

Interoffice Communication

To : A. H. Sather
From : J. V. Uptain
Date : February 3, 1977
Subject : VCM PERSONNEL DOSIMETRY PLAN CHANGES

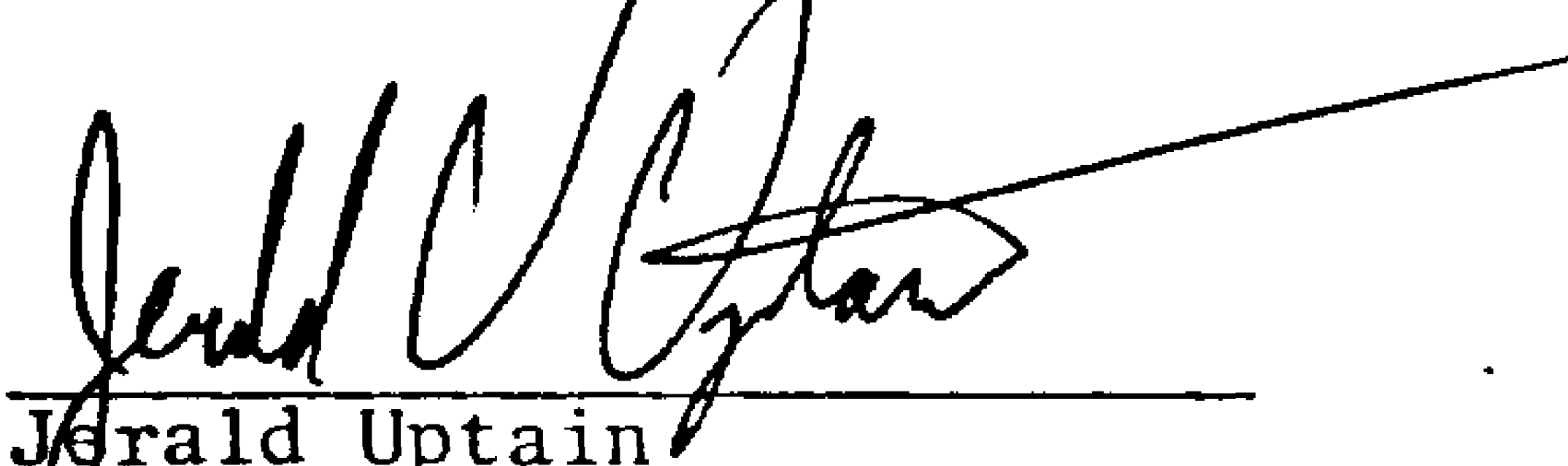
Attached are my recommendations for reducing plant VCM personnel dosimetry rates (see Table II). These recommendations are based on:

1. The results of all dosimetry during the July 1, 1976 - December 31, 1976 period (See Table I).
2. A strictly subjective assessment of the relative exposure risks, irrespective of the "numbers".

In reviewing the results in Table I, note that the "2-sigma Upper Control Limit" represents, that value, based on sampling, below which we can be 95% confident the true mean exposure exists. The "chances" of the exposure being greater are 5%, assuming our sampling was randomized and otherwise adequately representative.

In reviewing Table II, it will be noted that the plan for categories II and III is not substantiated by the "numbers". Even so, the more conservative approach, as recommended, should be taken to detect long-term change that might otherwise go undetected.

The proposal, if used, will reduce sampling from approximately 1,032 samples per year to something like 341. This represents a 67.0% reduction, the change being made on what is considered to be a very conservative basis.


Jerald Uptain

tp

c: GGD, RWS, Dept. Heads

Attachments

Dave what is your
feeling & how much time
per day would we save?

it would be about 3 hr / week
if we could hold samples until end of
week to run. other wise not more than
1 hr per week if we run daily.

TABLE I

SUMMARY OF VCM PERSONNEL DOSIMETRY RESULTS
JULY 1, 1976 - DECEMBER 31, 1976

<u>WORKFORCE GROUP</u>	<u>NO. SAMPLES</u>	<u>MEAN (PPM,VCM)</u>	<u>STD DEVIATION (PPM, VCM)</u>	<u>2-SIGMA UPPER CONTROL LIMIT (PPM,VCM)</u>
Transportation Office, Supervision	17	0.12	0.14	0.39
Reactor Lead Operators	8	0.06	0.18	0.42
Vinyl Dryer Lead Operators	8	0.15	0.15	0.45
Maintenance Electricians	3	0.10	0.17	0.45
Maintenance Machinists	3	0.08	0.07	0.21
Maintenance Painter/Carpenter	3	0.22	0.08	0.37
Maintenance General Helpers	7	0.09	0.13	0.35
Laboratory Supervisors	14	0.11	0.15	0.40
Compound Supervisors	13	0.17	0.16	0.49
Compound Workers -All, including Dry Blend	60	0.11	0.17	0.46
All Management, Administrative, & Office Workers not otherwise listed	11	0.08	0.13	0.34
Transportation Warehouse Workers	56	0.15	0.28	0.71
Warehouse Workers	14	0.18	0.27	0.73
Vinyl Dryer Supervisors	9	0.23	0.27	0.77
Vinyl Dryer Operators/Utilities	31	0.17	0.20	0.58
Maintenance Instrument Technicians	5	0.21	0.28	0.77
Maintenance Building Attendants	6	0.24	0.38	1.00
Maintenance Utility Technicians	4	0.23	0.17	0.56
Laboratory - All Technicians	39	0.15	0.18	0.52
Safety Department Personnel	15	0.11	0.26	0.63
Mechanical Engineers	13	0.09	0.21	0.52
Administrative Services	36	0.14	0.20	0.53
Yard Supervisor	3	0.37	0.32	1.01
Yard Operators	25	0.35	0.59	1.53
Reactor Supervisors	25	0.29	0.43	1.15
Reactor "A" Operators	22	3.62	15.94	35.51
Maintenance Supervisors	11	0.22	0.41	1.05
Maintenance "A" and "B" Mechanics, Helpers	37	0.72	3.73	8.37
Process Engineers	18	0.31	0.63	1.56
	<u>516</u>			

TABLE IIRECOMMENDED SAMPLING PLAN
VCM PERSONNEL DOSIMETRYCATEGORY I : Discontinue

1. Transportation Office, Supervisors
2. All Management, Administrative, Office Workers not Otherwise Listed.

CATEGORY II : One Sample Per Year

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|-----------------------------------|--------------------------------|
| 1. Maintenance Electricians | 4. Maintenance General Helpers |
| 2. Maintenance Machinists | 5. Laboratory Supervisors |
| 3. Maintenance Painter/Carpenters | |

CATEGORY III : One Sample Per Shift Per Year

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|-------------------------------|--|
| 1. Vinyl Dryer Lead Operators | 3. Compound, Dry Blend Workers ^{1/mo} |
| 2. Compound Supervisors | |

CATEGORY IV : One Sample Per Quarter

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|---------------------------------------|----------------------------|-------------------|
| 1. Transportation Warehouse Workers | 5. Safety Personnel | ^{6 s/mo} |
| 2. Warehouse Workers | 6. Mechanical Engineers | |
| 3. Maintenance Instrument Technicians | 7. Administrative Services | |
| 4. Maintenance Building Attendants | | |

CATEGORY V : One Sample Per Shift Per Quarter

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|--|------------------------------------|
| 1. Reactor Lead Operators | 4. Maintenance Utility Technicians |
| 2. Vinyl Dryer Supervisors | 5. Laboratory Technicians |
| 3. Vinyl Dryer Operators and Utilities | |

CATEGORY VI : One Sample Per Month

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|------------------------------|------------------------------|-------------------|
| 1. Yard Supervisor | 4. Maintenance "B" Mechanics | ^{6 s/mo} |
| 2. Maintenance Supervisors | 5. Maintenance Helpers | |
| 3. Maintenance "A" Mechanics | 6. Process Engineers | |

CATEGORY VII : One Sample Per Shift Per Month ^{12 s/mo}

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|------------------------|--------------------------|
| 1. Yard Operators | 3. Reactor "A" Operators |
| 2. Reactor Supervisors | |

about 1 sample / day
7 / week