5-18-88

ERRATA SHEET

Attached please find corrected replacement pages for the Application and Supporting Environmental Report for the USNRC Commercial Source Material License. Please replace the original pages with the corrected pages. These changes were made as a result of the Engineering Design Report for the evaporation ponds by Western Water Consultants, Inc. dated April 27, 1988.

Page No.	Change
3.0(11)	Figure 3.1-6 - Changed to show individual ponds.
4.2(1)	Size and design changes as a result of detailed engineering.
4.2(2)	Change in pond outline.
4.2(3)	Change in capacities as a result of detailed engineering.

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4.2 LIQUIDS AND SOLID WASTE

4.2.1 Solar Evaporation Ponds

The solar evaporation ponds at the Crow Butte Commercial facility are designed to contain the anticipated liquid waste from the process facility and the restoration process. The solar evaporation ponds will be located to the west of the process facility as shown in Figure 4.2-1.

The pond design, installation and operation criteria that will be used in the design of the waste ponds are those which are found to be applicable in USNRC Regulatory Guides 3.11, 3.11-1 and Staff Technical Position Paper WM-8101.

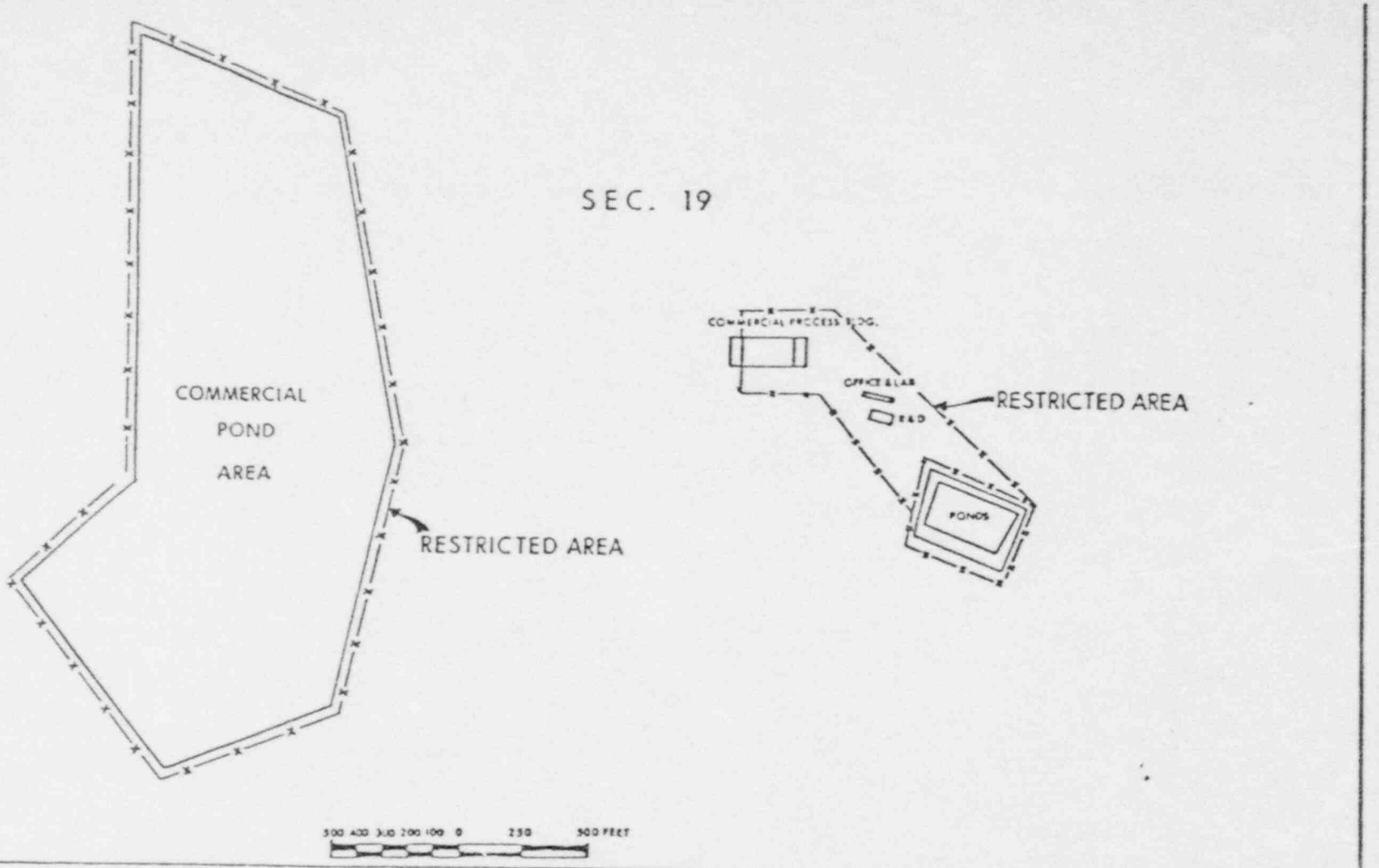
The waste ponds will be similar in construction to the ponds constructed for the R&D operation. The ponds will be membrane lined with a leak detection system under the membrane on compacted soil.

FEN plans to install up to a total of five solar evaporation ponds at the Crow Butte Site. The ponds will be nominally 280 feet by 800 feet by fifteen feet in depth. The ponds will be located west of the commercial plant as shown on Figure 4.2-1. Initially FEN plans to install two ponds; additional ponds will be constructed as needed during restoration.

The exact capacities of the solar evaporation ponds, the freeboard capacity, and the emergency capacity are contained in the Engineering Design Report dated April 27, 1988 by Western Water Consultants, Inc.

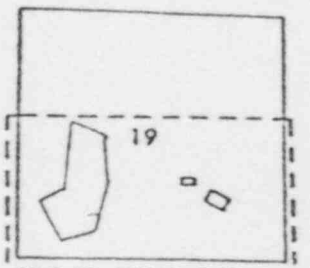
4.2.2 Liquid Waste Volume Estimate

There will be two primary sources of liquid waste at the Crow Butte Site.



4.2(2) 05/17/88

REV DATE	FERRET OF NEBRASKA, INC.		
	CROW BUTTE PROJECT Dawes County, Nebraska		
	SITE LAYOUT		
	PREPARED BY: F.E.N.		
	DWN BY: JC	DATE: 7/87	FIGURE: 4.2-1



SEC. 19-T31N-R51W

- FENCELINE

(1) Liquid process waste which is estimated at 0.5% of the design flow of 2500 gpm. A detailed water balance and composition of the process waste is found in Section 3.0. The liquid process waste is estimated at 6.6×10^6 gallons per year.

(2) The restoration process is described in Section 6.0. Approximate restoration waste will be generated as shown in Table 4.2-1. As can be seen from the Table approximately 32.34×10^6 gallons will be generated per year.

The solar evaporation ponds planned by FEN will be adequate to contain the wastes generated. The ponds will be installed on the following approximate schedule:

	Approximate Capacity gallons	(2) Evaporative Capacity gallon/yr
Pond #1 - 1988	11×10^6 gal. (33.6 acre-ft)(1)	5.6×10^6(3) (17.1 acre-ft)
Pond #2 - 1988	11×10^6 gal. (33.6 acre-ft)(1)	5.6×10^6(3) (17.1 acre-ft)
Pond #3 - 1991	16×10^6 gal. (49.7 acre-ft)	6.0×10^6 (18.4 acre-ft)
Pond #4 - 1991	16×10^6 gal. (49.7 acre-ft)	6.0×10^6 (18.4 acre-ft)
Pond #5 - 1991	16×10^6 gal. (48.0 acre-ft)	6.0×10^6 (18.7 acre-ft)

(1) Operating capacity will be 16×10^6 gal. (48.0 acre-ft) when all five ponds are operational.

(2) Evaporative capacity is based on a net evaporation rate of 45 inches per year.

(3) Evaporative capacity will be 6.1×10^6 gallons/yr when all five ponds are operational.

The total evaporative capacity of the five ponds is estimated at 30.3×10^6 gallons per year. The evaporative capacity in conjunction with the estimated storage capacity and water treatment will allow a minimum of 10 years of operation. Enhanced evaporation may be used to increase evaporation effeciency. Land application of RO permeate is also considered. If more ponds are required in the future FEN will install the necessary pond capacity using the same criteria specified for the initial ponds.

TABLE 4.2-1

APPROXIMATE LIQUID WASTE FROM RESTORATION

	Restoration Process	(gallons)
(a)	One PV[1] transferred to new mining area	0
(b)	Two PV removed for Halo Recovery; Solution to be purified by R.O. and permeate will be land applied and concentrate will be sent to waste.	23.1×10^6
(c)	Two PV removed for R.O. treatment and reinject permeate; Assume 90% permeate and 10% brine.	4.62×10^6
(d)	Three PV to be recirculated with a reductant.	0
(e)	Two PV removed for R.O. treatment and reinject permeate; Assume 90% permeate and 10% brine.	4.62×10^6
	TOTAL	32.34×10^6

(1) One PV for a 22.5 acre mine unit with 10 ft. of affected thickness and 0.29 porosity is 23.1×10^6 gallons.

4.2 LIQUIDS AND SOLID WASTE

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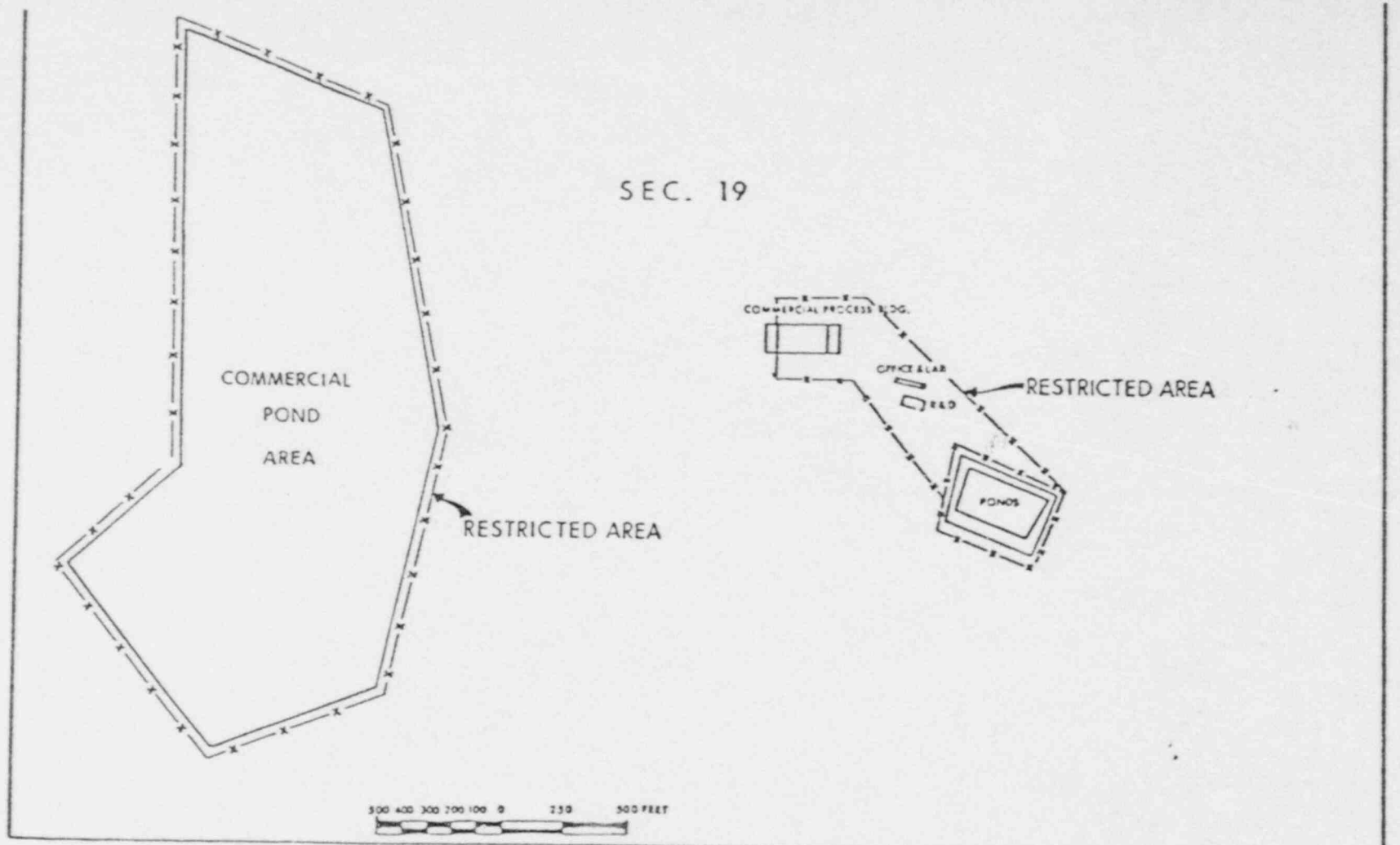

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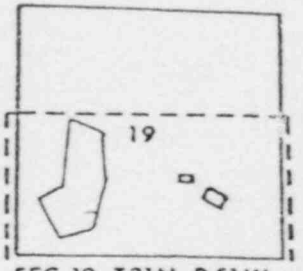
	DWN BY: JC — DATE: 7/87 — FIGURE 4.2-1



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