NOV 14 1977

JED

FROM

MR. LEROY WAGNER

POINT COMFORT OPERATIONS

TO

MR. J. K. McCLAIN

POINT COMFORT OPERATIONS

cc: Mr. Tom Bonney - Pittsburgh
Mr. H. W. Cooper - Pt. Comfort
Dr. M. F. Jones - Pt.Comfort
Mr. R. G. Barlund - Pt.Comfort
Mr. C. C. Douglas - Pt. Comfort
Mr. G. B. Viets - Pt. Comfort
Mr. D. Dunlap - Pt. Comfort
Mr. J. Kinder - Pt. Comfort
Mr. P. Morales - Pt. Comfort

11/21/77
Jim would like to discuss with you
Tom

1977 November 11

RE: INDUSTRIAL HYGIENE SURVEY

The Industrial Hygiene Department has started a walk through survey program of the entire Point Comfort Operations. The purpose of this survey is to find any conditions or procedures that could be hazardous to the health of the employees. These conditions are then checked by followup sampling.

Attached is the survey for the Bayer Plant. If there are any questions, please feel free to contact either Mr. Rudy Podhora or myself at phone number 2555.

Leroy Wagner

LEROY WAGNER

LW:cch

Attachment

ARCH 18653

ALCOA

SF-4563 (REV. 11-66)

PLANT COMFORT OPERATIONS

DATE: 8-26-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start 8:30 AM Stop 12:00 Noon

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
RAW MATERIALS	R-10 Dock	Dust in Ship during unloading	TRACTOR OPERATOR 9-26-77	Boke Bauxite 7.3 mg/m³ OPERATORS BREATHING ZONE
	No. 3 Belt	Dust at Transfer Points	See Attached Sheet	
	Bldg. R-16	Noise on Bulldozer	8-26-77	104 dBA - Drivers Seat
	R-16	Dust Around Bulldozer	9-8-77	OPERATORS BREATHING ZONE 40.2 mg/m³
	R-16 Tunnel	Dust in Tunnel	See Attached Sheet	
	Bldg. R-15	Noise on Bulldozer	8-26-77	104 dBA - Drivers Seat
	R-15	Dust Around Bulldozer	8-30-77	OPERATORS BREATHING ZONE 37.6 mg/m³
	R-15 Tunnel	Dust in Tunnel	See Attached Sheet	
	R-21	Noise in Bldg.	8-26-77	90 dBA
	R-21	Dust in Building	See Attached Sheet	
	R-25 Top	Dust in Building	See Attached Sheet	
8-26-77	Outside	Temp. 81° F, R.H. 90%		
	Wind Dir.	60° @ 5 mph		
	Partly Cloudy w/showers			

ARCH 18654

Dust Samples From Raw Materials
Breathing Zone Samples on Operators

Date Sampled	Area Sampled	Results Mg/m³
10-27-77	No. 3 Belt Operator	10.4 - Boke
10-28-77	" " "	7.1 - Boke
11-4-77	" " "	57.5 - HTD
11-5-77	" " "	45.2 - SUR./4 hrs.
8-30-77	Tunnel Operator - R-16	13.0
8-30-77	" " - R-15	47.3
10-25-77	" " - R-15 & 16	22.9
10-27-77	" " " "	4.4
10-28-77	" " " "	13.8
11-4-77	" " " "	14.0
11-5-77	" " " "	46.0
8-29-77	R-21 Operator	3.0
8-30-77	" "	26.3
10-25-77	" "	5.7
10-27-77	" "	6.8
10-28-77	" "	5.7
11-4-77	" "	30.2
8-29-77	R-25 Top Operator	20.4
8-30-77	" " "	20.9
10-25-77	" " "	30.4
10-27-77	" " "	3.8
10-28-77	" " "	35.3
11-4-77	" " "	14.8
11-5-77	" " "	15.5

TEXT COMFORT OPERATIONS

DATE: 9-15 & 9-22-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start Stop

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
CALCINATION	R-55 South Side	Blower Noise	9-15-77	90 dBA
	Bottom Floor Middle	Noise	"	90 dBA
	Second Floor	Noise	"	87 dBA
	Third Floor	Noise	"	87 dBA
	Fourth Floor	Heat at Furnaces	"	105° F.
	Fifth Floor	NAOH Mist at Rotary Filters	To be Sampled Next Survey	Temp. 102° F.
	Sixth Floor	Heat Between Units	9-15-77	100° F
	R-50			
	South Side Bldg.	Blower Noise	9-22-77	92 dBA
	Cooler Area	Dust at Shakers	To be Sampled Next Survey	
	Feed end	Noise on Ground Level	9-22-77	89 dBA
	Filter Floor	Noise	"	89 dBA
	" "	NAOH Mist at Filters	To be Sampled Next Survey	
			SURVEYED BY	LeRoy Wagner

ARCH 18656

POINT COMFORT OPERATIONS

DATE: 9-15 & 9-22-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start Stop

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
Calcination (Contd.)	R-51	Dust in Loading Area	8-31-77	Breathing Zone 30.2 mg/m³ on Loader
	"	" " "	"	3.7 mg/m³ on helper.
	R-60	Dust at Lime Conveyor Belt	To be Sampled Next Survey	
	"	Temp. at Burner Area	9-22-77	102° F.
		Outside Temp: 92°, R.H. 84%		
	9-15-77	Wind Dir. 150° at 6 mph		
		Clear		

ARCH 18657

SURVEYED BY Leroy Wagner

POINT COMFORT OPERATIONS

DATE: 8-18-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start 8:30 AM Stop 11:00 AM

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
Digestion	R-25 A Tanks	No Further Action		
	R-6 NAOH Tank	No Further Action		
	R-7 Acid Tank	No Further Action		
	R-8 Starch Bldg.	No Further Action		
	R-25 Bottom Floor	Noise - 5 Rod Mills	8-18-77	95 dBA
	R-25 Second Floor	Noise - 5 Rod Mills	8-18-77	92 dBA
	" "	Lime Dust at Feeders - South end	8-22-77	4.6 Mg/M³ Total Dust
	" "	Lime Dust in Middle of Bldg.	8-22-77	1.8 Mg/M³ Total Dust
	R-25 Third Floor	Noise - 5 Rod Mills	8-18-77	90 dBA
	R-25 Fourth Floor	Dust at Pan Feeders	8-22-77	1.2 Mg/M³ Total Dus
	R-30 Bottom Floor	No Further Action		
	R-30 Second Floor	NAOH Mist Above Digesters	To be Sampled Next Survey	
	R-33 Bottom Floor	Noise	8-18-77	88 dBA
			SURVEYED BY	Leroy Wagner

ARCH 18658

POINT COMFORT OPERATIONS

DATE: 8-18-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start 8:30 AM Stop 11:00 AM

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
Digestion (Cont'd)	R-33 Second Floor	No Further Action		
	R-33 Third Floor	No Further Action		
	R-33 Fourth Floor	No Further Action		
	R-32	This Unit Not Running		
	R-31 Bottom Floor	Noise	8-18-77	88 dBA
	R-31 Second Floor	No Further Action		
	R-31 Third Floor	No Further Action		
	R-40 Entire Bldg.	Noise	8-18-77	86 dBA
	R-42 Entire Bldg.	Acid Mist during Heater Cleaning	To be Sampled Next Survey	
		Outside Temp: 94° - R.H. 78%		
	8-18-77	Wind Dir: 185°		
		Wind Vel: 7 mph		
		Weather: Clear		

SURVEYED BY Leon Wagner

ARCH 18659

POINT COMFORT OPERATIONS

DATE: 8-22-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start 9:00 AM Stop 11:20 AM

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
CLARIFICATION	R-35 Bottom Floor	No Further Action		
	R-35 Second Floor	No Further Action		
	R-35 Third Floor	NAOH Mist during Press Washing	8-25-77	Press No. 29 - Regular .2 mg/m³ NAOH
	R-36 Bottom Floor	No Further Action		
	R-36 Second Floor	No Further Action		
	R-36 Third Floor	No Further Action		
	R-36 Fourth Floor	No Further Action		
	Mud Thickeners	No Further Action		
	Mud Washers	No Further Action		
		Outside Temp: 96° R.H. 70%		
	8-22-77	Wind Dir: 200°		
		Wind Vel: 6 mph		
		Weather: Clear		

SURVEYED BY Leroy Wagner

ARCH 18660

POINT COMFORT OPERATIONS

DATE: 8-17-77

INDUSTRIAL HYGIENE SURVEY

TIME: Start 8:15 AM Stop 11:15 AM

AREA	LOCATION	WALK THROUGH EVALUATION	DATE SAMPLED	RESULTS
R-45 Precipatation	Tanks No. 45-A, B, C, D, E & F.	No Further Action		
	Ground Level Under Prec.	Temp. 88°F, Noise Levels on Pumps at		
		Prec. No. 110	8-17-77	90 dBA
	Top of Prec. North Section	Temp. 96°F, Sample For NAOH Mist.	8-24-77	Trace - NAOH Mist.
	Top of Prec. South Section	Temp. 95°F, Sample For NAOH Mist.	8-24-77	Trace - NAOH Mist
		Scaling Tank No 28, Noise Levels	8-17-77	Top of Tank No 28 - 114 dB
			8-17-77	At Next Tank - 104 dB
		—	8-17-77	2 Tanks Away - 90 dBA
		Amb. Temp: 95° R.H. 74%		
	8-17-77	Wind Dir: 180°		
		Wind Vel: 7 mph		
		Weather: Clear	SURVEYED BY	Leroy Wagner

ARCH 18661

TOTAL DUST RESULTS COMPARISON FROM PARALLEL SAMPLING WITH MESA AUG. 30, 31 & SEPT. 8, 1977

DATE	SAMPLE LOCATION	JOB DESCRIPTION	MATERIAL	Mg/M 3 RESULTS - 8HR. TIME WEIGHTED	
				POINT COMFRT	MESA
8-30-77	R15 TUNNEL	CONVEYOR TENDER	BAUXITE: H.T.D. & BOKE	42.4	27.0
"	R16 "	"	BAUXITE: BOKE	11.8	2.4
"	R15 BAUXITE STORAGE	D8 DOZER OPERATOR	BAUXITE: H.T.D. & BOKE	33.9	21.1
"	R21 CRUSHER BLDG.	CRUSHER OPERATOR	BAUXITE: H.T.D & BOKE	24.7	12.2
"	R25 BAUXITE BINS	CONVEYOR OPERATOR	BAUXITE: H.T.D & BOKE	19.2	10.8
8-31	R51 ALUMINA LOADING	LOADER	ALUMINA	3.4	2.7
"	" "	AREA ATTENDANT	"	27.0	13.7
9-8	R15 BAUXITE STORAGE	D-8 DOZER OPERATOR	BAUXITE: H.T.D & BOKE	25.8	NO INFO.
"	R16 "	" "	BAUXITE: SURINAME & BOKE	52.4	"
"	R45 PRECIPITATORS	HYDRATE SCALER	ALUMINUM HYDRATE SCALE	5.8	"
"	"	"	"	6.5	"

ARCH 18662

POINT COMFORT'S SAMPLING RESULTS ARE HIGHER BECAUSE 0.8 MICROMETER PORE SIZE FILTERS WERE USED COMPARED TO MESA'S 5.0 MICROMETER PORE SIZE. POINT COMFORT'S PERSONAL SAMPLING CASSETTES WERE ATTACHED TO THE OPERATOR'S SHIRT COLLAR AS CLOSE AS POSSIBLE TO THE BREATHING ZONE. MESA'S SAMPLE CASSETTES WERE ATTACHED AT THE SHIRT POCKET LEVEL WITH A SPECIAL TYPE HOLDER. (Note: Three other total dust samples were obtained in the Calcination Dept., but the results were $\leq$ 1.0 mg/m^3.) R. E. Pardue 10-12-77

77-09-30 MESA INSPECTION/
RAW MATLS DEPT
BAUXITE RECLAIM, R15, R16, R21 - R25

PERSONAL SAMPLING DATA SHEET

SAMPLE NO.	CLOCK NO.	NAME	WORK DESCRIPTION	PUMP NO. BENDIX	PUMP NO. M.S.A.	SAMPLE RATE	FILTER TUBE NO.	START TIME DATE	TEMP. °F.	STOP TIME DATE	TEMP. °F.	MIN TOTAL TIME	TOTAL VOLUME	CHR TWA
1	62-165	R. L. Latimer 466-52-9452	R21 operator Crusher-conveyor tender		4	2 LPM	17	8:33 AM 8-30		4:03 8-30		7-30 450 min	900 L 26.3 mg/m³	24.7
* Noise		Dosimeter #1 99% exp.												
2	62-214	R.L. Hrabovsky 465-24-7697	R25 operator conveyor tender		3	2 LPM	18	8:40 8-30		4:02 8-30		7-22 442 min	884 L 20.9 mg/m³	19.2
Noise		Dosimeter #2 51% exp.												
3	62-076	Thomas Darilek 455-96-5562	R-15 Tunnel Conveyor Tender		1	2 LPM	19	8:48 8-30		3:58 8-30		7-10 430 min	860 L. 47.3 mg/m³	42.6
4	62 055	Joseph Polk 467-82-8077	R-16 Tunnel conveyor tender		2		20	8:50 8-30		4:06 8-30		7-16 436 min	872 L. 13.0 mg/m³	11.8
5	62 073	C. Martin 449-46-7494	R-15 Dozer Op.	3		2 LPM	21	8:51 8-30		4:03 8-30		7-12 432 min	864 L. 37.6 mg/m³	33.9
		Dosimeter #3 37.5% exp.												

WEATHER DATA: Wind Direction SSE Wind Velocity 5 MPH Ambient Temp. 81 Baro. Press. 29.97 Humidity 95% Partly cloudy / Showers.

~~VENTILATION: No. Roof Fans Oper. No. Wall Fans Oper. East West~~

SAMPLING DESCRIPTION: (1) Collecting Medium TOTAL DUST FILTER (3M DISPOSABLE) (2) Other Specs. 0.8μ MILLIPORE

EMPLOYEE DESCRIPTION: (1) Resp. Worn: Yes ☑ No ☐ (2) Using Fan/Air Horn: Yes ☐ No ☐ (3) Other: _____

No noise dosimeters on tunnel attendants - noise level - low

WORK DESCRIPTION DETAILS: No Suriname bauxite handled @ Reclaim, however ship "TARPON" discharging Suriname into R16

~~Hg Expected: High~~ ☐ Moderate ☐ ~~Low~~ ☐

* DuPont Noise dosimeters 85dBA base. MESA's were 90dBA base

A2

77-03-31 MESA INSPECTION

CALCINATION & ALUMINA LOADING AREAS R50, R51 & R55

PERSONAL SAMPLING DATA SHEET

SAMPLE NO.	CLOCK NO.	NAME	WORK DESCRIPTION	PUMP NO. BENDIX	PUMP NO. M.S.A.	SAMPLE RATE	FILTER THRU NO.	START TIME DATE	TEMP. °F.	STOP TIME DATE	TEMP. °F.	MIN. TOTAL TIME	TOTAL VOLUME	TWA
6	70 040	Ernest Escobar 467-78-1696	Alumina R51 Loading (Looder)	3	—	2 LPM	22	8:02 AM 8-31		3:32 PM 8-31		7-30 450 min.	900 L 3.7 mg/M³	3.4
* Noise		Dosimeter #1 = (15%)												
7	70 026	H. W. Koslan 461-22-0785	Alumina R51 Loading (Area a Hendrant)		1	2 LPM	23	8:07 AM 8-31		3:36 PM 8-31		7-29 429	858 L. 30.2 mg/M³	27.0
Noise		Dosimeter # 2 = (18%)												
8	70 014	Jim Yarborough 462-52-6633	Alumina - Burner Conveyor attendant R50		2		24	8:12 AM 8-31		3:37 PM 8-31		7-25 445	890 L 1.1 mg/M³	1.0
* Noise		Dosimeter # 3 = (29%)												
9	70 056	A. M. Padgen (Arcadio) 460-12-7053	Alumina - Utility clean up R50 Dosimeter #4 (49%)		3		25	8:15 AM 8-31		3:34 PM 8-31		7-19 439	578 L 0.5 mg/M³	0.4
10	70 013	H. Snider (Deceased) 465-09-6017	Calciner Operator R55 *Dosimeter #5 (22%)		4		26	8:24 AM 8-31		4:03 PM 8-31		7-39 459	918 L 0.3 mg/M³	0.3

WEATHER DATA: Wind Direction 50° Wind Velocity 5 MPH Ambient Temp. 81 Baro. Press. 29.95 Humidity 85%

~~VENTILATION: No. Roof Fans Oper. ____ No. Wall Fans Oper. ____ East ____ West ____~~

SAMPLING DESCRIPTION: (1) Collecting Medium TOTAL DUST FILTER (2) Other Specs. 0.8 μ MILLIPORE

EMPLOYEE DESCRIPTION: (1) Resp. Worn: Yes ☑ No ☐ (2) Using Fan/Air Horn: Yes ☐ No ☐ (3) Other: _____

3M DISPOSABLE DUST MASK @ R51 ALUMINA LOADING

WORK DESCRIPTION DETAILS: Dusty conditions at R51. (Lunchroom door open—A/C off.)

* Dosimeter Noise dosimetry / 85dBA base, MESA's were 90dBA base.

~~No Expected: High ☐ Moderate ☐ Low ☐~~

INDUSTRIAL HYGIENE DEPARTMENT POINT COMFORT OPERATIONS. 8/1/75 REP

P.2

ARCH 18664

77-09-08 MESA INSPECTION

PERSONAL SAMPLING DATA SHEET

BAUXITE RECLAIM R15 & R16

SAMPLE NO.	CLOCK NO.	NAME	WORK DESCRIPTION	PUMP NO. BENDIX	PUMP NO. M.S.A.	SAMPLE RATE	FILTER TUBE NO.	START TIME DATE	TEMP. °F.	STOP TIME DATE	TEMP. °F.	TOTAL TIME	TOTAL VOLUME
11	62 028	Kelly J. Long	DOZER OP. R16 #721 / ROLL PAN	#3		2 LPM	27	8:03 AM 77-09-08		3:55 PM 77-09-08		7-52 472 min	944 L. 53.3 mg/m³
* Noise		Dosimeter #1 (318%)											
12	62 015	Manuel G. Briseno	DOZER OP. R15 #875/am #904/pm		#1	2 LPM	28	8:07 AM 77-09-08		3:52 PM 77-09-08		7-45 465 min	930 L. 26.7 mg/m³
**		No Dosimeter #2 No reading (Dosimeter malfunction)											

8 HR TWA: 52.4 / 25.8

WEATHER DATA: Wind Direction ____ Wind Velocity ____ Ambient Temp. ____ Baro. Press. ____ Humidity ____

VENTILATION: ~~No. Roof Fans Oper.~~ ____ ~~No. Wall Fans Oper.~~ ~~East~~ ~~West~~

SAMPLING DESCRIPTION: (1) Collecting Medium TOTAL DUST FILTER (2) Other Specs. 0.8 µ MILLIPORE

EMPLOYEE DESCRIPTION: (1) Resp. Worn: Yes ☑ No ☐ (2) Using Fan/Air Horn: Yes ☐ No ☑ (3) Other: ____

USED 3M 8515 DISPOSABLE RESPIRATOR (DOUBLED)

OCCASIONALLY USE COOL HAT. K.L. LONG LIKES THE AIRSTREAM UNIT

WORK DESCRIPTION DETAILS: MOVE BAUXITE INSIDE BLDGS R15 & R16

** NEXT DAY DOSIMETER MEMORY CELL ALSO DID NOT RECORD ANY NOISE

~~Hg Expected: High~~ ☑ ~~Moderate~~ ☐ ~~Low~~ ☐

INDUSTRIAL HYGIENE DEPARTMENT. POINT COMFORT OPERATIONS. 8/1/75 REP

D_3

ARCH 18665

77-09-08 MESA INSPECTION R4

R4

PERSONAL SAMPLING DATA SHEET

R4S PRECIPITATION DEPT.

SAMPLE NO.	CLOCK NO.	NAME	WORK DESCRIPTION	PUMP NO. BENDIX	PUMP NO. M.S.A.	SAMPLE RATE	FILTER ~~TUBE~~ NO.	START TIME DATE	TEMP. °F.	STOP TIME DATE	TEMP. °F.	TOTAL TIME	TOTAL VOLUME	8 HR. TWA
13	69-	E. Arnold 460-80-4912	Hydrate scaler precip. Talc #19		#2	2 LPM	29	8:32 AM 77-09-08		4:18 PM 77-09-08		7-46 466 min.	932 L. 6.0 mg/m³	5.8
*	Noise	Dosimeter # 3 (1584 %)												
14	69-113	Richard Escobar 467-88-1164	Hydrate scaler precip tank #56		#3	2 LPM	30	8:47 77-09-08		4:17 PM 77-09-08		7-30 450 min.	900 L 6.9 mg/m³	6.5
*	Noise	Dosimeter # 4 (1775 %)												

WEATHER DATA: Wind Direction ____ Wind Velocity ____ Ambient Temp. ____ Baro. Press. ____ Humidity ____

VENTILATION: No. Roof Fans Oper. ____ No. Wall Fans Oper. ____ East ____ West ____

SAMPLING DESCRIPTION: (1) Collecting Medium TOTAL DUST FILTER (2) Other Specs. 0.8μ MILLIPORE

EMPLOYEE DESCRIPTION: (1) Resp. Worn: Yes ☐ No ☑ (2) Using ~~Fan/Air Horn~~ AIR MANIFOLD Yes ☑ No ☐ (3) Other: ____

WORK DESCRIPTION DETAILS: REMOVING SCALE (HYDRATE) FROM WALL, TANK #19 OPERATE SCALING GUNS.

~~Hg Expected: High~~ ☐ ~~Moderate~~ ☐ ~~Low~~ ☐

ARCH 18666

P5

77-09-08 MESA INSPECTION
R-36 - PROCESS TANK CLEANERS

PERSONAL SAMPLING DATA SHEET

SAMPLE NO.	CLOCK NO.	NAME	WORK DESCRIPTION	PUMP NO. BENDIX	PUMP NO. M.S.A.	SAMPLE RATE	TUBE NO.	START TIME DATE	TEMP. °F.	STOP TIME DATE	TEMP. °F.	TOTAL TIME	TOTAL VOLUME
15	67-109	Joe C. McMillon 465-74-5723	Mud Tank cleaner Helper Tank #9	NO DUST SAMPLE - NOISE ONLY									
*	DOSIMETER #5 (29%)							9:15 Am					

WEATHER DATA: Wind Direction ____ Wind Velocity ____ Ambient Temp. ____ Baro. Press. ____ Humidity ____

VENTILATION: No. Roof Fans Oper. ____ No. Wall Fans Oper. ____ East ____ West ____

SAMPLING DESCRIPTION: (1) Collecting Medium ____ (2) Other Specs. ____

EMPLOYEE DESCRIPTION: (1) Resp. Worn: Yes ☐ No ☐ (2) Using Fan/Air Horn: Yes ☐ No ☐ (3) Other: ____

WORK DESCRIPTION DETAILS: ____

Hg Expected: High ☐ Moderate ☐ Low ☐

INDUSTRIAL HYGIENE DEPARTMENT POINT COMFORT OPERATIONS 8/1/75 REP

P. 5

ARCH 18667

11/20/75 12:56

9/2/77

JED

Pt. Comfort

Phone Conv. with Milt Jones

Removal of furnace lining. Back-up block asbestos. Employees using air supplied respirator. One man apparently failed to wear in past & called OSHA.

OSHA hygienist visited plant. J[redacted] indicates he might be cited for failure to provide physical examinations. Previously measured concentrations indicate exposures to be less than 0.1 fiber/cc

Sent letters to Jones that indicate OSHA's policy is not to require monitoring & medical surveillance if concns < 0.1 fiber/cc. Suggested he query hygienist about whether this policy still applies. May prevent him from being cited

Jones is aware of recent review cases that rule monitoring & surveillance req'd at any concentration, which obviously is contradictory to earlier OSHA interpretation

TRC

THOMAS B. BONNEY 8/29/77

TO: [redacted]

Would you check with Rudy on this? Assume he used detector tube for evaluation. Are we sure that PH_3 was present (i.e. any interfering substances?)? Any other indications that it was present?

Tom

ALCOA

1501 Alcoa Building
Pittsburgh, Pennsylvania 15219

INTER-OFFICE COMMUNICATION

FROM R.E. Podhora AUG 29 1977 TO MR. TOM B. BONNEY

OFFICE IND. HYG. POINT COMFORT OPNS OFFICE PITTSBURGH OFFICE

SUBJECT PHOSPHINE - INGOT CASTING FURNACE #7 DATE 77-08-25

MESSAGE: TOM: DR. JONES ASKED ME TO SEND YOU A COPY OF THE ATTACHED. FURTHER UPDATE AS FOLLOWS:

1. HO-RAM HEAVY DUTY PAVING BREAKER WORKED ON #7 FCE SINCE MONDAY - FOUND BIG METAL PAD.
2. MASONS & LABORERS NEEDED TO WORK INSIDE TO JACK-UP METAL PAD TO PERMIT USE OF OXYGEN LANCE CUTTING OF METAL PAD
3. TESTED INSIDE OF FURNACE / PHOSPHINE AFTER AIR HORN BLOWING INTO OPENING / ~20 MINUTES. FOUND 0.5 ppm PHOSPHINE.
4. MOVED AIR HORN TO OPENING AT OPPOSITE END & EVACUATED / 15 MIN. PHOSPHINE DOWN TO 0.1 ppm (TLV = 0.3 ppm)
5. CHECKED FURN. AGAIN THIS AM & FOUND 0.1 ppm Phos.

(5 cont.) Had air horn evacuate Furn. #7 all night.
6. I FEEL WE HAVE IT UNDER CONTROL.

SIGNED Rudy.

ORIGINAL SENDER • DO NOT WRITE BELOW THIS LINE

REPLY:

If problem occurs in future, request that sample of furnace lining be sent to G. H. Farrah for positive identification of PH_3 generated under high humidity conditions. TBB believes that humidity should not cause problem of this magnitude without comparatively greater problem with NH_3 and acetylides. However, if appreciable PH_3 is generated identification and quantification by laboratory techniques is desirable

DATE 77-08-29 SIGNED J. W. Graffenreid

SF 2848—50M—7-68

PERSON RECEIVING COMMUNICATION - RETAIN THIS COPY FOR YOUR RECORD

ARCH 18670

file Bldg 19

AUG 29 1977

R. E. Podhora
Ind. Hyg. Dept.

Mr. Lee Williams
Layout Casting Dept.
cc: Mr. Joel Hutchins
Mr. Chase Phillips
Mr. R. A. Alexander
Mr. M. F. Jones

Confidential
77-08-22 8:55/Am

in mail @ 10:52 Am

Re: Phosphine - Furnace #7 Bldg #19
(Emergency memo)

At Mr. Marvin Thomas' request, No. 7 furnace was tested for confined space entry Friday, 77-08-19. There was no combustibles, CO, Cl_2. O_2 was ≃21%, however 0.8 ppm phosphine was detected. It was decided to test the furnace again on Monday. At 8:10/Am - 8:20/Am, 77-08-22 the furnace was tested again for phosphine, combustibles + O_2. Phosphine was detected again at the 0.8 ppm level. (O_2 ≃ 21% & no combustibles) PHOSPHINE TLV = 0.3 ppm

Since there are no suitable chemical cartridge for phosphine, it is necessary for anyone entering the #7 furnace to use supplied breathing air apparatus or provide forced ventilation to sufficiently dilute the existing concentration. Allow 20-30 min ventilation time and call the Industrial Hygiene Dept. for another analysis for phosphine to determine whether or not the space is cleared for safe entry.

ARCH 18671

R. E. Podhora 2555