

MEMORANDUM

WA-14-1600

April 16, 1975

To: Ron Robinson

From: Pat Lee *PL*Subject: Shelton Correctional Center *STP Operational Characteristics*

Enclosed are a few calculated operational characteristics of the above plant. The extremely high sludge age implies that the plant should be wasting more sludge. The high settleabilities and aeration period implies an oversized plant. The loading indices and F/M ratios are too low for an extended aeration plant. The four different numbers are from four different mixed liquor samples taken at various spots in the aeration chamber. The low d.o.'s in the aeration chamber are also indicative of sludge in need of wasting.

S.V.I. = 1. $990,000/3285 = 301$
 2. $990,000/2785 = 355$
 3. $990,000/3045 = 325$
 4. $960,000/3145 = 305$

30-minute settleability: 1. 990 mls
 2. 990 mls
 3. 990 mls
 4. 950 mls

Loading Index: 1. $193/7.87 \times 10^6 = 2.45 \times 10^{-2}$
 2. $193/6.82 \times 10^6 = 2.83 \times 10^{-2}$
 3. $193/7.37 \times 10^6 = 2.62 \times 10^{-2}$
 4. $193/7.69 \times 10^6 = 2.51 \times 10^{-2}$

F/M Ratio: 1. $193/9.10 \times 10^6 = 2.12 \times 10^{-2}$
 2. $193/7.72 \times 10^6 = 2.50 \times 10^{-2}$
 3. $193/8.44 \times 10^6 = 2.23 \times 10^{-2}$
 4. $193/8.71 \times 10^6 = 2.22 \times 10^{-2}$

Aeration Period: $332,000 \text{ gallons}/85,500 \text{ gallons} = 93 \text{ hours (extended aeration)}$

Sludge Age: 1. 99 days
 2. 84 days
 3. 92 days
 4. 95 days

PL:ee