



INDOOR AIR QUALITY SURVEY

Property:

**Memorial Elementary School
1001 N Josey Lane
Lewisville, Texas**

May 15, 2024

Ensolum Project No. 01A1288201

Prepared for:

**Lewisville Independent School District
1597 S Edmonds Lane
Lewisville, Texas 75067**

May 15, 2024

Lewisville Independent School District
1597 S Edmonds Lane
Lewisville, Texas 75067
Attn. Mr. David Treadway

Re: **Indoor Air Quality Survey**
Memorial Elementary School
1001 N Josey Lane
Lewisville, TX 75067
Ensolum Project Number: 01A1288201

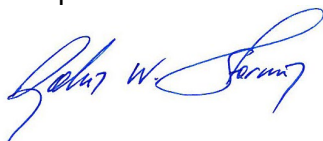
Ensolum, LLC was retained to perform an Indoor Air Quality Survey within selected areas of Memorial Elementary School located at 1001 N Josey Lane in Lewisville, Texas.

Ensolum, LLC appreciates this opportunity to be of service and looks forward to our continued work together. Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Darren G Bowden".

Darren G Bowden
Principal

A handwritten signature in blue ink, appearing to read "Robert W. Storment".

Robert W. Storment, CIH, CHMM
Senior Technical Review

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INDOOR AIR QUALITY SURVEY

1.0 EXECUTIVE SUMMARY

Ensolum, LLC (Ensolum) was retained by Lewisville Independent School District (LISD) to perform an Indoor Air Quality Survey at Memorial Elementary School located at 1001 N Josely Lane in Lewisville, Texas. The scope of the survey was based on information provided by Mr. David Treadway of LISD.

It is Ensolum's understanding that the request for the survey was based on gas odor complaints within the gymnasium and gymnasium restroom/hallway areas. The sample locations were determined by Mr. David Treadway and consisted of the hallway adjacent to the gymnasium restrooms, gymnasium, and cafeteria.

2.0 INTRODUCTION

Ensolum, LLC (Ensolum) was retained by LISD to perform an Industrial Hygiene Survey. The scope of sampling and locations were determined by LISD and consisted of the following:

- Industrial Hygiene Sampling: Ensolum collected total Volatile Organic Compound (VOC) and Methane (CH₄) readings using three (3) Honeywell MultiRAE (Model 6228) monitors.

3.0 PROCEDURES

Mr. Nolan Domain performed the survey beginning at approximately 10:00 am on Monday, May 6, 2024 and retrieved the monitors at approximately 3:00 pm on Friday, May 10, 2024. Mr. David Treadway escorted Mr. Domain during the monitor placement. Mr. Domain performed a site visit on Wednesday May 8, 2024 to ensure the monitors were operating normally. Samples were collected using the following methods and media:

Ensolum collected volatile organic compound (VOC) and Methane (CH₄) readings using three (3) Honeywell MultiRAE (Model 6228) monitors. The monitors were programmed to take a reading every hour. The maximum readings collected per location/day are presented in the tables below:

Peak Sample Readings		
Gym Restroom Hallway		
MultiRae Serial No. 3858		
Date	CH ₄ (%LEL)	VOCs (ppm)
5/6/2024	0	0
5/7/2024	0	0
5/8/2024	0	0
5/9/2024	0	0
5/10/2024	0	0

Peak Sample Readings		
Gym		
MultiRae Serial No. 1324		
Date	CH ₄ (%LEL)	VOCs (ppm)
5/6/2024	0	0.2
5/7/2024	0	0.1
5/8/2024	0	0
5/9/2024	0	0
5/10/2024	0	0

Peak Sample Readings		
Cafeteria		
MultiRae Serial No. 8723		
Date	CH ₄ (%LEL)	VOCs (ppm)
5/6/2024	0	0.1
5/7/2024	0	0.1
5/8/2024	0	0.1
5/9/2024	0	0.1
5/10/2024	0	0.3

4.0 RESULTS

Methane is a colorless, odorless gas that is the main constituent of natural gas. Poor ventilation or plumbing/sewage leaks are typical sources for indoor methane. The Occupational Safety and Health Administration (OSHA) does not have a permissible exposure limit for methane. However, the National Institute for Occupational Safety and Health (NIOSH) recommends that workers should not be exposed to more than 1000 ppm (0.1%) of methane over an 8-hour period. NIOSH also recommends an airborne exposure limit of 100 ppm over a 10-hour work shift. No CH₄ levels were recorded during the sampling period.

Volatile Organic Compounds (VOCs) are a large group of carbon-based chemicals that easily evaporate at room temperature. They can be found in a wide array of products used in schools, including paints and lacquers, paint strippers, varnishes, cleaning supplies, air fresheners, pesticides, building materials, and furnishings. VOCs are released from products during both use and storage. VOCs can also be found in the exhaust from automobiles and fuel-burning furnaces. Some organic compounds create odors ranging from very faint to pungent. Others have no odor at all.

Individual VOCs often have regulatory standards. However, due to the potential for combined effect, the EPA has suggested 3,000 parts per billion/3 parts per million as a level above which odors or discomfort may be noted. Only low levels of VOCs or levels less than the instrument detection limit were encountered at any sampled locations and are within normal background levels for offices.

5.0 RECCOMENDATIONS

Based on the results, no further action is recommended at this time regarding VOCs and CH₄.

6.0 LIMITATIONS

This report was created to assist the client with administering their company policies and procedures and provide general direction and assistance with regulatory compliance, industry best practices, or a combination of both. If exposures are measured and identified in this report, it is the express responsibility of the client to communicate those hazards and respond appropriately. It is not Ensolum's responsibility to ensure that the client is in compliance with all applicable local, state, and federal regulations. This report has been created at the express request of LISD.

The protocols used are consistent with those exercised by other reputable consultants and based on current industry standards on projects of similar scope. No warranty, representation, or guarantee, expressed or implied, is included or intended in this report.