WV-0220 #63

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor K-40 operator for asbestos exposure due to ambient air movement. The operator performed the regular duties of the K-40 operator.

DATE OF SAMPLES: 1/22/87

PLAINTIFF'S EXHIBIT

UC-3538

SAMPLE	TYPE	TIME START	TIME STOP	RESPIRATOR?	RESULTS
Z-8889	BZ	8:45	15:00	No	< 0.003 f/cc

BZ = Breathing Zone

DISCUSSION: The results (<0.003 fibers/cc) are well below the OSHA permissible exposure limit of 0.133 fibers/cc TWA_{12} and also well below the action level of 0.667 fibers/cc (for 12 hours). This indicates that during a normal day the K-40 operator was not overexposed to asbestos.

RECOMMENDATIONS: Request I.H. monitoring of other operators who may be concerned about asbestos exposure. This will assist in pinpointing any "trouble spots". Share this information with operators.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: C. R. McMillan/T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, D. L. Mullins, F. M. Plechaty, R. D. Smith, W. V. Summers

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WV-0220467

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor Emulsion Building area as well as an operator to determine the exposure potential due to exposed asbestos in the area.

DATE OF SAMPLES: 2/4/87

SAMPLE	TYPE	TIME START	TIME STOP	RESPIRATOR	RESULTS
Z-8956	Area	13:30	16:15	N/A	<0.007 fibers/cc
Z-8957	BZ	13:33	16:12	No	<0.008 fibers/cc

BZ = breathing zone

DISCUSSION: The area sample was placed approximately 3 inches from exposed asbestos on a vibrating pipe. Both the personnel and the area samples show levels well below both the action level (0.0667 fibers/cc - 12 hour average) and the OSHA Permissible Exposure Limit (TWA_{12} of 0.133 f/cc).

RECOMMENDATIONS: Where it is suspected that an exposure potential may exist, I.H. monitoring should be requested. Share these results with area operators.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: JHM Labs

COPY TO: D. A. Boggs, E. L. Doerflein, D. L. Mullins, F. M. Plechaty, R. D. Smith, W. V. Summers.

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WV-027065

INDUSTRIAL HYGIENE RESULTS

DATE: April 7, 1987.

PROJECT: Monitor insulators for asbestos during deinsulation of R-2 in the Reactor Area of Silanes. A negative pressure enclosure was built around the reactor for the purpose of deinsulation.

DATE OF SAMPLES: 2/10/87

SAMPLE	TYPE	TIME START	TIME STOP	RESPIRATOR	RESULTS
Z-8962	BZ	10:30	11:23	Airline	0.31 fibers/cc
Z-8963	BZ	10:32	11:21	Airline	0.52 fibers/cc

BZ = Breathing Zone

DISCUSSION: Both samples showed air concentrations above the OSHA PEL during the monitoring period. Respiratory protection was worn during the entire monitoring period. Even if one considers 4 - one hour exposure periods with no other exposures and averages this over 8 hours, sample Z-8963 would be above the PEL TWA_8 of 0.2 fibers/cc. Obviously, these concentrations are unacceptable.

RECOMMENDATIONS: Wet methods must be used more effectively. The use of the enclosure keeps all ambient fibers in close proximity to the worker and therefore the methods used to prevent fiber release must be even more stringent. It goes without saying that respirators must continue to be used when working in the temporary enclosure. This will not be counted as an overexposure since respiratory protection prevented the employee from actually being exposed to the material.

METHOD OF ANLYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: J.H.M. Labs

COPY TO: D. A. Boggs, E. L. Doerflein, J. K. Kyle, F. M. Plechaty, K. B. Purinton, W. V. Summers, G. W. Wulfert.

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INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor a pipefitter for asbestos exposure while removing an asbestos gasket.

DATE OF SAMPLES: 1/16/87

SAMPLE	TIME START	TIME STOP	RESPIRATOR	RESULTS
Z-8874	14:25	15:29	No	0.035 fibers/cc

DISCUSSION: This exposure was less than the OSHA 8-hour Time Weighted Average Permissible Exposure Limit (PEL) of 0.20 f/cc and below the action level of 0.10 fibers/cc.

RECOMMENDATIONS: Request I.H. monitoring when asbestos gaskets are being removed since we need to get more background data on such operations.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, C. A. Gorrell, W. V. Summers, Ralph Wilson, G. W. Wulfert

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WW-0770 #97

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulators for exposure to asbestos during the de-insulation of K-6 within the temporary negative pressure enclosure, Silanes Reactor Tower.

DATE OF SAMPLES: 1/29/87 and 1/30/87

DATE	SAMPLE	TIME START	TIME STOP	RESPIRATOR	RESULTS	TYPE
1/29/87	Z-8817	2:35	3:42	Airline	0.109	BZ
1/29/87	Z-8918	2:36	3:30	Airline	0.021	BZ
1/30/87	Z-8919	12:53	13:40	Airline	0.129	BZ
1/30/87	Z-8920	12:57	13:40	Airline	<0.026	BZ

BZ = Breathing Zone

DISCUSSION: All samples are below the PEL of 0.2 fibers/cc TWA_8. Z-8917 and Z-8919 are above the action level for the monitoring period. Increased wetting may help. The insulators wore airline respirators during the entire monitoring period.

RECOMMENDATIONS: Increase the amount of wetting agent (water) used. Continue using respiratory protection. Request further I.H. monitoring of similar tasks. Share this information with craftsmen.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, J. K. Kyle, F. M. Plechaty, K. B. Purinton, W. V. Summers, G. W. Wulfert.

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INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulator and area near south corner of fluids lab while removing asbestos from heater. Insulator used glove bag method.

DATE OF SAMPLES: 1/20/87

SAMPLE	TYPE	TIME START	TIME STOP	RESPIRATOR	RESULTS
Z-8881	BZ	10:33	11:01	Comfo II HEPA Filter	<0.032 fibers/cc
Z-8882	A	10:35	11:01	N/A	0.104 fibers/cc

BZ = breathing zone
A = area

DISCUSSION: Both results are below the OSHA permissible exposure limit TWA - 8 of 0.2 f/cc. The area sample was above the action level of 0.1 f/cc during the sampling period. However at the end of the monitoring period no further release of fibers was expected since the job was at that time completed. Therefore it can be assumed that over an 8 hour period the actual area concentration was well below the action level.

RECOMMENDATIONS: Request further IH monitoring when similar jobs are being performed. Share this information with area and craft personnel.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: C. R. McMillan/T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, E. L. Doerflein, T. W. Heiskell, J. K. Kyle, T. L. McHenry, K. B. Purintan, W. V. Summers, G. W. Wulfert.

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WV-0220 #69

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor insulators removing asbestos insulation using the glove bag technique. SSP Unit. K-36, top deck.

DATE OF SAMPLES: January 16, 1987.

SAMPLE	TIME START	TIME STOP	RESP?	CONC.
Z-8872	10:34	11:30	Airline	0.158 fibers/cc
Z-8873	14:31	15:29	Airline	0.272 fibers/cc

DISCUSSION: Both of the above exposures were unexpectedly high. Since these exposures do not typically extend for 8 hours, but rather 4 one hour exposures, it is doubtful that an overexposure condition was experienced. This, however is only true if during breaks, lunch, etc. the insulator is not exposed to any asbestos (which should be the case). In addition, airline respirators were worn. The above stated protective equipment and work schedule should however in no way diminish the impact of these results. I would recommend that we closely scrutinize if the glove bag method of removal is being used properly. The above results indicate that wetting must be used in conjunction with the glove bag. The high concentrations measured are most likely a result of fibers being released during removal of the glove bag from the line. Since this is the most probably time for release of fibers, the glove bag should be thoroughly wetted and evacuated with the HEPA vacuum before removing it from the line. It is very important that I.H. be called to perform monitoring during similar situations in order to ascertain if these high concentrations are the norm or if this was an isolated incident.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: T. L. Grittie

COPY TO: D. A. Boggs, E. L. Doerflein, T. K. Ioannou, J. K. Kyle, F. M. Plechaty, W. V. Summers, K. B. Purinton, G. W. Wulfert.

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WV-0220 #70

INDUSTRIAL HYGIENE RESULTS

DATE: April 6, 1987.

PROJECT: Monitor contract personnel and area under roof of Polymers I for asbestos. Transite was being removed from the Poly I roof by Tri-State employees.

DATE OF SAMPLES: 1/20/87 and 1/21/87

SAMPLE	TYPE	TIME START	TIME STOP	RESPIRATOR?	RESULTS	DATE
Z-8885	BZ	14:38	15:43	Comfo II HEPA filter	0.074 fiber/cc	1/20
Z-8886	BZ	14:40	15:42	Comfo II HEPA filter	0.160 f/cc	1/20
Z-8887	A	14:42	15:45	N/A	0.070 f/cc	1/20
Z-8888	A	08:26	15:34	N/A	0.004 f/cc	1/21

BZ = Breathing Zone
A = Area

DISCUSSION: All samples were below the OSHA permissible exposure limit. The removal of the transite took less than two hours on both of these days. Z-8886 was above the action level during the monitoring period, but below the PEL. On 1/21/87 area monitoring was performed for 7 hours 8 minutes while the same type work was being performed. This was done to assure that operators entering the area below the roof repair were not being overexposed. As the results of sample Z-8888 indicate there was little to no exposure potential in the area. It also serves to illustrate that when monitored over an 8-hour period the exposure potential did indeed decrease at the end of the time period in which the transite was being removed.

RECOMMENDATIONS: Continue to use respiratory protection as a precautionary measure until more samples may be taken to assure that the PEL is not exceeded. Request I.H. monitoring any time work on transite is being performed to obtain more background data.

METHOD OF ANALYSIS: Microscopy

DATA AND REPORT BY: C. R. McMillan/T. L. Grittie

ANALYSIS BY: Kemron Environmental

COPY TO: D. A. Boggs, J. E. Boley, E. L. Doerflein, T. K. Ioannou, L. P. Smith, W. V. Summers, G. W. Wulfert. F. M. Plechary

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