the Top of Dam.

Section 74:02:08:09

1. Topo Map - Legal Description Etc - OK
2. Dam ax's Profile - OK
3. Dam Maximum X-Section - OK
4. Area - Capacity Curve - OK
5. Outlet Details - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs. - OK
9. EPP - Cont. 1 Dam - N/D (Being Developed)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

April 6, 1994

Keith Skogstad
Office of Facility Services
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Dear Mr. Skogstad:

We have reviewed the second set of draft plans and specifications for the Lake Menno Dam Reconstruction Project, in Hutchinson County. We contacted Rick Solonen, Banner Associates, Inc., on March 22, 1994, with questions on the footing supports for the primary spillway walls, the drainage system below the spillway structure over the pervious fill material and the weir plate on the divider wall in the outlet works control structure.

We have no additional comments or questions at this time; however, we still would like to have a copy of the reservoir routings for our file. We will be waiting for a final set of plans and specifications for review and approval after comments from the other agencies are received.

We are working with the Department of Game, Fish and Parks on Water Permit Application No. 5803-3 for the storage of water in Lake Menno Dam. This matter will be scheduled for the July 6 & 7, 1994, Water Management Board meeting in Pierre. Construction of the project can not begin until this matter is resolved. In addition, work should continue in preparing the Emergency Preparedness Plan (EPP) for Lake Menno Dam.

If you have any questions , please feel free to contact us.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
(605) 773-3352

c: Rick Solonen, Banner Associates, Inc.
Jeff Peters, Department of Game, Fish & Parks
Tim Olson, Department of Game, Fish & Parks



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182
(605) 773-6082

April 7, 1994

Mr. Keith Skogstad
Office of Facility Services
Joe Foss Building
523 East Capitol, Suite 205
Pierre, SD 57501-3182

Re: Lake Menno Dam Reconstruction - Final Review Comments
OFS #GPE931002I
GFP #W94 37 02A

Dear Keith:

We have had an opportunity to review the plans and specifications and would offer the following comments.

Plans
Sheet No.

- | | |
|----|---|
| B5 | 1. Is there still a consideration for a barrier or separation berm between the primary and secondary spillways (at the embankment crest area). |
| D1 | 1. Are the sizing and spacing for the chute blocks based entirely on the Froude number and critical depth? Is there possibly a way to adjust the number and dimensions for easier construction? |
| F1 | 1. Although it appears that the Menno Dam Association will not be able to participate in portions of the listed alternates, we will still want them in the bid documents. |
| F2 | 1. Increase the ramp length down to elev. 1256.9±. |
| F4 | 1. The ramp slope looks fine, but we may want to push the finished grade a few more feet out into the lake to avoid possible siltation problems at the bottom sections of the ramp. |

Mr. Keith Skogstad
Page 2
April 7, 1994

Specifications

The only comment I would have concerning the specifications deals with introducing an "experience questionnaire" to evaluate the capability of the contractor to do this work. Enclosed is a copy of the form our office uses. Also any permitting requirement, if available should be provided somewhere in the document.

Attached is a copy of the comments provided by Allen Knapp. Thank you for this review opportunity.

Sincerely,

ENGINEERING SECTION



Jeffrey Peters, P.E.
Buildings Engineer II

JP*cn

Enclosures

cc: George Vandell
Wayne Winter
Allen Knapp

SOUTH DAKOTA DEPARTMENT OF GAME, FISH AND PARKS
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3182

EXPERIENCE QUESTIONNAIRE
FOR

Submitted By: _____

Mailing Address: _____

Street Address: _____

City _____ State _____ Zip _____

Phone Number: (_____) _____
A/C

* * * * * NOTE * * * * *

This Questionnaire and Statement must be fully completed and executed. It must be received by the South Dakota Department of Game, Fish and Parks prior to or on the date of letting to be eligible for that letting. The information provided shall clearly state the status of the equipment and personnel to be used on the project or projects being bid. Strict attention should be placed on experience and qualifications that would indicate the company's ability to successfully complete the work intended.

Contractors that have filed an "Experience Questionnaire" within the last 2 years are not required to refile, provided the content of the document remains valid.

EXPERIENCE QUESTIONNAIRE

Submitted by _____ A Corporation
A Co-partnership
An Individual

If a Corporation, fill in:

If a Co-partnership, fill in:

When incorporated _____
In What State _____
Cash capital paid in _____
Have you filed articles of
incorporation in South Dakota? _____
President's name _____
Address _____
Vice President's name _____
Address _____
Secretary's name _____
Address _____
Treasurer's name _____
Address _____

Date of organization _____
Name and address of partners:
(1) _____
(2) _____
(3) _____
(4) _____

- (1) How many years has your organization been in business as a general contractor under your present business name: _____
- (2) How many years has your organization participated in Heavy Equipment Construction? (a) As a general contractor _____
(b) As a subcontractor _____
- (3) Have you ever failed to complete any work awarded you? _____
If so, where and why? _____
- (4) Has any officer or partner of your organization ever been an officer or partner of some other organization that failed to complete a construction contract? _____ If so, state name of individual, other organization and reason therefor _____
- (5) Has your organization, any of its officers or any employees ever been indicted, convicted of or plead to any bid rigging charges? _____
If yes, explain where and other circumstances. _____
- (6) For what cities and counties have you performed work and to whom do you refer? _____
- (7) For what State Bureaus or Departments have you performed work and to whom do you refer? _____
- (8) Is this a consolidated company? _____ If yes, please list affiliates or subsidiaries and state if they are prequalified to bid in South Dakota: _____

(9) What projects has your organization completed in the past two years; and in particular, what projects relate to the work you are about to bid?

[illegible]

(10) **Equipment-Construction** - List items available for use on this project or projects i.e. transport, heavy construction, finishing, materials manufacturing, etc.

[illegible]

Use additional sheets if necessary.

APR 24 1994

SOUTH DAKOTA GAME, FISH AND PARKS
INTER-DEPARTMENTAL CORRESPONDENCE

To: Jeff Peters
From: Allen D. Knapp
Subject: Menno Dam Draft Review
Date: 3/30/94

Jeff:

The Menno draft looks good. Hopefully the lack of a water permit will not seriously delay construction. I think we are still on track for closure by February 1995 which should be before any significant run-off. Let me know when the Menno water permit will be heard because there is an interest within the Menno Dam Association (MDA) to have representation at this meeting to emphasize community support. If we know enough before hand we should let bids and make them contingent on receiving a water permit. That way when we receive the water permit we should be able to get the contractor on site in short order.

The MDA has indicated that they will not be able to do the floating dock, toilets or concrete sidewalk. They felt they did not have enough expertise and cost margin to do them.

I do have some questions from the draft:

- 1) Who will do the piezometer monitoring?
- 2) Who will pay additional costs if they are incurred (re. deepening the cut-off trenches, etc.)?
- 3) Is the abutment blanket rip-rapped?
- 4) On page B9 in the top picture is the primary spillway shown at the right elevation?
- 5) The boat ramp concrete ends only 3.9 feet below the high water line. I do not believe this is going to be adequate in some cases. I think we should go to a minimum of five feet leeway which would put the end of the boatramp at elevation 1256.9.
- 6) No boat dock is shown. Where is that budgeted and is it ordered?
- 7) No fisheries structures are shown. What are their status?

Dave Bender from MDA was wondering about getting electricity ran to the parking lot and having a security light there. Dave has checked and said the cost is a lot lower if we do it now as part of the project. He would like to get it cost shared as part of the DJ project. I would have no objection with this especially if the MDA would pay the monthly service charge as part of their maintenance agreement.

Where do we stand on the portion that the MDA will be doing in-kind? What has been approved in the project that they will get in-kind for (fishery structures, etc.) Since they are not doing some projects they originally thought they could will their cash obligation be more? The MDA is currently fund raising and they would like to know a goal. Also it would help in the local area if we could put together a reasonable schedule to show them dates. There has been more local questioning and I think a schedule, even though tentative, would stop this.

Thanks for the opportunity to put my two cents worth in on the project Jeff. Let me know what I can do to keep things going.



Allen D. Knapp
ARS - Fisheries Management

c/c Gaarder
Vandel
Winter

BANNER ASSOCIATES, INC.
409 22nd Avenue South • P.O. Box 298
Brookings, South Dakota 57006-0298
(605) 692-6342
FAX: (605) 692-5714



May 2, 1994

Mr. Keith Skogstad
Office of Facility Services
Joe Foss Building
523 East Capitol, Suite 205
Pierre, SD 57501-3182

RE: Final Design Documents (#1 Finals)
Repair Lake Menno Dam
Department of Game, Fish & Parks
Menno, South Dakota
OFS No. GPE931002I
GFP No. W94 37 02A
BAI #7626-02

Dear Mr. Skogstad:

By copy of this letter, we are transmitting one (1) copy of the Final Design (#1 Finals) Documents to Mr. Tim Schaal, Water Rights, SDDENR as requested for their use at the July 6 & 7, 1994 Water Management Board Meeting in Pierre. This set of Contract Documents is complete less the OFS completed "Advertisement For Bids" page. Upon our receipt of the final "Advertisement For Bids" from your office, we will provide you with three (3) final sets of Contract Documents.

We have revised the final documents in accordance with the review letter from your office dated April 18, 1994 and other enclosures. The following information is a documentation of the action taken on all review comments.

OFS PROJECT ENGINEER REVIEW LETTER

1. Revised the complete project name as your office noted on plan sheet A1 and throughout the specifications.
2. No revision required.
3. Completed Instructions to Bidders, page 1 of 5, 2. Method of Bidding: Added detailed bids required.
4. Revised the project name on the Bid Form, BF-1.
5. Current General Conditions and Special Conditions, provided by your office, are included in the revised specifications. The Sections GC-6. Bids, GC-26. Special Safety Requirements, and SC-13. Safety Requirements were reviewed and are current.
6. Revised SC-14. Cleaning.

Mr. Keith Skogstad
May 2, 1994
Page 2

7. The specifications have been revised to indicate that the Contractor will not need to provide testing services for on site tests for compaction or concrete. The testing shall be conducted at the Owner's expense.
8. Revised Division 3, Concrete, Section 1.05A. Advanced Concrete Tests to Selection of Concrete Proportions as referenced by ACI.
9. Revised Division 3, Concrete, Section 2.01A. Materials to specify Dakota Brand cement manufactured by the South Dakota Cement Plant.
10. As discussed during our telephone conversation with Jeffrey Peters, dated April 22, 1994, the questionnaire asking for the Contractor's capability and performance, relative to this project, will be sent to the bidders as a separate item and will not be bound into the specifications.

SDDENR REVIEW LETTER

Our office reviewed the letter from Gale N. Selken, Department of Environment and Natural Resources, to your office, dated April 6, 1994. The letter did not address any revisions of the plans and specifications for the above mentioned project.

SDGF&P REVIEW LETTER

- B5. Plan Sheet B5. As discussed during our telephone conversation with Jeffrey Peters, dated April 22, 1994, no revision to the plans is required concerning the barrier or separation berm between the primary and secondary spillways at the embankment crest area.
- D1. Plan Sheet D1. The dimensions of the chute blocks were rounded for easier construction.
- F1. Plan Sheet F1. The add alternates are included in the bid documents. No revision to Plan Sheet F1 is required.
- F2. Plan Sheet F2. The boat ramp was extended down to elevation 1256.80. The plan sheet, typical sections and cross sections were revised accordingly.
- F4. Plan Sheet F4. The finished grade was extended as required. The plan sheet, typical sections and cross sections were revised accordingly.

Specifications. As discussed during our telephone conversation with Jeffrey Peters on April 22, 1994, the questionnaire asking for the Contractor's capability and performance, relative to this project, will be sent to the bidders as a separate item and will not be bound into the specifications.

Mr. Keith Skogstad
May 2, 1994
Page 3

Our office reviewed the letter from Allen D. Knapp, Fisheries Management, Department of Game, Fish and Parks to Jeffrey Peters, Department of Game, Fish and Parks. It is our understanding from a telephone conversation with Jeffrey Peters on April 22, 1994, that the comments generated in this letter were incorporated into the review letter submitted by Jeffrey Peters.

INTER-OFFICE REVIEW WITH GEOTECHNICAL CONSULTANT

We made additional revisions to the plans and specifications in accordance with review comments from Jim Rudd, American Engineering Testing, Inc. The revisions made are noted as follows:

- 7 ✓ 1. Deleted the filter fabric shown on the toe drain detail on plan sheet B2 and Section 2A of the specifications. The typical detail for the 6" PVC toe drain and the 4" PVC drain pipe for the principal spillway have been revised to reflect this change.
- ✓ 2. Revised the limits of the impervious blanket in the cross sections in accordance with review comments from Jim Rudd.
- ✓ 3. Revised the locations of the three seepage collars around the 24" RCP low level draw down pipe on plan sheet C1.
- ✓ 4. Extended the two 4" PVC drain pipes for the primary spillway through the primary spillway wingwalls to drain into the riprap.
- ✓ 5. Detailed the inverts for the 6" PVC toe drain and the 4" PVC drain pipes for the primary spillway on plan sheet B3.
- ✓ 6. Added a paragraph to Section 2A of the specifications addressing the grading of existing slopes prior to placing the impervious blanket.

BANNER OFFICE SENIOR TECHNICAL REVIEW

Banner did an in-house Senior Technical review and as a result made additional revisions to the plans and specifications as follows:

1. The parking lot grade was adjusted for better drainage and a concrete culvert pipe was added at the parking lot roadway.
2. The lower end of the Primary Spillway was extended and adjusted for better backwater geometry.
- ✓ 3. The 24" diameter Outlet Works pipe was adjusted for better gravity flow characteristics.
- ✓ 4. The above changes have been incorporated into the C, D and F series of Plan sheets. The culvert drainage pipe required the addition of Section 2F to the specifications.

Mr. Keith Skogstad
May 2, 1994
Page 4

The Opinion of Probable Construction Cost has been revised to reflect the adopted review changes. A copy of same is attached hereto.

If you have any questions regarding the plans, specifications or probable cost, please do not hesitate to contact our office.

Sincerely yours,



Fred Rittershaus, P.E. & L.S.

FR/db

Enclosure

cc: ✓ Tim Schaal, SDDENR, Pierre (w/P&S)
Ralph E. Lindner, P.E., GeoTek Engineering and Testing Services, Inc.
Jim Rudd, P.E., American Engineering Testing, Inc.

OPINION OF PROBABLE CONSTRUCTION COST

Prepared by:
BANNER ASSOCIATES, INC.
BROOKINGS, SOUTH DAKOTA

PROJECT #: 7626-02
PROJECT NAME: Reconstruction of Lake Menno Dam
LOCATION: Hutchinson County, SD

SHEET #: 1 OF 1
PREPARED BY: RLS
DATE: 4/29/94

file:7626\cost_est.wk3

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1.	Mobilization	1	LS	\$20,000	\$20,000
2.	Demolition	1	LS	\$5,000	\$5,000
3.	Temp. Erosion Prot. & Channel Div.	1	LS	\$5,000	\$5,000
4.	Earthwork	150,000	CY	\$1	\$150,000
5.	Structure Excavation	5,000	CY	\$3	\$15,000
6.	Stockpile riprap	1,400	CY	\$2	\$2,800
7.	Install riprap	1,400	CY	\$2	\$2,800
8.	Riprap	8,600	TON	\$18	\$154,800
9.	Filter Fabric	9,100	SY	\$2	\$18,200
10.	Pervious Fill	15,700	TON	\$4	\$62,800
11.	Erosion Control Blanket	10,000	SY	\$1	\$10,000
12.	Seeding	15	AC	\$800	\$12,000
13.	Concrete	1,140	CY	\$300	\$342,000
14.	Miscellaneous Metals	1	LS	\$13,000	\$13,000
15.	Toe Under-drain System	500	LF	\$5	\$2,500
TOTAL ESTIMATED CONSTRUCTION COST					\$815,900

CONTINGENCIES (10%)	\$81,590
ADD ALTERNATE NO. 1	\$21,000
ADD ALTERNATE NO. 2	\$5,510
ADD ALTERNATE NO. 3	\$11,000
ADD ALTERNATE NO. 4	\$16,000

OPINION OF PROBABLE TOTAL PROJECT COST **\$951,000**



AMERICAN
ENGINEERING
TESTING, INC.

CONSULTANTS
• GEOTECHNICAL
• MATERIALS
• ENVIRONMENTAL

FAX TRANSMITTAL FORM

DATE: 3/24/94
TO: Richard Salonen
COMPANY: Banner Associates
FAX NUMBER: (605) 692-5714
AET JOB NO.: _____

This communication consists of 10 pages, including cover page.

RE: Lake Menno Dam
Review comments

If you do not receive all the pages, or have any questions, please call 612-659-9001.

FROM: Jim Rudd 612/659-1367

"AN AFFIRMATIVE ACTION EMPLOYER"

2101 University Ave. W. • St. Paul, MN 55114 • 612-659-9001 • Fax 612-659-1379
4431 West Michigan Street, Suite #4 • Duluth, MN 55807 • 218-628-1510 • Fax 218-628-1560
1730 First Avenue • Mankato, MN 56001 • 507-387-2222 • Fax 507-387-6999

Memorandum**American Engineering Testing, Inc.**

To: Richard Salonen
Banner Assoc., Inc.

From: Jim Rudd

Date: March 24, 1994

Subject: REVIEW COMMENTS - LAKE MENNO DAM REPAIR

Following are my comments on the plans and specifications that you recently sent me.

Filter Fabric The filter fabric shown on the toe drain detail (Sheet B2) should be deleted. The fabric is not needed because the gradation of the gravel filter and pervious fill meet filter criteria.

The same detail should be used for the 4 inch drain pipes for the principal spillway. That is, the drain pipes should be surrounded by 6 inches of gravel filter.

Impervious Blanket The limits of the impervious blanket on the right abutment are correct. The limits of the impervious blanket on the left abutment should be modified as shown on the attached Sketch 1.

The impervious blanket should be continuous with the clay core of the dam. Therefore, some of the cross sections need to be revised as shown on attached Sketches 2 through 6.

Because of the new limits of the impervious blanket, the cross sections at stations 5+50 and 6+00 would not show the blanket.

Seepage Collars On Sheet C1, the three seepage collars around the 24-inch RCP drawdown pipe should be located such that the three collars are within the impervious cutoff zone. See Sketch #7

Drainage System I recommend that the two 4-inch drainage pipes for the principal spillway be carried through the wingwall so that they can drain into the rip rap. This will provide additional protection against excess uplift pressures from developing under the chute spillway if the drainage system outlet becomes

Memorandum**American Engineering Testing, Inc.**

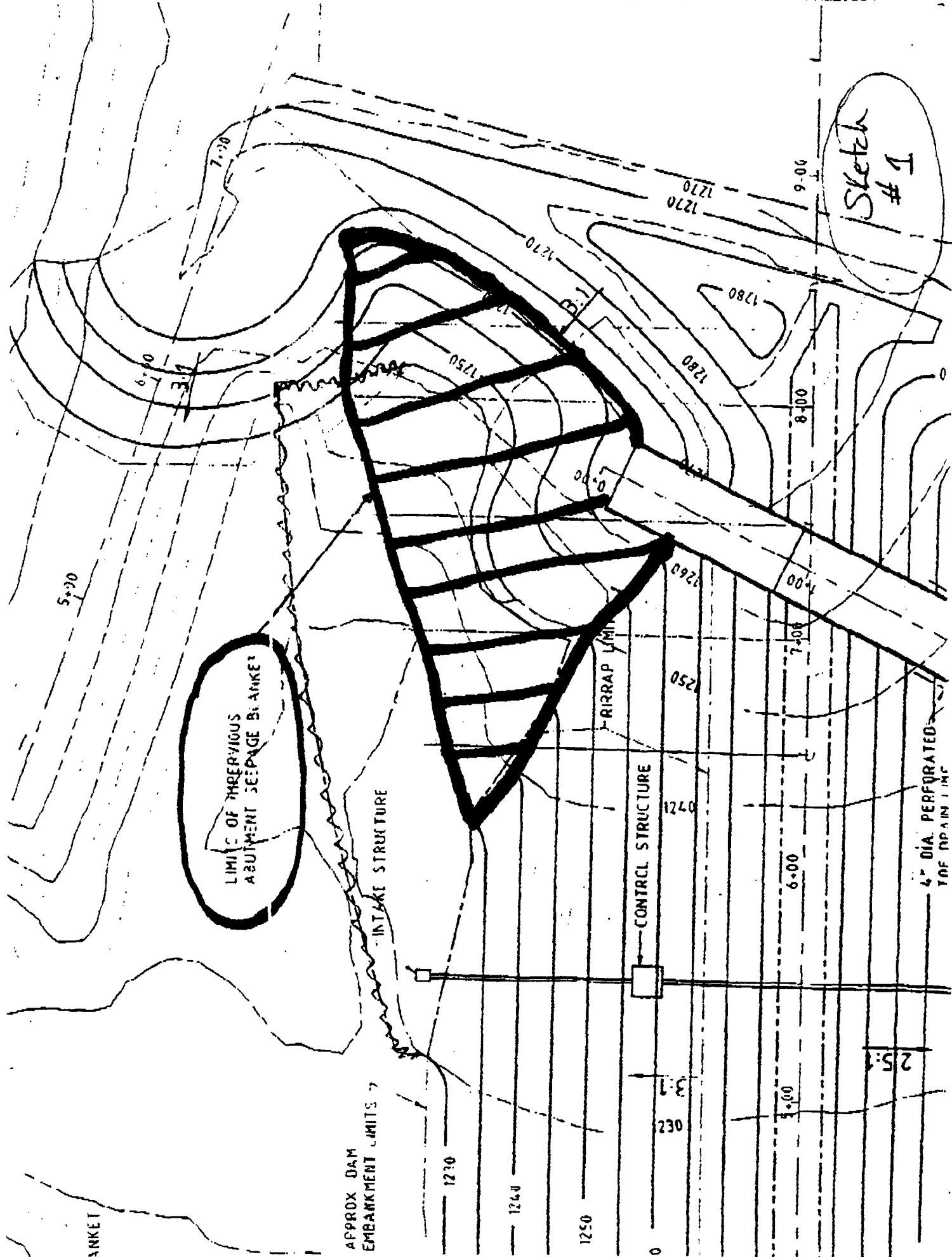
ice jammed in winter.

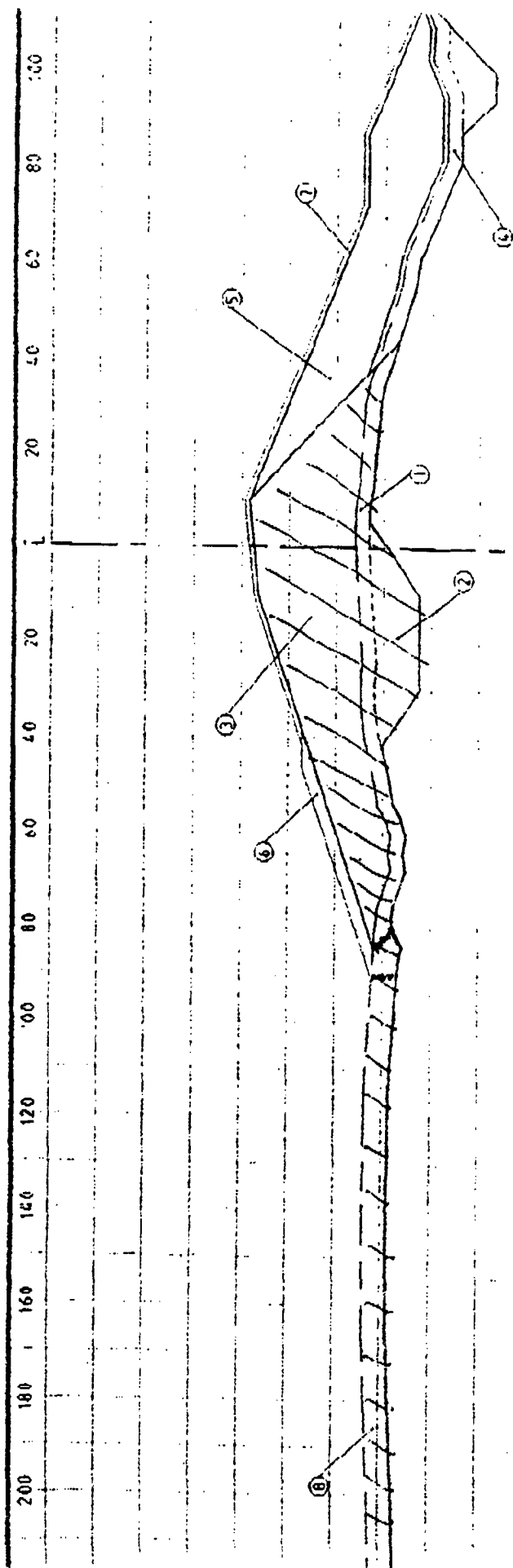
The invert elevations of the 6-inch PVC drainage pipe are not shown on the plans. What is the outlet elevation of the pipes at the two toe drain headwall structures ? Please call me so we can discuss. Also is there sufficient soil cover to prevent freezing during winter ?

Specifications

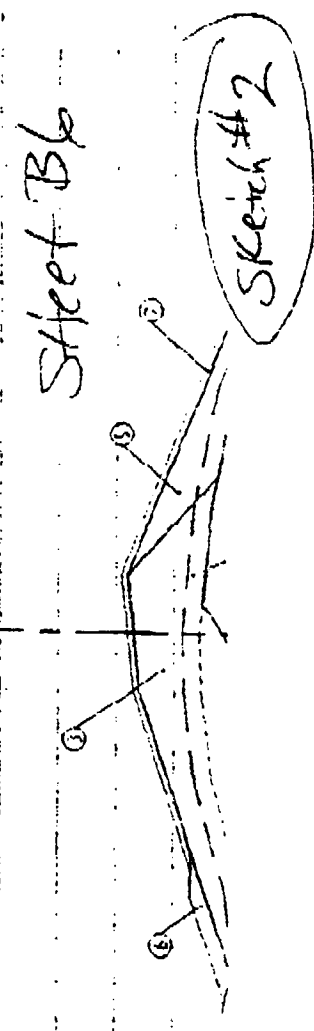
I have not completed my review of the specifications. I should be finished by Monday and will fax you my comments then.

Please call me at 612-659-1367 so we can discuss these comments.

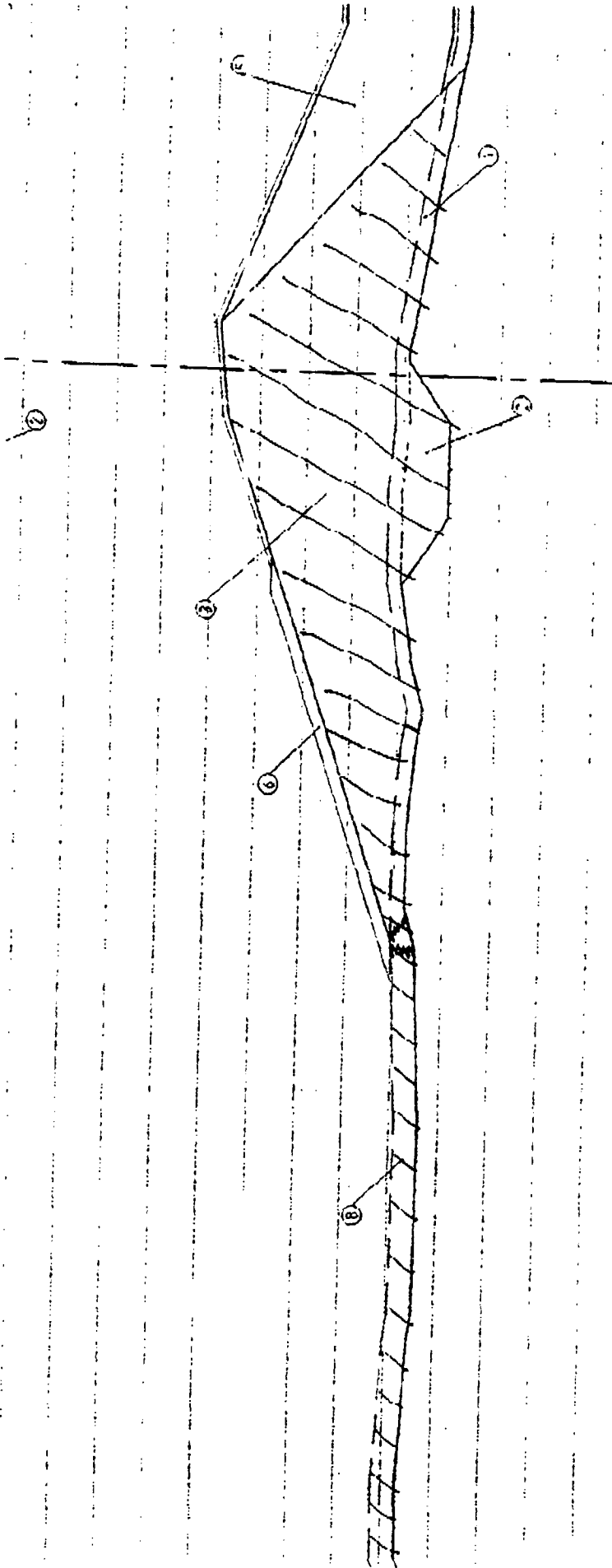




STA 2+50



Sheet B6

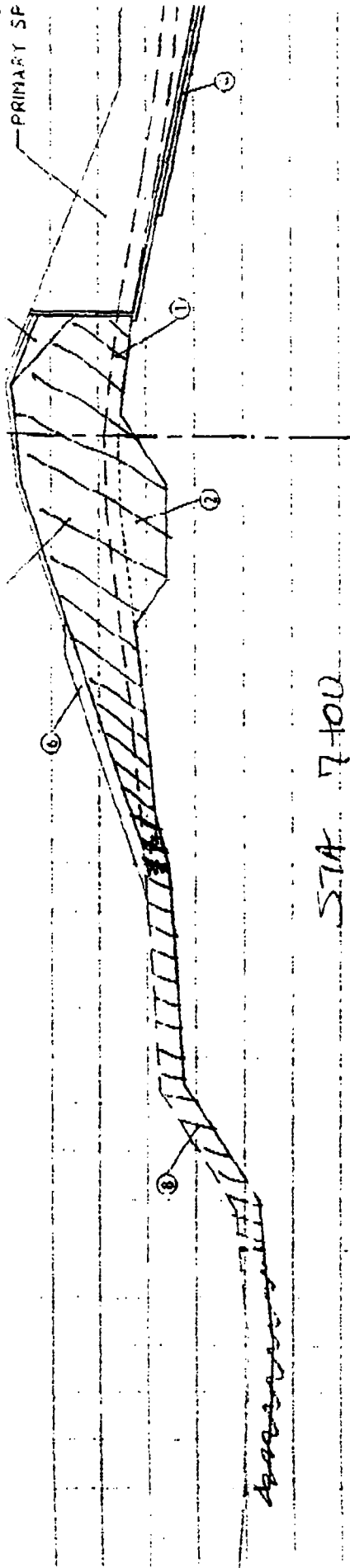


STA 3+00

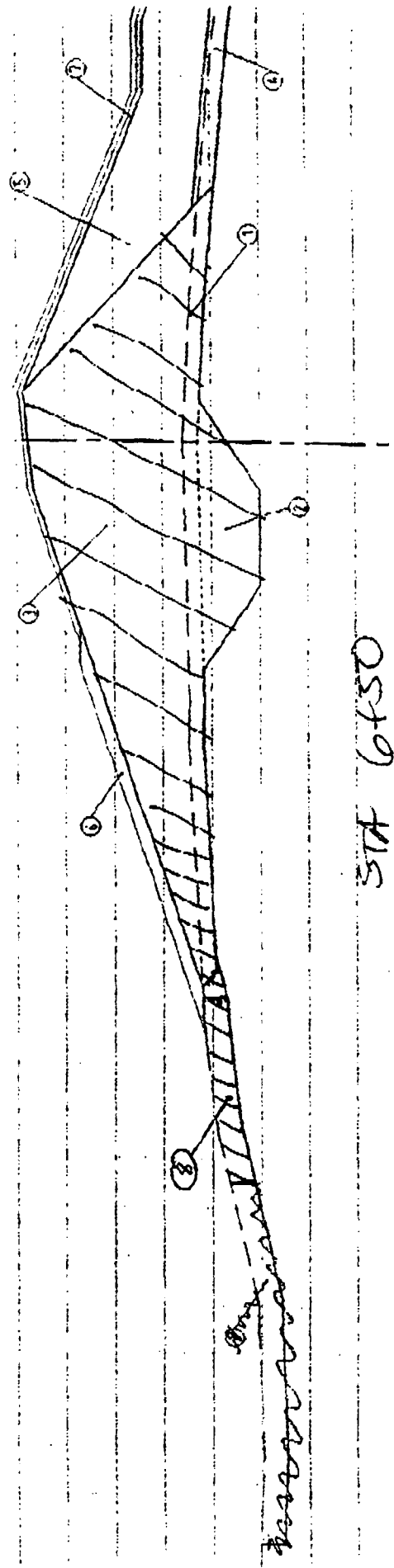
Sheet B7

240	220	200	180	160	140	120	100	80	60	40	20	0	20	40	60	80
OR BANNER ASSOCIATES, INC BANNER BANNER ASSOCIATES, INC. • CONSULTING ENGINEERS & ARCHITECTS 409 22nd Av S • P.O. Box 298 - Brookings, SD 57006 • (605)692-6342																
REVISION										DATE		DESCRIPTION			BY	

Sketch #3



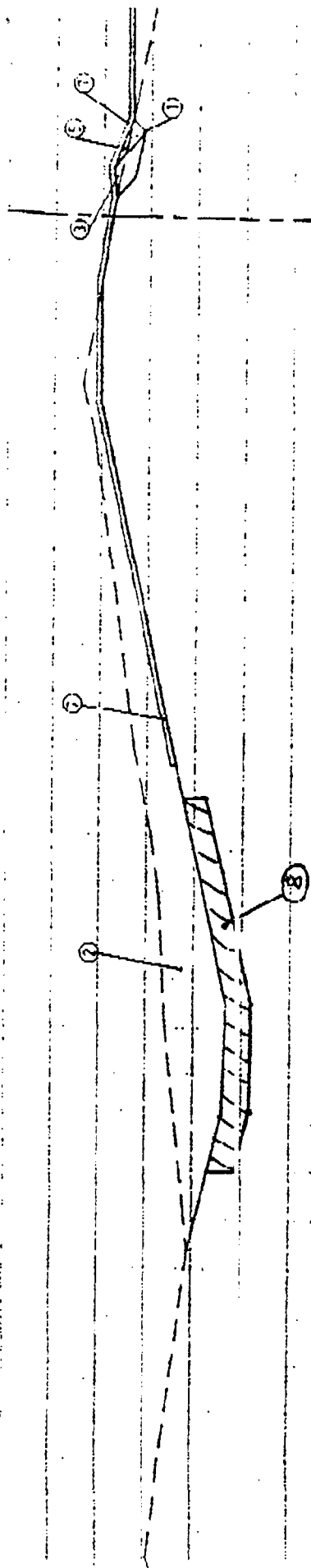
STA 7+00



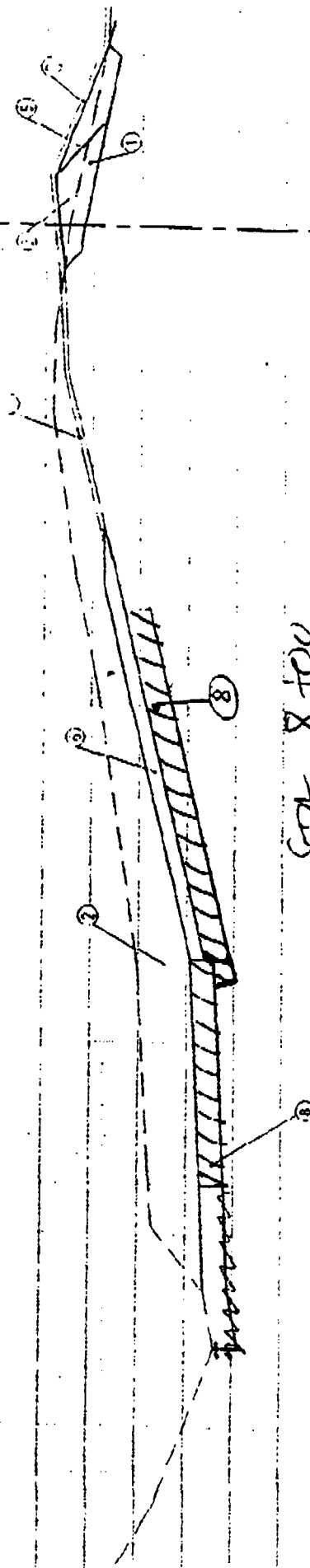
STA 6+50

SK 166 #4

Sheet B9



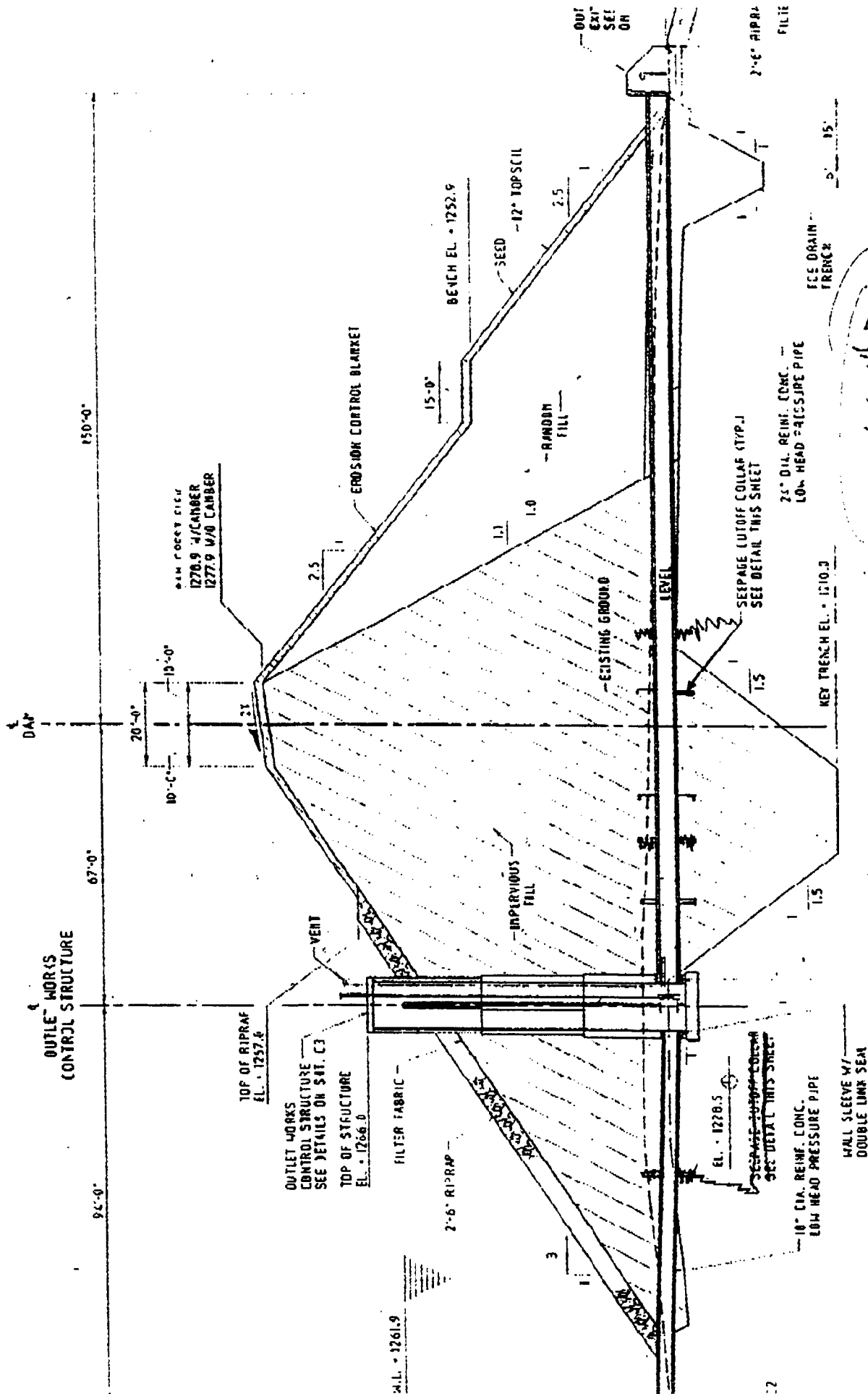
63+8 A15
STA 8+39



63+8 A15
STA 8+100

Sheet B10

Sketch #5



Sketch #47

1287.5



AMERICAN
ENGINEERING
TESTING, INC.

CONSULTANTS
• GEOTECHNICAL
• MATERIALS
• ENVIRONMENTAL

FAX TRANSMITTAL FORM

DATE: 3/28/94
TO: Richard Salonen
COMPANY: Banner & Associates
FAX NUMBER: (605) 692-5714
AET JOB NO.: _____

This communication consists of 2 pages, including cover page.

RE: Additional comment on specs.
Like Manno Dam project

If you do not receive all the pages, or have any questions, please call 612-659-9001.

FROM: Jim Rudd 612/659-1367

"AN AFFIRMATIVE ACTION EMPLOYER"

2102 University Ave. W. St. Paul, MN 55114 • 612-659-9001 • Fax 612-659-1379
3431 West Michigan Street, Suite #4, Duluth, MN 55807 • 218-628-1518 • Fax 218-628-1560
1730 First Avenue, Mankato, MN 56001 • 507-387-2222 • Fax 507-387-0999

Memorandum

American Engineering Testing, Inc.

ice jammed in winter.

The invert elevations of the 6-inch PVC drainage pipe are not shown on the plans. What is the outlet elevation of the pipes at the two toe drain headwall structures? Please call me so we can discuss. Also is there sufficient soil cover to prevent freezing during winter?

Specifications

I reviewed Sections 2A and 2D. I have the following two comments regarding paragraph 3.02 of Section 2A:

The filter fabric should be deleted. The reason is because potential clogging of the filter fabric could reduce the effectiveness of the drain.

The pervious backfill should be compacted to 95% relative compaction, instead of 98%.

Add the following paragraph to Section 2A: "Before placing impervious clay blanket on an existing slope steeper than 4 horizontally to 1 vertically (4:1), the Contractor shall construct steps in the slope, with the back surface being as nearly vertical as practicable and with the horizontal cuts being made as close together as the slope permits, but with no step being less than one foot in width."

Please call me at 612-659-1367 so we can discuss these comments.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

May 13, 1994

Fred Rittershaus, P.E. & L.S.
Banner Associates, Inc.
P.O. Box 298
Brookings, SD 57006-0298

Dear Mr. Rittershaus:

We have reviewed the final set of plans and specifications for the Lake Menno Dam Reconstruction Project, in Hutchinson County. The plans and specifications as submitted are approved. Approval of the plans and specifications does not authorize construction of the project. No construction may begin until Water Permit Application No. 5803-3 is approved. Water Permit Application No. 5803-3 will be scheduled for the June 28 & 29, 1994, Water Management Board meeting in Pierre.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release the Department of Game, Fish and Parks, as owner of Menno Dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

Menno Dam will be classified as an intermediate size Category 1 High Hazard Dam with a dam height of 53 feet and a normal storage capacity of 720 acre-feet and a maximum storage capacity of 1900 acre-feet.

If you have any questions , please feel free to contact us.

Sincerely,

Gale N. Selken, P.E.
Natural Resources Engineer IV
for John Hatch, Chief Engineer
Water Rights Division
(605) 773-3352

c: Richard Beringson, Secretary, Dept. Game, Fish & Parks
Keith Skogstad, Office of Facility Services



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

May 16, 1994

Leonard Heer
RR 1
Olivet, SD 57052

Dear Mr. Heer:

Enclosed for your information is a report, recommendation and notice of hearing on Application No. 5803-3, SD Dept. of Game, Fish and Parks. This application is to impound 720 acre-feet of runoff and Furlong Creek water by reconstructing Menno Dam.

If you have any questions, please feel free to contact Eric Gronlund at (605)773-3352.

Sincerely,

Jaci R. Konop
Senior Secretary
Water Rights Division

Encl.

REPORT ON
WATER PERMIT APPLICATION No. 5803-3
Department of Game, Fish & Parks
April 7, 1994

Water Permit Application No. 5803-3 has been filed by the South Dakota Department of Game, Fish and Parks to impound 720 acre-feet of water by reconstructing Lake Menno Dam. The dam will be located in the N 1/2 SW 1/4 of Section 32-T98N-R57W, in Hutchinson County. The water will be used for recreational purposes and to provide habitat for fish and wildlife production.

Discussion:

Lake Menno Dam was originally constructed in 1935 by the Works Progress Administration (WPA). It was 38 feet high with a normal storage capacity of 365 acre-feet with the reservoir level at the primary spillway elevation, and a maximum storage capacity of 630 acre-feet with the reservoir level at the top of dam elevation.

Menno Dam was classified as a small size Category 1, High Hazard Dam. The Leonard Heer farmstead is located along Furlong Creek, about 1 mile downstream of Menno Dam, near the confluence of Furlong Creek with the James River. The Heer home was located less than 10 feet above the channel bottom.

Menno Dam had a combined spillway capacity to pass approximately 15 percent of the Probable Maximum Flood (PMF) without overtopping the embankment. It had a 21 foot wide concrete primary spillway with approximately 6 feet of freeboard and a 80 foot wide earthcut secondary spillway with approximately 2 feet of freeboard. The embankment crest elevation varied up to 3 feet due to settlement near the center of the embankment.

Menno Dam was overtopped and failed on June 12, 1984 after the Menno area received a 3 inch rainfall; however, the area had been previously saturated with several other large rainfalls. The failure resulted in a sudden release of water from Menno Dam, resulting in the loss of the Heer home and a confinement hog facility with an estimated loss of approximately 450 hogs along with other numerous pieces of property and valuables. The failure resulted in a law suit against the State with the courts eventually awarding the Heers approximately \$650,000 for the damages.

The Lake Menno Dam Reconstruction Project involves locating a new embankment about 400 feet downstream of the existing embankment, the construction of a new 30 foot wide concrete primary spillway and enlargement of the existing earthcut secondary spillway to 200 feet wide. The new Menno Dam embankment will be 53 feet high, with a normal storage capacity of 720 acre-feet with the reservoir level at the new primary spillway elevation; and a maximum storage capacity of 1900 acre-feet with the reservoir level at the new top of dam elevation.

The new Lake Menno Dam will still be classified as a Category 1, High Hazard dam, since the Heer family have constructed a new home in the downstream floodplain. However, the new Menno Dam will be classified as an intermediate size dam, since the maximum storage capacity will now be greater than 1000 acre-feet. The increase in both the normal and maximum storage capacity is the result of relocating the embankment downstream and increasing the embankment height. The primary spillway elevation and reservoir level will not be increased and the primary spillway will be constructed at elevation 1261.9 fmsl.

Our Safety of Dams Rules, Chapter 74:02:08 require an intermediate size Category 1, High Hazard Dam to have the spillway capacity capable of passing a minimum spillway design flood equal to 50 percent of the PMF. Lake Menno Dam has a drainage area of approximately 13 square miles. This drainage area produces approximately 30,000 cfs during a 50 percent PMF event. The new Lake Menno Dam will have a combined spillway capacity capable of passing approximately 32,500 cfs or approximately 60 percent of the PMF.

The new Lake Menno Dam has been designed by Banner Associates, Inc. The new 30 foot wide concrete primary spillway will have 16 feet of freeboard available and the new 200 foot wide earthcut secondary spillway will have 12.4 feet of freeboard available. The design allows for a 50 year flood event peak of 1095 cfs to be routed through the primary spillway, at a maximum depth of 3.4 feet without utilizing the secondary spillway. A 100 year flood event peak of 1523 cfs is routed through the spillways with a maximum depth of 4.1 feet in the primary spillway and 0.5 feet in the secondary spillway. The 50 percent PMF event (30,000 cfs) is routed through both spillways leaving 1 foot of freeboard available.

The new embankment is designed to have a 20 foot wide embankment crest; a 3 to 1 upstream slope; a 2.5 to 1 downstream slope with a 15 foot wide downstream slope berm; a gated low level outlet structure with an 18 inch diameter Reinforced Concrete Pipe (RCP) inlet and a 24 inch diameter RCP outlet; and a 6 inch diameter embankment toe drain.

The plans and specification for the Lake Menno Dam Reconstruction Project are being reviewed. The Department of Game, Fish and Parks has never filed for a Water Permit or a Vested Right Claim for Lake Menno Dam. Since Menno Dam has been breached for nearly 10 years and a new application would be necessary for the increased storage, Water Permit Application No. 5803-3 is being filed to store 720 acre-feet at elevation 1261.9 fmsl with a priority date of February 11, 1994. There are no existing Water Permits/Rights on Furlong Creek.

Conclusions:

1. Plans and specifications for the Lake Menno Reconstruction Project are being reviewed.
2. Water Permit Application No. 5803-3 should be approved since unappropriated water is available and approval will not have any adverse effects on existing Water Permits/Rights.
3. If approved, the low flow bypass requirement for downstream domestic use should be a qualification on Water Permit Application No. 5803-3.

Timothy G. Schaal 
Timothy G. Schaal, P.E.
Natural Resources Engineer III

Approved by:

Gale N. Selken
Gale N. Selken, P.E.
Natural Resources Engineer IV

References:

- Banner Associates, Inc., Feasibility Study For Repair Lake Menno Dam, 1990, Banner Associates, Inc., Brookings, SD 57006.
- Banner Associates, Inc., Plans and Specifications Lake Menno Dam Reconstruction, Banner Associates, Inc, Brookings, SD 57006.
- Water Rights, 1994, Water Rights Files, SD DENR, Division of Water Rights, Pierre, SD 57501.
- Water Rights, 1994, Safety of Dams Files, SD DENR, Division of Water Rights, Pierre, SD 57501.

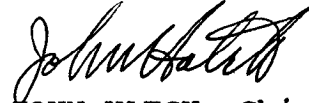
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 5803-3, SD Department of Game, Fish and Parks

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Environment and Natural Resources concerning Water Permit Application No. 5803-3, SD Department of Game, Fish and Parks, c/o Secretary Richard Beringson, 523 East Capitol, Pierre, SD 57501.

The Chief Engineer is recommending APPROVAL of Application No. 5803-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) in the public interest with the following qualifications:

1. Water Permit No. 5803-3 authorizes storage of up to 720 acre-feet of water annually.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.



JOHN HATCH, Chief Engineer
April 8, 1994



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

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

May 16, 1994

Richard Beringson, Secretary
SD Department of Game, Fish and Parks
523 East Capitol
Pierre, SD 57501

Dear Mr. Beringson:

Water Permit Application No. 5803-3 for fish and wildlife production and recreational 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 Hutchinson Herald printed at Menno, SD (Ph # 387-5158). For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are 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 Hearing 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. The newspaper has been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

May 16, 1994

Hutchinson Herald
Box 537
Menno, SD 57045-0537

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 5803-3 to be published twice. Please publish the first notice on May 25, 1994, 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 SD Department of Game, Fish and Parks, 523 East Capitol, Pierre, SD 57501 (Ph # 773-3387).

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. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

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 May 25, 1994, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 5803-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 E. Capitol, Pierre, SD 57501 has filed an application for a water permit to impound 720 acre-feet of runoff and Furlong Creek water by reconstructing Menno Dam. The dam site is located in the N 1/2 SW 1/4 Section 32 with water impounded in the N 1/2 SW 1/4, S 1/2 NW 1/4, NE 1/4 NE 1/4, S 1/2 NE 1/4, NW 1/4 SE 1/4 Section 32; all in T98N-R57W. Water is to be stored annually to an elevation of 1261.9 feet mean sea level and is to be used for recreational purposes and to provide habitat for fish and wildlife production.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 5803-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) 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 opposed to 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 June 17, 1994. 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 Water Management Board will consider this application at 11:30 a.m., June 28, 1994, Gallery D, Ramkota Inn Best Western, 920 West Sioux, Pierre, SD. 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. The June 28, 1994, 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 June 17, 1994.

Any hearing will be an adversary proceeding. Any person filing a petition 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 Eric Gronlund by June 17, 1994, at the above Water Rights Division address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

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, 46-2A-20, 46-2A-21; 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; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Russell L. Stone, Acting Secretary, Department of Environment and Natural Resources.

Affidavit of Publication

STATE OF SOUTH DAKOTA,

SS.

County of Hamlin

Mark R. Hausman and Carla Clarke, of said county, being first duly sworn, on oath say that they are the publishers or managers of The Hamlin County Herald Enterprise, a weekly newspaper printed and published in Hayti, said County of Hamlin, and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said county for fifty-one successive weeks next prior to the publication of the notice herein mentioned, and was and is printed wholly or in part in an office maintained at said place of publication; that the

Noted of Hayti

_____, a printed copy of which taken from the paper in which the same was published, is attached to this sheet, and is made a part of this affidavit, was published in said newspaper at least one week for 2 successive weeks, on the day of each week of which said newspaper was regularly published, to wit:

June 2, 1994; _____, 19____
June 9, 1994; _____, 19____
_____, 19____; _____, 19____
_____, 19____; _____, 19____
_____, 19____; _____, 19____

that the full amount of the fees for the publication of the annexed notice is \$ 34.81.

Subscribed and sworn to before me this 15

day of June, 1994.

Connie Jean Jensen
Notary Public
My Commission Expires
Sept. 29, 1994



NOTICE OF HEARING On Application No. 5803-3 To Appropriate Water

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(Publish May 25 & June 1, 1994)



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

NOV 14 1994

Richard Beringson, Secretary
SD Department of Game, Fish & Parks
523 East Capitol
Pierre, SD 57501

Dear Mr. Beringson:

Enclosed is Water Permit No. 5803-3 authorizing construction of your water diversion system and beneficial use of the water, 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.

Permit No. 5803-3
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 30, 2002, made a thorough examination of the water use system constructed by SD Department of Game, Fish & Parks of 523 East Capitol, Pierre SD 57501 holder of Permit No. 5803-3, bearing the priority of May 3, 1994 authorizing the storage of 720 acre-feet of the waters of runoff (Furlong Creek) for fish & wildlife production and recreational use purposes, in Hutchinson County.

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

A. Works used to divert the water:

53 foot high earth dam with a 30 foot wide primary spillway and 200 foot wide secondary spillway and storage capacity of 720 acre-feet.

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

N/A

C. Works used to apply water to beneficial use:

53 foot high earth dam with a 30 foot wide primary spillway and 200 foot wide secondary spillway and storage capacity of 720 acre-feet.

The system is in the following condition good. The point of diversion is located 2300 feet north & 1320 feet east of the SW corner of Sec. 32-T98N-R57W (N 1/2 SW 1/4). The works are capable of storing 720 acre-feet of water which is to be used for fish & wildlife production and recreational use. Water has been put to beneficial use to the maximum extent as follows:

53 foot high earth dam with a 30 foot wide primary spillway and 200 foot wide secondary spillway and storage capacity of 720 acre-feet.

and the license should be issued for 720 acre-feet of storage.

Applicable permit qualifications have been complied with: Yes X

Exceptions to compliance are: none Date Report Completed: June 11, 2002



Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist
DENR, Water Rights Program

REPORT ON INSPECTION OF PERMIT NO. 5803-3

Other permit(s) associated with the project: XXXX

DATE OF INSPECTION: May 30, 2002

NAME & ADDRESS OF PERMIT HOLDER: SD Department of Game, Fish & Parks
523 E. Capitol, Pierre SD 57501

DIVERSION POINT LEGAL LOCATION: 2300 feet north & 1320 feet east of the SW corner of
Section 32-T98N-R57W (N 1/2 SW 1/4).

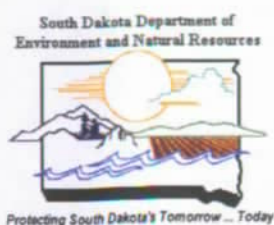
DAM INFORMATION:

- 1) Height to crest 53 feet
- 2) Height to primary spillway 37 feet
- 3) Height to secondary spillway 40.5 feet
- 4) Crest width 20 feet
- 5) Crest length 676 feet
- 6) Spillway length XXX feet
- 7) Spillway width 30 (primary) & 200 (2nd) feet
- 8) Approx. storage (Normal) 720 acre-feet
- 9) Approx. storage (Maximum) 1900 acre-feet
- 10) Date constructed: 1996

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Soil and water permit lands agree with lands being irrigated and lands listed on permit N/A
- 2) Special qualifications to permit being abided by yes
- 3) All structures, wells and lands on map yes
- 4) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period N/A

Water Permit Application No. 5803-3



Timothy G. Schaal
Timothy G. Schaal, P.E. 6/11/02
Natural Resources Engineer Specialist
Water Rights Program

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 5803-3

(1) The South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 made Application No. 5803-3, February 11, 1994 for a water permit to impound 720 acre-feet of water from runoff and Furlong Creek, Hutchinson County, South Dakota for recreation and fish & wildlife propagation purposes. Permit No. 5803-3, with a priority date of May 3, 1994 was approved June 28, 1994 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before June 28, 1999 and for the application to beneficial use of said water on or before June 28, 2003.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the reconstruction of the George S Mickelson Dam (Menno dam) and is entitled to impound 720 acre-feet of water for beneficial use with sufficient water annually to maintain the water level to the outlet elevation of 1261.9 feet mean sea level. The location of the storage dam (spillway) is 2,300 feet north and 1,320 feet east of the southwest corner of **Section 32-T98N-R57W (N ½ SW ¼)**.

(3) The permit holder 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 South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 the holder and/or owner of Water Right No. 5803-3 is issued a license to appropriate water, the right to impound 720 acre-feet of water from runoff and Furlong Creek with sufficient water annually to maintain the water level to the outlet elevation of 1261.9 feet mean sea level with a priority date of May 3, 1994 from the location specified in (2) of this license for recreation and fish & wildlife propagation purposes. This license is subject to any limitations or qualifications listed in Water Right No. 5803-3 and subject to South Dakota State Law.



Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUL 31 2002

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

JUL 31 2002

5803-3

SD Department of Game, Fish & Parks
% John Cooper
523 E. Capitol
Pierre, SD 57501

Dear Mr. Cooper:

Enclosed is Water License No. 5803-3. This is the final water right document completing your process of obtaining a Water Right.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures