

F. L. B.  
Sioux Falls

JUL 16 1971

Mr. L. F. Otto  
Chief, Operations Division  
Department of the Army  
Omaha District, Corps of Engineers  
7410 U. S. Post Office and Court House  
Omaha, Nebraska 68102

Dear Mr. Otto:

Enclosed is a completed set of application forms for permit to discharge into navigable waters under the Refuse Act of 1899, together with the following supporting documents.

- a. EROS Data Center, Engineering Report, Proposed Waste treatment Facilities dated June 2, 1971.
- b. EROS Data Center location map.
- c. Letter from U.S. Environmental Protection Agency, Kansas City, Missouri, dated June 17, 1971.

It will be appreciated if technical inquiries or communications which may arise in connection with the issuance of the permit be directed to our authorized agent, item 4 ERG Form 4345 with copy to this office.

Sincerely yours,

*W. A. Radlinski*

W. A. Radlinski  
Acting Director

Enclosures

cc: Eros Design Group  
P.O. Box 1123  
Sioux Falls, South Dakota 57101

Director's Chron, General Files (14) Mr. Fischer (Code 7) Mr. Schmidt  
Room 5203

FPishmael:ad  
July 15, 1971

7/19

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

SECTION I. GENERAL INFORMATION

1. State	Application Number (to be assigned by Corps of Engineers)		
<u>S.</u> <u>D.</u>	--- --	--- --	---
	Div.	Dist.	Type
			Sequence No.

2. Name of applicant and title of signing official U.S. Department of Interior, Geological Survey,  
Acting Director, Geological Survey.

3. Mailing address of applicant Acting Director, U.S. Geological Survey, 18th and F Streets, N. W.,  
Washington, D. C. 20242

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.  
EROS Design Group, P.O. Box 1123  
Sioux Falls, South Dakota 57101  
Attn: Mr. Duane P. Paulson, Project Manager  
Telephone - 605 - 336-1160

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" before attempting to complete this form.

Required Information

- a. All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents and frequency of a discharge be recognized as confidential or privileged information.
- b. The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.
- c. If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.
- d. Drawings required by items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 10 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

Fees

If any discharge or deposit is involved, an application fee of \$100 must be submitted with this application. An additional \$50 is required for each additional point of discharge or deposit.

Signature

- a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor. Other signature requirements are discussed in the pamphlet.
- b. If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

W. A. Radiński  
Signature of Applicant  
**W. A. Radiński, Acting Director**

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

FOR CORPS OF ENGINEERS USE ONLY

Acronym name of applicant	_____	Are discharge structures	Major? <input type="checkbox"/>	Minor? <input type="checkbox"/>	N/A? <input type="checkbox"/>
Date received, form not complete	--- --	Date sent to EPA, form not complete	--- --		
Date received, form complete but without certificate	--- --	Date sent to EPA, NOAA, D/I, AEC, FPC in complete form	--- --		
Date received, form complete	--- --				
Date of Cert./Ltr.	--- --				
	day mo yr		day mo yr		

5. Date 7 14 1971 (Office use only)  
 mo day yr

6. Check type of application: a. Original  b. Revision

7. Number of original application \_\_\_\_\_

8. Name of facility where discharge or construction will occur.  
EROS, Data Handling Center

9. Full mailing address of facility named in item 8 above.  
Project site is the south half (S 1/2) of Section 8,  
Township 103 N, Range 48 west of the 5th principal  
meridian, Minnehaha County, South Dakota, except for  
small parcels along the south boundary.

10. Names and mailing addresses of all adjoining property owners whose property also adjoins the waterway.  
Peter H. Stadum  
133 N. Prairie Avenue  
Sioux Falls, South Dakota 57104

11. Check to indicate the nature of the proposed activity:  
 a. Dredging  b. Construction  c. Construction with Discharge  b. Discharge only

12. If activity is temporary in nature, estimate its duration in months.  
 N/A

If application is for a discharge:

13. List intake sources

Source	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal or private water supply system	0.063 (City of Sioux Falls)
Surface water body	---
Ground water	---
Other	---

14. Describe water usage within the plant (See Engineering Report)

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Cooling water	---
Boiler Feed water	---
Process water	0.055
Sanitary system*	0.008
Other	---

15. List volume of discharges or losses other than into navigable waters. (See Engineering Report)

Type	Estimated Volume in Million Gallons Per day or Fraction Thereof
Municipal waste treatment system	0.005
Surface containment	---
Underground disposal (Pond Seepage)	0.008
Waste Acceptance firms	---
Evaporation (Polishing Pond)	0.009
Consumption	---

\* Indicate number employees served per day 500

If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.

(Office use only)

a. Name the corporate boundaries within which the structures exist or the activity will occur.

16. <sup>State</sup> South Dakota 17. <sup>County</sup> Minnehaha 18. <sup>City or Town</sup> N/A

b. Name of waterway at the location of the activity

19. Unnamed intermittent stream tributary to West Pipestone Creek

20. Maps and sketches which show the location and character of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. For construction or work in navigable waters for which a separate permit is sought under 33 U.S.C. 403, the character of each structure must be fully shown on detailed plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document	Id. No.	Date	Issuing Agency
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Preliminary Engineering Report submitted to Environmental Protection Agency, South Dakota Committee on Water Pollution and South Dakota State Department of Health. See attached copy of letter dated June 17, 1971.			
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23. Check if facility existed or was lawfully under construction prior to April 3, 1970.

24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

N/A

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids which may be deposited and to determine its effect upon the waterway.

N/A

26. State rates and periods of deposition described in Item 25.

N/A



22. (See Remarks) **PHYSICAL DESCRIPTION OF INTAKE WATER AND DISCHARGE**

Parameter and (Code)	Intake		Discharge			(Office use only)	
	UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Flow (Gallons per day) 00056							
pH 00400							
Temperature (Winter) (°F) 74028							
Temperature (Summer) (°F) 74027							

23. (See Remarks) **DISCHARGE CONTENTS**

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Turbidity 00070			Antimony 01097			Selenium 01147		
Radioactivity 74050			Arsenic 01002			Silver 01077		
Hardness 00900			Beryllium 01012			Potassium 00937		
Solids 00500			Barium 01007			Sodium 00929		
Ammonia 00610			Boron 01022			Titanium 01152		
Organic Nitrogen 00605			Cadmium 01027			Tin 01102		
Nitrate 00620			Calcium 00916			Zinc 01092		
Nitrite 00615			Cobalt 01037			Algicides 74051		
Phosphorus 00665			Chromium 01034			Oil and Grease 00550		
Sulfate 00945			Copper 01042			Phenols 32730		
Sulfide 00745			Iron 01045			Surfactants 38260		
Sulfite 00740			Lead 01051			Chlorinated Hydrocarbons 74052		
Bromide 71870			Magnesium 00927			Pesticides 74053		
Chloride 00940			Manganese 01055			Fecal Streptococci Bacteria 74054		
Cyanide 00720			Mercury 71900			Coliform Bacteria 74056		
Fluoride 00951			Molybdenum 01062					

24. Have all known hazardous or potentially hazardous substances in your plant been inventoried?

Yes

No

(Proposed Installation)

24b. If yes, have steps been taken to insure that there exists no possibility of any such known hazardous or potentially hazardous substance entering this discharge?

Yes

No

(Proposed Installation)

25. Remarks.

Items 22, 23, 24 & 24b: Application is for proposed installation, data on the wastes, methods of waste treatment, and control of effluent discharges are included in the report on "EROS Data Center - Proposed Waste Treatment Facilities - Sioux Falls, South Dakota", a copy of which is attached.

The information above completes the basic reporting requirements which are required of all applicants. Those applicants whose discharge results from an activity included within any of the Standard Industrial Classification Code (SIC Code) categories listed below must complete Part A of this form as well.

### CRITICAL INDUSTRIAL GROUPS

SIC 098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC 285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC 10-14	DIVISION B - MINING	SIC 2871	FERTILIZERS
SIC 201	MEAT PRODUCTS	SIC 2879	AGRICULTURAL PESTICIDES, AND OTHER AGRICULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC 202	DAIRY PRODUCTS	SIC 2891	ADHESIVES AND GELATIN
SIC 203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC 2892	EXPLOSIVES
SIC 2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND SEAFOODS	SIC 29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC 204	GRAIN MILL PRODUCTS	SIC 3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC 206	SUGAR	SIC 3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC 207	CONFECTIONARY AND RELATED PRODUCTS	SIC 311	LEATHER TANNING AND FINISHING
SIC 208	BEVERAGES	SIC 32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC 209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC 331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC 22	TEXTILE MILL PRODUCTS	SIC 332	IRON AND STEEL FOUNDRIES
SIC 23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC 333, 334	PRIMARY SMELTING AND REFINING OF NON-FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC 242	SAWMILLS AND PLANING MILLS	SIC 336	NONFERROUS FOUNDRIES
SIC 2432	VENEER AND PLYWOOD	SIC 347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC 2491	WOOD PRESERVING	SIC 35	MACHINERY, EXCEPT ELECTRICAL
SIC 26	PAPER AND ALLIED PRODUCTS	SIC 36	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC 281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)	SIC 37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC 2818	INDUSTRIAL ORGANIC CHEMICALS	SIC 3731	SHIP BUILDING AND REPAIRING
SIC 282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC 491	ELECTRIC COMPANIES AND SYSTEMS
SIC 283	DRUGS	SIC 493	COMBINATION COMPANIES AND SYSTEMS
SIC 284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS		

**PART A**

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

(Office use only)

N/A

Discharge Serial No.

**INFORMATION REQUIRED OF SPECIFIED INDUSTRIES**

Intake	Discharge											
PARAMETER AND CODE	DAILY AVG. CONCENTRATION/ UNTREATED INTAKE WATER (1)	DAILY AVG. CONCENTRATION/ TREATED INTAKE WATER (2)	MAXIMUM CONCENTRATION PER PROCESS UNIT (3)	MAXIMUM POUNDS PER DAY PER DAY (4)	DAILY AVG. CONCENTRATION PER DAY (5)	AVERAGE POUNDS PER DAY (6)	SAMPLE TYPE (7)	SAMPLE FREQUENCY (8)	METHOD OF ANALYSIS (9)	CONTINUOUS MONITORING (10)	(11)	
ALKALINITY (as Ca CO <sub>3</sub> ) 00410												
B.O.D. 5-DAY 00310												
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340												
TOTAL SOLIDS 00500												
TOTAL DISSOLVED SOLIDS 70300												
TOTAL SUSPENDED SOLIDS 00530												
TOTAL VOLATILE SOLIDS 00505												
AMMONIA (as N) 00610												
KJELDAHL NITROGEN 00625												
NITRATE (as N) 00620												
PHOSPHORUS TOTAL (as P) 00665												

**TABLE A**  
Guide for Completion of Part A

PARAMETER & UNITS	METHOD	REFERENCES			SIGNIFICANCE IN REPORTING DATA
		STANDARD METHODS 13TH ED. 1971	A.S.T.M. STANDARDS Pt. 23 1970	W.Q.O. METHODS 1971	
ALKALINITY AS Ca CO <sub>3</sub> Mg/liter	ELECTROMETRIC TITRATION TECHNICON METHYL ORANGE METHOD	p. 370	p. 154	p. 6	X.
B.O.D. 5-DAY Mg/liter	MODIFIED WINKLER METHOD OR PROBE METHOD	p. 489	p. 712	p. 15	X.
CHEMICAL OXYGEN DEMAND (C.O.D.) Mg/liter	DICHROMATE REFLUX METHOD	p. 495	—	p. 17	X.
TOTAL SOLIDS Mg/liter	GRAVIMETRIC, 105° C. METHOD	p. 535	—	p. 280	X.
TOTAL DISSOLVED (FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 180° C.	p. 539	—	p. 275	X.
TOTAL SUSPENDED (NON-FILTERABLE) SOLIDS Mg/liter	GLASS FIBER FILTRATION METHOD, 103-105° C.	p. 537	—	p. 278	X.
TOTAL VOLATILE SOLIDS Mg/liter	GRAVIMETRIC METHOD 550° C.	p. 536	—	p. 282	X.
AMMONIA (as N) Mg/liter	DISTILLATION-NESSLERIZATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 453	—	p. 134	.XX
KJELDAHL NITROGEN Mg/liter	DIGESTION-DISTILLATION METHOD OR TECHNICON-DIGESTION & PHENOLATE METHOD	p. 469	—	p. 149	.XX
NITRATE (as N) Mg/liter	BRUCINE SULFATE METHOD OR TECHNICON-HYDRAZINE REDUCTION METHOD	p. 461	—	p. 170	.XX
TOTAL PHOSPHORUS (as P) Mg/liter	PERSULFATE DIGESTION & SINGLE REAGENT METHOD OR TECHNICON-MANUAL DIGESTION & SINGLE REAGENT OR STANNOUS CHLORIDE	p. 526	—	p. 235	.XX

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

911 WALNUT STREET, ROOM 702  
KANSAS CITY, MISSOURI 64106

June 17, 1971

IN REPLY REFER TO:  
REGIONAL DIRECTOR - WATER QUALITY  
WQM

Mr. Duane P. Paulson, P.E.  
EROS Design  
P.O. Box 1123  
Sioux Falls, South Dakota 57101

Dear Mr. Paulson:

We have reviewed the preliminary engineering study for the waste treatment facilities to serve the EROS Data Center, Sioux Falls, South Dakota. Our review was coordinated with the South Dakota State Department of Health.

We offer the following comments for your consideration:

1. The concentration of cyanide in the effluent of the polishing pond should not exceed 0.1 mg/l in order to protect the water quality of the effluent receiving stream. In no case shall the cyanide concentration exceed 0.02 mg/l in Split Rock Creek. This level is set by the South Dakota water quality standards.

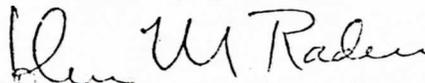
This office feels that a skilled operator and an extensive sampling program with laboratory analysis will be needed if the polishing pond effluent is allowed to discharge to a watercourse.

Disposal of the pond effluent by irrigation is recommended by this office in preference to discharging to the watercourse.

2. The aeration equipment for the concentrated waste evaporation pond should be provided in the original construction.

Please submit two copies of the plans and specifications.

Very truly yours,



JOHN M. RADEMACHER  
Regional Director

cc: South Dakota State Department of Health  
Schmitz, Kalda, & Associates

HTS	___	RR	___
WEB	___	RW	___
WSS	___	GS	___
DLR	___	JV	___
JLL	___	RG	___
DPP	___	HS	___
MLP	___	AE	___
Copy to:	___	JB	___
DK	___	JD	___
JK	___	MT	___
Action by	_____		
Return to	_____	File	_____

JUN 21 1971