

WASHINGTON TOWNSHIP PUBLIC SCHOOLS

RUBBERIZED FLOOR INVESTIGATION
OCCUPIED AIR SAMPLING SUMMARY
MARCH 26, 2019

INTRODUCTION OF TEAM

- ANNINA HOGAN, PE, RA, RVE
 - RESPONSIBLE AS PROJECT MANAGER INCLUDING GUIDANCE OF ENVIRONMENTAL SCIENTISTS, PROTOCOL DEVELOPMENT, REPORT DEVELOPMENT AND RECOMMENDATIONS
- MICHAEL MENZ, CIH, CHMM, INDOOR ENVIRONMENTAL CONCEPTS
 - RESPONSIBLE AS ADVISOR, PROTOCOL DEVELOPMENT, EXPOSURE EVALUATION AND REVIEW OF RESULTS AND RECOMMENDATIONS
- JAMES EBERT, EPIC ENVIRONMENTAL – ENVIRONMENTAL SCIENTIST
 - RESPONSIBLE FOR SAMPLING PROTOCOL DEVELOPMENT, FIELD SAMPLING AND LABORATORY COORDINATION.
- TOM PRUNO, ENVIRONMENTAL DESIGN – ENVIRONMENTAL SCIENTIST
 - RESPONSIBLE FOR ADDITIONAL COORDINATION & GUIDANCE WITH CIH

RUBBERIZED FLOORING LOCATIONS

School	Location (s)
Bells Elementary School	Gymnasium
Birches Elementary School	Gymnasium
Hurffville Elementary School	Gymnasium
Thomas Jefferson Elementary School	Gymnasium
Wedgwood Elementary School	Gymnasium
Whitman Elementary School	Gymnasium
Bunker Hill Middle School	Main Gymnasium & Adaptive/Auxiliary Gymnasium
Washington Township High School	Dance Studio (Room B13 of 11/12 Wing)

REGULATIONS AND UNREGULATED RECOMMENDATIONS

THE MERCURY VAPOR TESTING RESULTS WERE REVIEWED WITH PROJECT CERTIFIED INDUSTRIAL HYGIENIST (CIH) AND COMPARED TO THE FOLLOWING REGULATIONS AND UNREGULATED EXPOSURE RECOMMENDATIONS.

• AGENCY	EXPOSURE LIMIT (UG/M ³)	NOTES
• OSHA (PEL)	100	
• NIOSH (REL)	50	
• ACGIH (TLV)	25	
• MINN DOH	1.8 (1 HR)	(CHILDREN, PREG. WOMEN)
• MINN DOH	0.75 (40/WK)	(GYM TEACHERS/SCHOOL YR)
• MINN DOH	0.75 (16/WK)	(STUDENTS/SCHOOL YR)
• CA OEHHA	0.60 (1 HR)	RECOMMENDED, NOT STATUTE
• CA OEHHA	0.06 (8 HR)	RECOMMENDED, NOT STATUTE
• CA OEHHA	0.03 (CHRONIC)	RECOMMENDED, NOT STATUTE
• NJ DOH	0.8 (8 HR)	(PRE-K/180 DAY SCHOOL YEAR) GUIDANCE MCL, NOT STATUTE

EXPOSURE EVALUATION - RECOMMENDATION/ACTIONS

Vapor Concentration ($\mu\text{g}/\text{m}^3$)	Recommendation / Actions
<1.0	Acceptable for use, no action required. Monitor condition of the flooring
1.0 - <3.0	Acceptable for use. Evaluate actions to lower concentration and continued monitoring
3.0 or more	Limit access to space

<u>SCHOOL</u>	<u>TESTING DATE</u>	<u>MERCURY AIR SAMPLING RESULTS</u>	
• BELLS ES GYMNASIUM	2/13/19	NON DETECT TO 0.16 UG/M ³	
• BIRCHES ES GYMNASIUM	2/19/19	0.60 UG/M ³ AVERAGE	
• BIRCHES ES GYMNASIUM	2/27/19	0.17 UG/M ³ AVERAGE (INCREASED VENTILATION)	(71% REDUCTION)
• WHITMAN ES GYMNASIUM	2/19/19	0.86 UG/M ³ AVERAGE	
• WHITMAN ES GYMNASIUM	2/27/19	0.44 UG/M ³ AVERAGE (INCREASED VENTILATION)	(48% REDUCTION)
• WEDGWOOD ES GYMNASIUM	2/21/19	0.37 UG/M ³ AVERAGE	
• HURFFVILLE ES GYMNASIUM	2/21/19	NON DETECT TO 0.34 UG/M ³	
• THOMAS JEFFERSON ES GYM	2/25/19	0.30 UG/M ³ AVERAGE	
• BUNKER HILL MS GYM	2/13/19	0.49 UG/M ³ AVERAGE	
• BUNKER HILL MS GYM	2/26/19	NON DETECT TO 0.16 UG/M ³ (INCREASED VENTILATION)	
• BUNKER HILL MS GYM	3/20/19	0.15 UG/M ³ AVERAGE (INCREASED VENTILATION)	(69% REDUCTION)
• BUNKER HILL MS AUX GYM	2/13/19	0.63 UG/M ³ AVERAGE	
• BUNKER HILL MS AUX GYM	2/26/19	0.48 UG/M ³ AVERAGE (INCREASED VENTILATION)	
• BUNKER HILL MS AUX GYM	3/20/19	0.33 UG/M ³ AVERAGE (INCREASED VENTILATION)	(47% REDUCTION)
• WTHS 11/12 ROOM B-13	2/25/19	NON DETECT TO 0.37 UG/M ³	

RECOMMENDATIONS / NEXT STEPS

- MAINTAIN INCREASED VENTILATION AND TEMPERATURE CONDITIONS ESTABLISHED DURING THE TESTING.
- COMPLETE WORST CASE TESTING TO DETERMINE ACCESS TO SPACE UNDER COOLING/VENTILATION FAILURE SIMULATION
- AS THE FLOORS ARE EXPECTED TO CONTINUE TO DEGRADE IT IS RECOMMENDED THAT THE DISTRICT PLAN TO REMOVE THE FLOORS AS THEY CAN BE BUDGETED.
 - BASED ON THE MERCURY VAPOR LEVELS WITH STANDARD AND INCREASED VENTILATION WE RECOMMEND THAT WHITMAN ELEMENTARY SCHOOL AND BUNKER HILL MIDDLE SCHOOL RUBBERIZED FLOORING BE PRIORITIZED FOR REMOVAL AND REPLACEMENT WITH MERCURY FREE FLOORING.
- UNTIL SUCH TIME AS FLOORS ARE ABATED AND REPLACED IT IS RECOMMENDED THAT SEASONAL AIR SAMPLING BE COMPLETED TO CONFIRM THAT MERCURY VAPOR LEVELS ARE STILL WITHIN ACCEPTABLE RANGES.
- DISTRICT TO FOLLOW BEST PRACTICES ON FLOOR MAINTENANCE AND MONITOR FLOOR CONDITION TO MAINTAIN UNTIL SUCH TIME AS FLOORS ARE ABATED AND REPLACED.

THANK YOU