

Quarterly Progress Report  
For Second Quarter, 1986 on  
INS Corp - Royersford Decontamination  
Wastewater Treatment Facility

Prepared For:  
The Nuclear Regulatory Commission

By

INS Corporation  
Springfield, Massachusetts

July, 1986

### Second Quarter Discharge Summary

Liquid effluent discharges from the INS-Royersford facility are presented as weekly averages and weekly totals in the following tabulations.

#### Discharge Summary Second Quarter of 1986

By week (1986)	Average Beta/Gamma (uCi/cc)	Average Alpha (uCi/cc)	Total Beta/Gamma (uCi)	Total Alpha (uCi)	Total Release (uCi)
04/01 - 04/05	1.34E - 5	3.45E - 8	4252.6	10.9	4264
04/06 - 04/12	1.02E - 5	3.67E - 8	2290.2	10.9	3001
04/13 - 04/19	1.25E - 5	3.67E - 8	4140.0	12.1	4152
04/20 - 04/26	1.41E - 5	4.14E - 8	3605.4	10.6	3616
04/27 - 05/03	2.31E - 5	3.52E - 8	5564.0	8.4	5572
05/04 - 05/10	2.86E - 5	4.36E - 8	8147.7	12.4	8160
05/11 - 05/17	2.02E - 5	5.61E - 8	6961.8	19.4	6981
05/18 - 05/24	2.75E - 5	4.05E - 8	8267.3	12.1	8279
05/25 - 05/31	1.49E - 5	3.72E - 8	4027.0	10.1	4037
06/01 - 06/07	1.18E - 5	4.10E - 8	3554.3	12.3	3567
06/08 - 06/14	1.36E - 5	4.16E - 8	4495.2	13.7	4509
06/15 - 06/21	1.12E - 5	4.21E - 8	4190.0	15.7	4206
06/22 - 06/28	1.24E - 5	3.70E - 8	3922.8	11.7	3934
06/29 - 06/30	7.29E - 6	3.09E - 8	<u>218.9</u>	<u>.9</u>	<u>220</u>
		TOTALS:	63637.2	161.2	64498

The activity was discharged in a total water volume of 1,049,400 gallons. This produces an average beta-gamma activity concentration of 1.6E - 5 uCi/cc, and an average alpha activity concentration of 4.1E - 8 for the entire quarter.

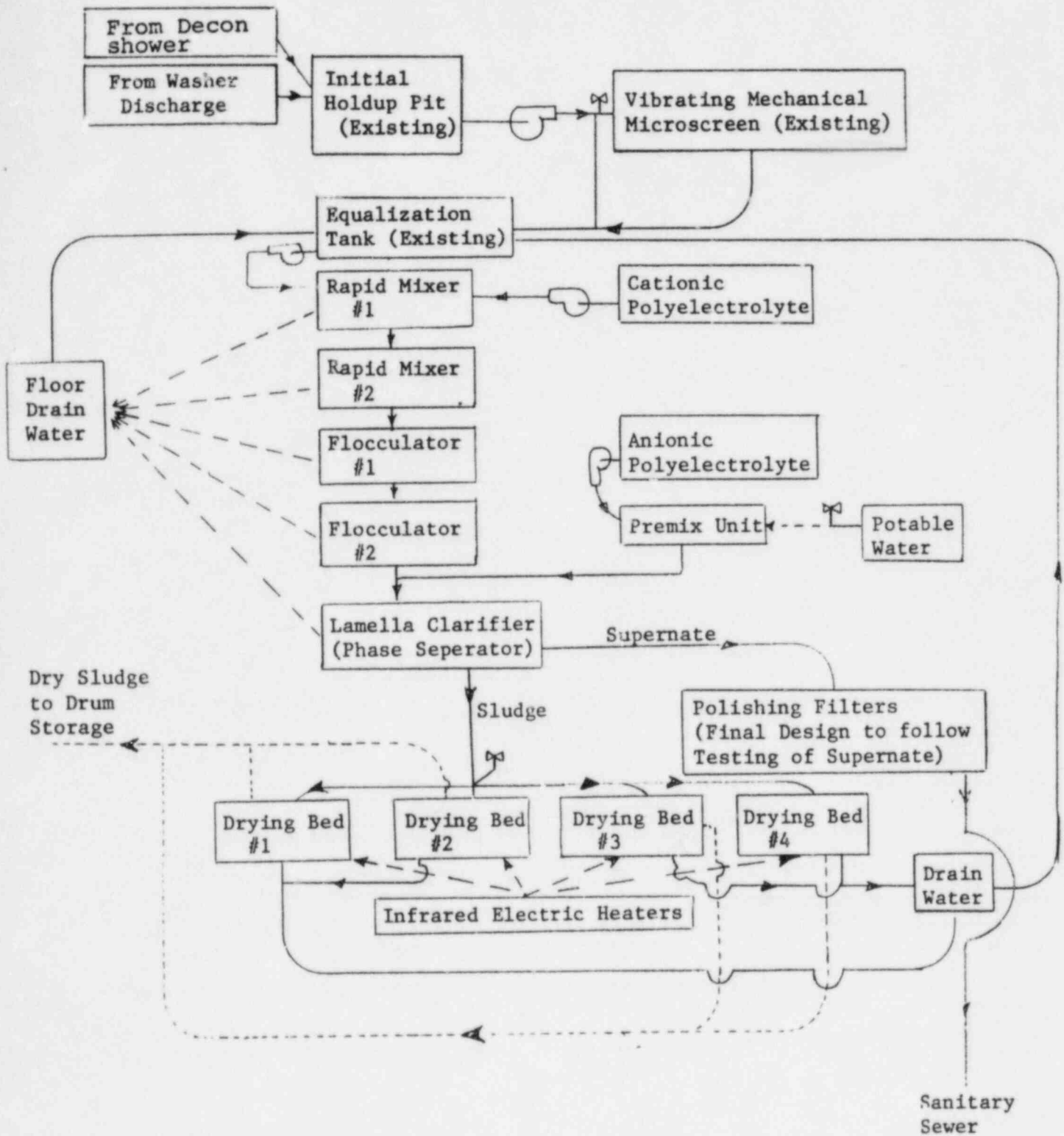
### Second Quarter Decontamination Wastewater Treatment Progress

INS Corporation, in keeping with their goal of substantially reducing activity in liquid discharges at the INS Royersford plant, made a great deal of progress during the second quarter of 1986. Mr. Wilson conducted over one hundred laboratory jar tests with polyelectrolytes and various floc agents. The results were extremely positive and several polyelectrolytes available from multiple sources were found to enhance settling of a wide variety of INS Royersford wastewater samples and types. Selected cationic polyelectrolytes produced floc and promoted settling. Certain other anionic polyelectrolytes enhanced phase separation, sludge dewatering and sludge characteristics.

Based on the laboratory results, INS immediately approved construction of a new wastewater treatment system based on the polyelectrolytes. That system is now substantially into the construction phase attachment "A" schematically depicts the new system logistics. Attachment "B" provides photographs of the construction underway as of July 19, 1986 (actually into the third quarter). Workers are approved for overtime to complete the project expeditiously.

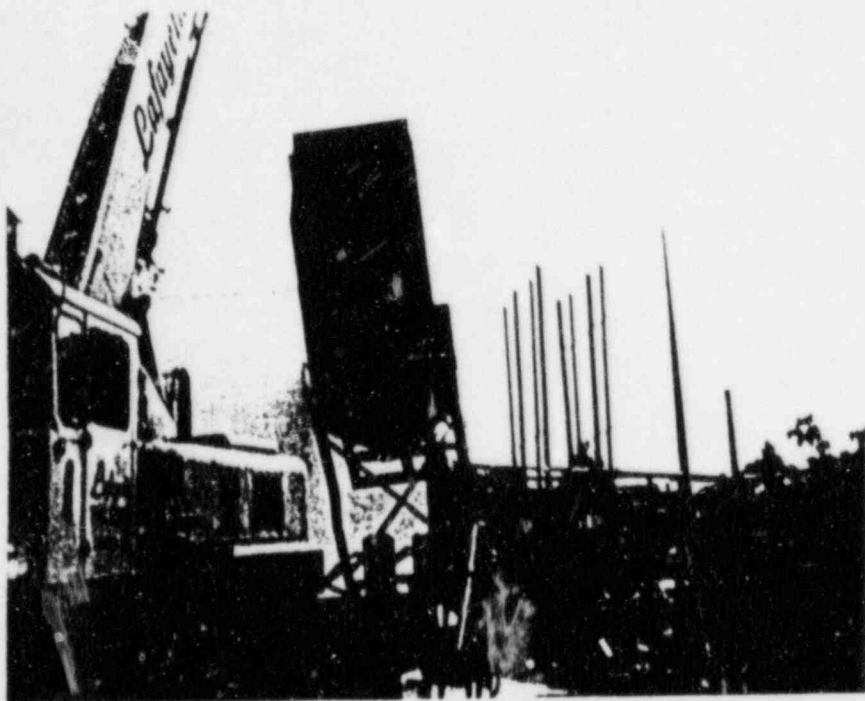
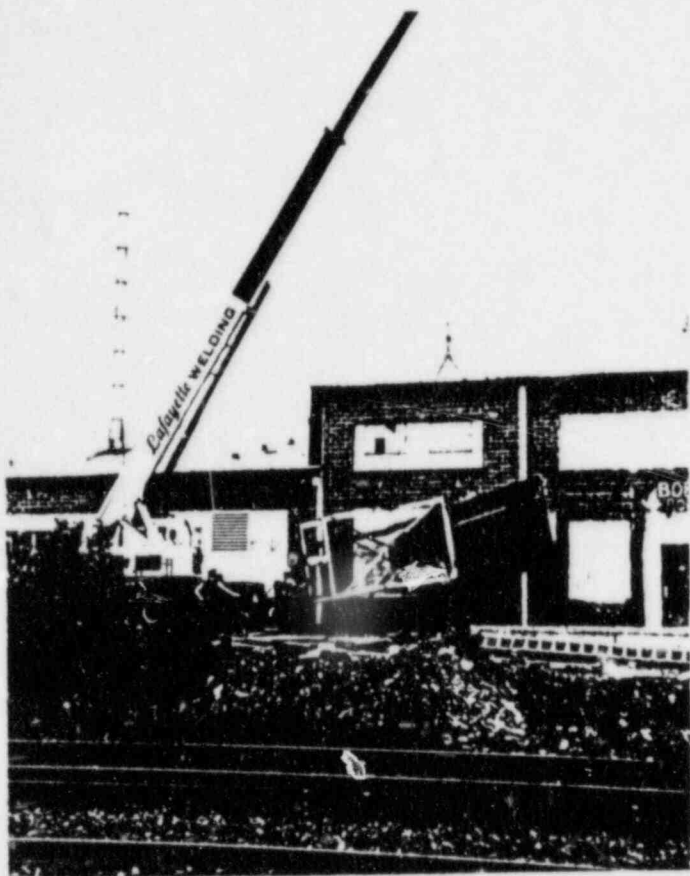
Attachment "A"

PLANNED WASTEWATER TREATMENT  
SYSTEM FOR INS-ROYERSFCRD, PA DECON. FACILITY

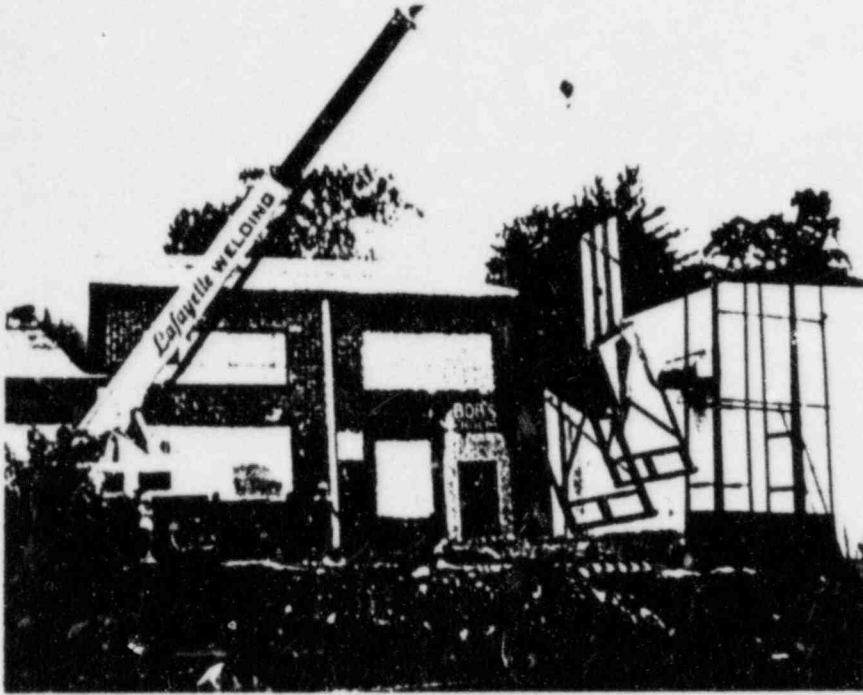


Attachment "B"

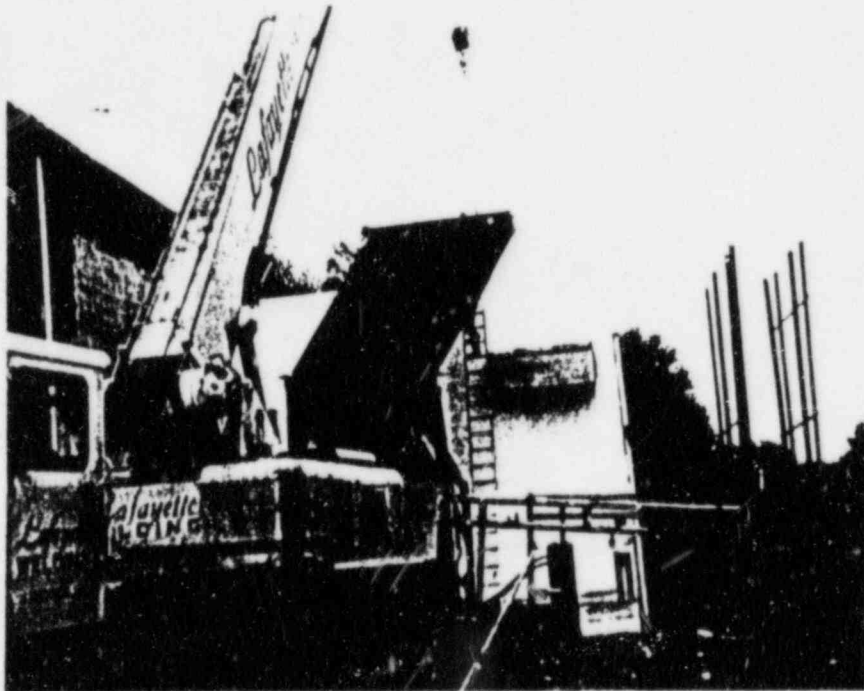
Crane placing  
lamella tank on  
slab where new  
treatment room  
will be located.



Attachment "B" (cont'd)



Lamella tank is positioned. (existing tank room is white room in background)



Attachment "B" (cont'd)

Lamella separator (on left)  
is in position. Tank on right  
will house rapid mixers and  
flocculators.

