

Monsanto

FROM J. J. Uihlein--Springfield
DATE April 5, 1973
SUBJECT Solvent Operator Arbitration

cc. J. R. Belschwender
R. L. Bourget

REFERENCE

TO M. S. Starr--Springfield

As we anticipated, the Union attempted to refute elimination of the solvent operators on the basis that a substantial part of their job still remains. Although we clearly showed that cleaning time per batch had been reduced from 100 to 50 minutes (15 to 7 1/2 hours per shift), the Union's contention is that the remaining work belongs to the solvent operator since solvent is still being used. Obviously, we look at it differently pointing out that a water flush has been replaced by a solvent flush. The following points may be helpful in presenting our case.

1. The solvent operator was not an integral part of the kettle floor like the CKO, KO and AKO. He had very limited and specific duties. When a kettle was to be cleaned, it was literally turned over to the solvent operator (C. Kelley's testimony) for an extended period of time to be cleaned. As such, cleaning was not an integral part of the reactor cycle. Interestingly, this was the main argument of the Union in 1964 when the solvent operator classification was established. On the other hand since flushing is done every batch or every other batch as is the current practice, it is considered an essential part of the cycle. As such it belongs to the kettle floor compliment.
2. While the Union attempted to refute our numbers, the testimony of both Kelley and Brodowski was misleading and inaccurate. Kelley first claimed 30 minutes/batch to FKF which he corrected to 40 minutes under subsequent direct examination. While his cycle times on all phases of FKSF were accurate, he grossly over-estimated the interim time required to open valves, press start buttons and close kettles. His estimate of 25 minutes "working" time at 5 minutes/operation is more accurately 10 minutes total. Furthermore, his estimates of 2 to 6 hours per flush is totally out of line. It is interesting to note Kelley's glaring inaccuracies in several areas, such as the 30 minute water flush, the time of the blasting (February not January as he claimed), average 88 Building productivity (11 batches/day not 13 as he claimed). Yet on the subject of time to open and close valves, average FKSF cycles, he

sounded quite convincing. As to Mr. Brodowski's "average" time of 5°25' which was given with the same air of authenticity as Mr. Kelley's testimony, this is 10 minutes better than the lowest time noted after reviewing over 100 logs. A detailed review of 100 typical logs indicated average times of:

	<u>Cycle</u>	<u>Per Batch</u>	<u>Co. Nos.</u>
PKF	43 minutes	43	40
Solvent Cleaning	6° 40 minutes	57	60
Solvent Flushing	110 minutes	55	50

3. The Union's argument over how much work remains is misleading. Although C. Kelley would have you believe he is overworked, emphasizing that a 40 minute flush was replaced with a two hour operation, the major differences in cycle time between the water and the solvent flush do not require any additional effort on the part of the operator. (See Figure 1.) They include the initial and final vacuums which are both automatically terminated after 20 minutes and extending the agitation or hold time by 10 minutes. The most significant change in the operator's work load is in opening a few additional valves and pressing a few buttons. This is a very minor part of the kettle operator's work load and is the main reason why the Union's proposed compromise (eliminate a KO instead of a SO) would have resulted in a most unfair distribution of work load. The SO function would have been looked upon as "featherbedding". By comparison, the solvent cleaning function while not a full job required much more work on the operator's part (four times as many valves, many operations removed from the kettle floor and a higher level of monitoring).
4. With regard to the recovery vessel, again the Union would have us believe that a high degree of attention and work was still required. Kelley made mention of 4 hours per shift. A polymerization reactor having far more requirements upon the operator and running twice as fast as the solvent recovery kettle does not take 4 hours of attention per shift. (See Figure 2.) Furthermore, 88 Building was reduced from seven reactors to six and '92 Building has eight reactors and turns out 35% more batches than 88 with comparable staffing.

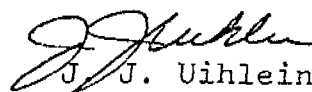
I have included some typical log sheets which include solvent cleaning, solvent recovery and polymerization batches to give you some idea of the reduction in data logging.

M. S. Starr

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I trust this information will be helpful and let me know if I
can be of any further assistance.


J. J. Uihlein

/pld

attachments

RSV0025793

Figure 1

Comparison of Operator Activity FKF & FKSF

<u>FKF</u>	<u>FKSF</u>
1. Close kettle & dog manhole.	1. Same
2. --	2. Open vacuum valve & energize jet. Stops automatically.
3. Open charge valve & connect quick locking hose.	3. Close vacuum valve, open charge valve.
4. Start pump. Pump stops automatically.	4. Raise setpoint, start pump. Pump stops automatically.
5. Close charge valve, disconnect hose.	5. Close charge valve.
6. Open dump valves.	6. Open dump valve. Open nitrogen valve, start pump. Pump stops automatically.
7. Close dump valve.	7. Close dump valve, close nitrogen valve.
8. --	8. Open vacuum valve.
9. --	9. Energize jet. Stops automatically.
10. Open kettle.	10. Open kettle.

Opening and closing a kettle requires about two minutes. All other functions are less than one minute in length.

Figure 2

Estimated Time Per Reactor

1. Prepare catalyst solution	10 minutes
2. Flush with solvent	10 minutes
3. Charge water	*25 minutes
4. Add C-1	<5 minutes
5. Close kettle	2 minutes
6. Evacuate kettle	5 minutes
7. Charge VCM	*25 minutes
8. Adjust temperature setting	<5 minutes
9. Add A6 solution/flush	<5 minutes
10. If reaction goes 1° over setpoint, go to FCW.	Although opening FCW valves, adding water injection & venting require very little, a great deal of monitoring is required since there is a high degree of batch to batch variability and time cannot be accurately predicted.
11. If reaction goes 2° over setpoint, inject cold water.	
12. Repeat #11	
13. When reaction reaches 75 PSI, wait 20 minutes and vent.	
14. Add antifoam	<5 minutes
15. Data logging	<5 minutes
16. Open kettle	2 minutes

*Although operator does not have to be present at all times, he must be there to shut off meters.