Project No. ASF23-037-00
June 14, 2023

12821 W. Golden Lane
San Antonio, TX 78249

PO Box 690287
San Antonio, TX 78269

**P** 210.699.9090
**F** 210.699.6426
TBPE Firm F-3257

**WWW.RKCI.COM**

Ms. Corrina Green
Associate Vice President
Office of Real Estate, Construction, and Planning
University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249

**RE: Indoor Air Quality Assessment**
**Institute of Texan Cultures**
**801 East Cesar E. Chavez Boulevard**
**San Antonio, Bexar County, Texas**

Dear Ms. Green:

Pursuant to your request on behalf of the University of Texas at San Antonio (CLIENT), **Raba Kistner, Inc. (RKI)** has completed an evaluation of indoor air quality (IAQ) conditions within the Institute of Texan Cultures (ITC) building, which is locally addressed at 801 East Cesar E. Chavez Boulevard within the City of San Antonio, Bexar County, Texas. On the basis of our communications and discussions with University of Texas at San Antonio (UTSA) staff members during an initial project meeting on May 11, 2023, the study scope was defined to include indoor air screening, sampling, and testing, as recommended to identify potential human-health concerns and facilitate recommendations to mitigate long-term exposure risks. In addition, the results from this survey were also compared to the air-quality criteria established by the American Alliance of Museums (AAM), which pertains to industry standards for museum curation. **RKI** engaged the services of AEHS, Inc. (AEHS), an environmental firm headquartered in San Antonio, Texas that specializes in indoor air quality studies and worker health and safety, to conduct the IAQ study as summarized herein. The following sections provide an overview of the IAQ assessment methods, findings, and recommendations.

A detailed discussion of the scope, methodology, and results of the IAQ study is presented in the attached technical report prepared by our sub-consultant, AEHS. The report was prepared for CLIENT and may not provide adequate information for other purposes or parties. If other parties wish to rely on this report, please have them contact us so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use of this information.

## SUMMARY OF IAQ ASSESSMENT RESULTS

### Study Methods

As requested by the UTSA, a directed IAQ study approach was adopted to address sources of air contaminants within common areas and within the area that houses the museum archives. The study was conducted by AEHS under the direction of Mr. Ronald Bishop, an experienced Certified Industrial Hygienist (CIH) certified with the American Board of Industrial Hygiene (i.e., ABIH No. 814, expiration December 1, 2025), with assistance from **RKI**.

On the basis of similar project experience pertaining to determining baseline conditions, a broad range of air sampling is typically appropriate to adequately assess potential IAQ concerns. On the basis of information developed in conjunction with our initial reconnaissance visit and Mr. Bishop's experience conducting similar assessments at hospital facilities and other workplace settings, it was proposed that the AEHS/**RKI** field team spend up to two days onsite performing visual assessments and air sample collection activities within the ITC building. Field assessment and sampling activities included the following primary elements. The locations of respective indoor air sample stations within the ITC building are presented on ***Appendix A – Diagram*** within the attached survey report.

- Collect 12 representative air samples (for laboratory analysis) for 25 volatile organic compounds (VOCs) that are commonly associated with IAQ concerns using passive dosimeters at four locations on each floor.

- Evaluate the presence of VOCs in air using a calibrated photoionization detector (PID) at 20 measurement stations established within the ITC building, and four outside stations. The interior sample stations included common areas, display areas, and within the areas that house archived materials and collections.

- Evaluate the presence of ultra-fine particles and/or other contaminants in the air (PM 2.5, 5, 10) and particle dosimetry at the same measurement stations discussed above with respect to VOC testing.

- Utilize real-time, direct-read air monitoring equipment to evaluate oxygen, relative humidity, temperature, Carbon Monoxide (CO), Hydrogen Sulfide, and Methane at the same measurement stations discussed above with respect to VOCs/particle testing.

The specific passive dosimeters referenced above were selected to detect the following 25 VOC analytes that represent contaminants commonly found in building and furniture products: 1,1,1-trichloroethane; 1-butanol; 4-phenyl cyclohexene; acetone; benzene; butyl acetate; chloroform; cyclohexanone; ethylacetate; ethyl alcohol; ethylbenzene; heptanes; hexane; isopropyl alcohol; methyl alcohol; methyl ethyl ketone; methyl isobutyl ketone; methyl methacrylate; methylene chloride; perchloroethylene; styrene; tetrahydrofuran; toluene; trichloroethylene; and total xylenes.

**Study Results and Recommendations**

Data collection activities (passive dosimeters and direct-read measurements) within the ITC building were conducted on May 18 and 19, 2023, with passive dosimeters left in place for approximately 24 hours. As described in the preceding section, the IAQ study included an assessment of real-time indoor air measurements for targeted constituents that could pose a concern with respect to worker health and safety or general comfort (i.e., particulates, carbon dioxide, carbon monoxide, methane, hydrogen sulfide and VOCs, ventilation, mold spores, ozone, nitrogen dioxide, and Formaldehyde/Acetaldhyde. IAQ study results were generally considered with respect to permissible exposure limits (PELs) defined by OSHA that are defined to be protective of worker safety in addition to other indoor air threshold values established by the Leadership in Energy and Environmental Design (LEED) program that are used in conjunction with their building certification process and intended to promote a "healthy" worker environment. The AAM

now relegates and references the criteria for indoor air to other organizations as referenced in the attached report.

A detailed discussion of study findings and tabulated air-quality measurements are provided in the attached AEHS report, but salient study findings are summarized below:

- In general, housekeeping within the ITC building was observed to be good with no perceptible odors other than those associated with archived materials. It was noted that some mechanical rooms and storage areas needed housekeeping attention (i.e., vacuuming, organizing, dusting).

- Particle dosimetry indicated a reduction of air particles (dust) within the ITC building when compared to measurements collected outside. The PM10 measured interior mean was 38.52 µg/$m^3$ on referenced sampling day, which is below the LEED requirement of 50 µg/$m^3$.

- Carbon dioxide readings were within the expected concentrations for an indoor environment ranging from 415 to 800 parts per million (ppm) with a mean of 500.2 ppm. These values are well below the OSHA PEL of 5,000 ppm. Worker exposure to levels below 1,000 ppm in indoor air is generally considered to be favorable. Minor detections of nitrogen dioxide (<0.0083) were detected, but well below the OSHA PEL of 5.0 ppm.

- No carbon monoxide or hydrogen sulfide was detected within the ITC building.

- Nine of the 12 passive dosimeter results for Formaldehyde/Acetaldyde were above the detection limit of 0.0035 ppm (i.e., measured concentrations ranging from 0.0037 to 0.0068 ppm). The LEED limit is 70 ppm and the OSHA PEL is 200 ppm.

- Analyses of the 25 additional VOC constituents sampled by passive dosimetry were non-detect or more than an order of magnitude below the OSHA PELs or LEED levels. As indicated, in the attached report, the following VOC constituents were detected: acetone (0.007 ppm; OSHA PEL 1000 ppm, no LEED level) and isopropyl alcohol (0.0047 to 0.0081 ppm, OSHA 400 ppm, LEED 3.5 ppm).

- No hydrogen sulfide or methane was detected indicating that sewer gasses are not entering the building. Minor concentrations of methane were detected ranging from 1 to 4 ppm within the archives and collections room on the 3rd floor which could indicate the presence of initial deterioration.

- The American Institute for Conservation (AICs) “Environmental Guidelines: Museum Climate in a Changing World” (accessed April 4, 2022), concluded that a relative humidity of 50% +/- 5% should be maintained with a temperature of 70°F +/- 2%. The recommended relative humidity was exceeded at nine locations and the recommended temperature of 70 °F +/- 2% was exceeded at eleven locations within the building.

Based on the collective IAQ data generated as part of this study, indoor air quality conditions were not identified to pose an exposure concern for workers. The data results confirm that indoor air quality conditions within the worker breathing zone meet or exceed standards established by LEED and OSHA that are intended to promote a healthy workplace environment. On the basis of study findings, **RKI** and AEHS offer the following recommendations:

- Ensure that all occupants have access to the results of this study.
- Recommend that local relative humidity and temperature control continue and be expanded to all critical areas that contain archived materials.
- Ensure all filters for the Heating Ventilation Air Conditioning systems are properly sized and changed on a scheduled basis. Consider including 100 cfm negative air machines in critical areas. The units must contain high-efficiency particulate air (HEPA) filtration and should be placed in the recirculation mode.
- Consider installing charcoal filtration on the supply air diffusers to remove trace levels of VOCs.

**CLOSING**

We appreciate the opportunity to provide assistance to UTSA in this matter. If you have any questions regarding the information presented herein, please contact either of the undersigned at (210) 699-9090.

Very truly yours,

**RABA KISTNER, INC.**

Brian D. Strye
Environmental Project Manager

Richard V. Klar, P.G.
Vice President

BDS/RVK/srw

Attachment

Copies Submitted: Above (1 Electronic PDF Copy)

# APPENDIX A

# AEHS INDOOR AIR QUALITY REPORT

# Indoor Air Quality
# Special Study


# Institute of Texan Cultures

**Prepared**
**for**
**Raba Kistner, Inc.**
**On behalf of the University of Texas**
**at**
**San Antonio**

*by*
*AEHS, Inc.*
**4402 Center Gate**
**San Antonio, Texas 78217**
**(210) 656-9300**
**www.aehs-sa.com**

# Indoor Air Quality Special Study
# Institute of Texan Cultures
# 801 East Cesar E. Chavez Blvd.
# San Antonio, Texas 78205

### University of Texas at San Antonio

## Preface

*Indoor Air Quality (IAQ) has received considerable attention in the past; however, the majority of the attention was directed at comfort of the occupants. This was particularly true in the distant past when energy efficient buildings were constructed or older building remodeled to save heating and cooling costs. Terms such as "Sick Building Syndrome", "Tight Building Syndrome", "Sick House", and "Sick Schools" have become vogue. Currently, more attention is being paid to the health aspects that have resulted in many physical and psychological symptoms. This coupled with the realization that hypersensitive persons may have multiple chemical sensitivities and are in fact suffering from an illness have led to both research and applied studies. Additionally, there appears to be more allergic reactions to various microorganisms, such as fungi, than in the past.*

*Collection Materials are even more sensitive than individuals to adversity, without regard to the substrate – paper, wood, cloth, parchment, leather, film or other cellulose based photographs, and metal – from environmental concerns. While temperature and relative humidity appear to be the primary focus concerning the preservation of archival materials, other environmental issues such as fungi, particle deposition, and chemicals can hasten the deterioration and breakdown of the aforementioned substrates.*

## Executive Summary

A directed indoor air quality study was performed at numerous locations within the Institute of Texan Cultures.

It was determined that measurements/sampling would occur for the following: Dust (Particle Dosimetry, and Particulate Matter 1.0, 2.5, 5, and PM-10), Carbon Dioxide, Carbon Monoxide, Surface and Air Sampling, Formaldehyde, Hydrogen Sulfide, Methane, Mold, Oxygen, Volatile Organic Compounds, and Temperature and Relative Humidity Measurements. The rationale and explanation are provided within the body of this report.

In the past, the American Alliance of Museums and other institutional entities associated with archival collections such as the Northeast Document Conservation Center; the American Society of Heating, Refrigerating and Air-Conditioning Engineers; the American Institute for Conservation Green Resources Sustainable Practices for Conservation; the American Institute for Conservation; etc. have pursued central HVAC systems with zonal controls. However, this has been extremely difficult to achieve due to open display areas, multiple systems, and

multiple requirements; therefore, recently there has been a trend for localized control for temperature and humidity. It should be noted that the AAM now relegates and references the criteria for indoor air to other organizations.

The overall appearance of the facility was very good and there were no perceptible odors – other than normally found with archival materials – with the exception of within some mechanical and non-archival storage areas.

Based on the measurements performed in this investigation, there does not appear to be a significant Indoor Air Quality (IAQ) issue concerning archival material.

There were areas where the temperature and humidity exceeded recommended levels.

Notwithstanding, that no concerning negative findings existed, there is always room for improvement; therefore, the following recommendations are made:

- Replace all water stained ceiling after repairing the cause of the water intrusion.
- Ensure all filters in the HVACs are properly sized and changed on a scheduled basis.
- Move away from large HVAC systems with untenable zonal controls to individual room controls as recommended by ASHRAE.
- Consider installing charcoal filters in critical areas.
- Consider installing negative air machines, with HEPA filters, in the critical areas and use in the recirculation mode to scrub (cleanse) the air.

## 1.0 INTRODUCTION.

**1.1. General.** In general, indoor air quality problems can occur in all types and ages of buildings; in newly constructed buildings; in renovated or remodeled buildings; and in old buildings. The buildings may be private residences, multi-storied office buildings, healthcare facilities, or industrial complexes. Problems in new, clean buildings are rarely related to microbial growth, since the physical structures are new; however, this may not hold true if the building materials were allowed to be exposed to weather and then not adequately dried prior to installation or the drainage around a new construction is not sufficient. On the other hand, the use of new building materials and/or furnishings may lead to off-gassing of chemicals in the glues, materials, or product itself. Older buildings that have not been properly maintained and operated may have problems with bioaerosols if parts of the building have been allowed to become reservoirs for microbial growth. Also, if inadequate outside air is provided, regardless of the age of the building, chemical and biological contaminants will build up to levels that can cause health effects in some occupants and certainly damage archival materials. This occurs by chemical reactions that lead to the formation of acids from pollutants from not only the building materials but also outside sources such as vehicular

exhaust products of combustion. It should be noted that that the literature is replete with documentation that suggests sudden changes in humidity will cause structural substrate damage with the resultant overall hastening of deterioration.

## 1.2. Chemicals.

**1.2.1.** Most of the health effects associated with indoor environments are concentrations of pollutants, which are much less than the OSHA Permissible Exposure Levels (PELs) (29 CFR 1910.1000). It is important to point out that the PELs are chemical-specific standards that are not only based on health effects but also on technological feasibility, cost restraints and a "healthy" worker exposed for a 40-hour work week. In the industrial workplace, hazards are minimized by the use of administrative and engineering controls and the use of personal protective equipment. The non-industrial environment, however, does not have these controls. Therefore, some professionals suggest the levels for routine non-industrial exposures should be 1/10 of the PEL. The establishment of the LEED® building certification process includes Indoor Air Quality as one of the seven topics where points can be accumulated. To this end, AEHS, Inc. will use the LEED® criteria to assist in the establishment of the quality of the indoor air.

**1.2.2.** In an office environment, the chemical exposures are associated with cleaning and janitorial compounds; air fresheners; personal items such as perfume, cologne, hair spray, after shave lotion, etc; paints; and other coatings (varnish, shellac, etc.). Also, office furnishings and office equipment such as printers, facsimiles, and copiers can produce carbonaceous ultrafine particles and are a source of irritation. Generally, sampling for Volatile Organic Compounds (VOCs) is undertaken in an office environment to determine potential contaminants. However, it is important to differentiate the VOCs when possible and not just group off gassing together as VOCs.

**1.2.3.** General non-industrial ventilation systems [such as office and home Heating, Ventilating, and Air Conditioning (HVAC)] are designed only to remove occupant-generated contaminants, such as carbon dioxide and odors, and provide tempered air for comfort. These types of systems are not designed to dilute multiple point sources of contaminants that are typically found in non-industrial workplaces. Unless adequate ventilation and source controls are utilized and adequately maintained, many of the chemical contaminants can concentrate to levels that induce symptoms. The possibility exists that synergistic effects occur, this is particularly true with high levels of carbon dioxide. There is evidence that high levels (greater than 1000 parts per million - ppm) of carbon dioxide exacerbate other problems. The source of the carbon dioxide is the exhaled air of occupants and the PEL is 5000 ppm. In addition to the exacerbation potential, measuring carbon dioxide is often a surrogate for effectiveness of the ventilation system to provide sufficient outside make-up air. This is precisely why the multiple consensus standard organizations are moving toward localized control for the storage of critical items and centralized systems for the display areas. In fact, the most recent guidance suggests that the minimum of outside air for occupants should be used.

**1.2.4.** Microbial Volatile Organic Compounds (MVOCs) are beginning to be used by IAQ investigators as indicators of microbial contamination. There are two primary reasons for addressing MVOCs production in buildings. First, to determine if any toxic levels are produced in sufficient amount to affect human health and second, to "fingerprint" a particular organism based on the MVOCs spectrum. Improved techniques for the collection and analyses of MVOCs are currently and continuously being developed. In the case of archival materials, the fungi themselves as well as the MVOCs may cause damage.

## 1.3. Comfort Balance.

**1.3.1.** Not only is there an increase in the variation of chemical sensitivity, but there is a wide variation in temperature and humidity comfort zones for different individuals. Experience indicates that occupant comfort complaints constitute a large portion of IAQ complaints. If occupants are too cold, too hot, too damp, or too dry, they consider the environment uncomfortable; therefore, they experience an IAQ problem.

**1.3.2.** The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) provides guidance as to the proper combination of temperature and humidity to provide for effective temperatures that are comfortable. The comfort temperature range is 65 $^{o}$ to 75$^{o}$ F. However, there are disagreements between researchers, architects, engineers, and health professionals concerning the recommended levels of humidity. Notwithstanding, the general consensus is that for biological activity to occur, the building surfaces must be above sixty (60) percent humidity. Typically, the humidity on building material surfaces will be approximately 10 – 15% less than the relative humidity in a space; however, the majority of the IAQ investigators still recommend spatial relative humidity levels to be below sixty (60) percent to ensure that surface humidities remain below sixty (60) percent. Notwithstanding, empirical data in south Texas indicates that it is necessary to keep the relative humidity near 50% to inhibit mold amplification indoors.

**1.3.3.** The American Institute for Conservation (AIC)'s "Environmental Guidelines: Museum Climate in a Changing World" (accessed 4 April 2022), concluded that a relative humidity of 50% +/- 5% should be maintained with a temperature of 70°F +/- 2%. ASHRAE suggests 45% relative humidity while the Northeast Document Conservation Center discusses monitoring in detail, it does not provide prescriptive guidance.

## 1.4. Particulates.

**1.4.1. Particles.** Particles greater than 1 micron are often the cause of irritation and can exacerbate other problems particularly when associated with low humidities. Generally, larger particulates are a source of contamination that is often associated with the lack of proper filtering of re-circulated and make-up air. Accurate portable particle counters for very small particles are relative new technology that allows for direct comparisons at various locations

within a facility. Additionally, elevated particulate levels in the 0.5 to 10 micron range, when compared to the outside, could indicate potential mold growth.

**1.4.2. Particulate Matter.** Airborne particulate matter (PM) is not a single pollutant, but may be a mixture of many chemical species. It is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape and chemical composition, and may contain inorganic ions, metallic compounds, elemental carbon, organic compounds, and compounds from the earth's crust. This also means that the particulates may contain small amounts of acids. Particles are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less (PM10) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM2.5). Therefore, PM2.5 comprises a portion of PM10. However, based on the instrumentation, information for PM0.5, PM1.0, and PM5, was collected as well as PM2.5 and PM10.

## 2.0 BACKGROUND.

**2.1.** Mr. Brian Strye, Raba Kistner, Inc., on behalf of the University of Texas at San Antonio, contacted AEHS, Inc., concerning the potential need to conduct an Indoor Air Quality (IAQ) investigation. The concern was not associated solely with the occupants but with the archival material. A proposed approach was developed and accepted.

**2.2.** The investigation was under the overall direction of Ronald M. Bishop. Ron Bishop is a Certified Industrial Hygienist, a Certified Safety Executive, a Diplomate in Environmental Health, a Registered Environmental Professional and Environmental Manager, a Certified Environmental Safety Compliance Officer, a Texas Department of State Health Services (TDSHS) licensed Asbestos Consultant, a TDSHS Lead Risk Assessor and Lead Project Designer, a TDSHS licensed Mold Assessment Consultant, LEED® trained, and a Green Consultant.

**2.3.** AEHS is a TDSHS licensed Asbestos Consultant Agency, an Asbestos Phase Contrast Microscopy Laboratory, and an Asbestos Training Provider; a TDSHS licensed Lead Firm and Lead Training Provider; and a TDSHS licensed Mold Assessment Company and Mold Training provider.

**2.4.** All equipment used by AEHS has been calibrated to within the specifications required by the manufacturer and can be traced to the National Institute of Standards and Testing (NIST). Additionally, they were zeroed and/or had internal calibrations performed prior to testing.

**2.5.** All samples were collected at a height of three (3) to six (6) feet unless specific to the task which dictated otherwise.

## 3.0 APPROACH.

## 3.1. General.

It was determined that measurements/sampling would occur for the following: Dust (Particle Dosimetry and Particulate Matter 1.0, 2.5, 5.0, and PM-10), Carbon Dioxide, Carbon Monoxide, Aldehydes, Hydrogen Sulfide, Methane, Mold, Nitrogen Dioxide, Oxygen, Volatile Organic Compounds, and Temperature, and Relative Humidity Measurements. The rationale and explanation are iterated below if not described elsewhere.

**Particulates:**
Dosimetry - 0.3 micron, 0.5 micron, 1.0 micron, 2.5 microns, 5.0 microns, and10.0 microns. These measurements assist in the mold evaluations (spore sizes) as well general source identification. Discernment for 1.0, 2.5, 5, and 10 PM allows comparison to other criteria.

**Carbon Dioxide:**
Carbon dioxide measurements are used as a surrogate to determine if a sufficient or excess quantity of outside air is being provided. High levels of carbon dioxide can also exacerbate issues with other irritants within the workplace.

**Carbon Monoxide:**
The location of the facility is very near a main interstate highway, near a sports arena, and downtown; therefore, during time of thermal inversions, there is a high probability that vehicular traffic will contribute to elevated levels of carbon monoxide and other products of combustion.

**Formaldehyde:**
Passive Dosimetry for the analytes of formaldehyde (building material and furnishings off-gassing) and specifically the panel for acetaldehyde was used. Office furniture made of pressed wood may contain a residual of formaldehyde from the manufacturing process. Additionally, aldehydes are often associated with diesel powered internal combustion engines.

**Hydrogen Sulfide:**
Hydrogen sulfide is produced with rotting vegetation, decaying/decomposing sewage, and deterioration of cellulose and organic substrates.

**Methane:**
Methane is produced with rotting vegetation and decaying/decomposing sewage, and deterioration of cellulose and organic substrates.

**Nitrogen Dioxide:**
Oxides of Nitrogen are produced as products of combustion but readily transform to Nitrogen Dioxide; therefore, Nitrogen Dioxide levels were measured using passive dosimeters.

**Oxygen:**
Normal atmospheric oxygen ranges from 19.5 to 23.0 % while 21% is considered normal; however, oxygen deficiency can exist above 19.5% depending on other conditions. Oxygen was measured throughout.

**VOCs:**
The specific passive dosimeters were selected to detect twenty-five analytes (1,1,1-trichloroethane, 1-butanol, 4-phenyl cyclohexene, acetone, benzene, butyl acetate, chloroform, cyclohexanone, ethylacetate, ethyl alcohol, ethylbenzene, heptanes, hexane, isopropyl alcohol, methyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, methyl methacrylate, methylene chloride, perchloroethylene, styrene, tetrahydrofuran, toluene, trichloroethylene, and xylenes).

A direct reading Photoionization Detector (PID) was also used throughout the area. The PID provides total VOCs and does not differentiate.

**Ventilation:**
Limited discussions were held with the individuals responsible for operating the HVAC as well as site observations at a number of mechanical rooms.

**Temperature and Relative Humidity:**
Temperature and Relative Humidity measurements were made at all locations where particle dosimetry occurred.

**3.2.** The specific locations measured/sampled are depicted on the Diagram at Appendix A.

## 4.0 FINDINGS and DISCUSSIONS.

### 4.1. General Observations. Photographs are at Appendix B.

**4.1.1.** The overall appearance of the facility was very good; however, some mechanical rooms and storage areas need housekeeping attention.

**4.1.2.** There were no perceptible odors other than those associated with archival materials.

**4.1.3.** The sampling/measurements were performed on 18 and 19 May 2023 with the passive dosimeters left in place for approximately 24 hours.

### 4.2. Specifics.

#### 4.2.1. Particulates.

- The particulate data is at Appendix C with the statistics depicted in the Table 1, Page 8.

**Table 1**
**Particulates**
**(microns – counts)**

| Location | 0.3 | 0.5 | 1.0 | 2.5 | 5.0 | 10.0 |
|---|---|---|---|---|---|---|
| Outside Mean | 113,483 | 7,065 | 2,454 | 1,253 | 210 | 35 |
| Interior Mean | 18,420 | 1,360 | 435 | 269 | 83 | 30 |
| Outside Maximum | 120,485 | 8,387 | 2,561 | 1,253 | 241 | 44 |
| Interior Maximum | 27,771 | 2,221 | 1,133 | 810 | 232 | 101 |

- For the smaller particles, there was a magnitude reduction from the outside, however, the reduction in the larger sizes was significantly reduced and in some cases there were more larger particles in the interior.
- The particulate matter levels are shown in Table 2, below.

**Table 2**
**Particulate Matter**
**(µg/m$^3$)**

| Location | PM0.5 | PM1.0 | PM2.5 | PM5.0 | PM10.0 | Total |
|---|---|---|---|---|---|---|
| Exterior Mean | 3.36 | 4.91 | 10.99 | 41.54 | 82.64 | 98.82 |
| Interior Mean | 0.54 | 0.81 | 1.89 | 8.44 | 24.56 | 38.52 |

- The PM 10 LEED requirement being 50 µg/m$^3$. Therefore, the interior would have qualified as a "green building".
- The other Particulate Matter measurements are reflected in Appendix C.

### 4.2.2. Carbon Dioxide.

- The results of the direct reading measurements are at Appendix D.
- The carbon dioxide levels were unremarkable and what would be expected.

### 4.2.3. Carbon Monoxide.

- The results of the direct reading measurements are at Appendix D.
- The carbon monoxide levels were at zero (0) for all indoor measurements.
- Products of combustion from vehicles do not appear to be entering the interior environment; however, during a thermal inversion, the situation would most likely change. This is particularly probable because of the location near vehicular traffic.

### 4.2.4. Formaldehyde/Acetaldehyde.

- See Appendix E for the results of the passive dosimetry.
- Nine (9) of the twelve (12) passive dosimeter results were above the detection limit of 0.0035 ppm while the LEED limit is 70 ppm with the OSHA PEL being 200 ppm.
- Formaldehyde will react with other materials to create formic acid which is very destructive to collections; however, at the level measured within the ITC, it is likely that the impact is minimal.

### 4.2.5. Hydrogen Sulfide.

- The results of the direct reading measurements are at Appendix D.
- The hydrogen sulfide levels were at zero (0) for all measurements.
- Sewer gases do not appear to be entering the office environment.

### 4.2.6. Methane.

- The results of the direct reading measurements are at Appendix D.
- Some methane levels were detected in the storage areas albeit very low. Notwithstanding this could indicate the presence of the initial deterioration.

### 4.2.7. Nitrogen Dioxide.

- A few – three (3) – spot check samples were collected for nitrogen dioxide which were less than the detectable limit of 0.0083 ppm.

### 4.2.8. Volatile Organic Compounds (VOCs).

- See Appendix E, for the results of the passive dosimetry.
- The analyses of the twenty-five (25) analytes which were sampled via passive dosimetry – paragraph 3 above, were at or below the respective detectable limits with the exception of Isopropyl Alcohol in all samples and Acetone on the second floor east.
- All results were extremely low and would not impact personnel nor archival materials.
- The detected levels were multiple magnitudes below OSHA PELs.

### 4.2.9. Temperature and Relative Humidity.

- See Appendix F for a full table of the results.
- Table 3, Page 10, depicts the statistics for Temperature and Relative Humidity.

**Table 3**
**Temperature and Relative Humidity Statistical Summarization**

| Location | Mean | | Maximum | | Minimum | | Std Dev | |
|---|---|---|---|---|---|---|---|---|
| | Temp | RH | Temp | RH | Temp | RH | Temp | RH |
| Outside | 83.9 | 57.8 | 89.5 | 66.1 | 78.8 | 49.5 | 5.7 | 8.8 |
| Inside | 71.9 | 52.2 | 78.3 | 61.6 | 63.6 | 42.9 | 4.0 | 6.0 |

- The recommended 50% +/-5% was exceeded nine (9) times within the building.
- The recommended 70 °F +/- 2% was exceeded eleven (11) times within the building.

## 5.0 CONCLUSIONS.

**5.1.** Based on the measurements performed in this investigation, there does not appear to be an Indoor Air Quality (IAQ) issue even for an individual with a chemical sensitivity.

**5.2.** VOCs did not represent a concern for personnel nor archival material.

**5.3.** Maintenance and filter changing associated with the air handlers need attention. This may be the cause of the dirt on the supply diffusers and ceiling as depicted in the photographs.

**5.4.** The minimal presence of methane could indicate the initiation of deterioration of archival material.

**5.5.** Continue to move away from large HVAC systems with untenable zonal controls to individual room controls as recommended by ASHRAE.

**5.6.** The AAM now relegates and references the criteria for indoor air to other organizations as referenced herein.

## 6.0 RECOMMENDATIONS.

**6.1.** Ensure that all occupants have access to the results of this study.

**6.2.** Recommend that local relative humidity and temperature control continue and be expanded to all critical archival materials areas.

**6.3.** Replace all water stained ceiling after repairing the cause of the water intrusion.

**6.4.** Ensure all filters in the HVACs are properly sized and changed on a scheduled basis.

**6.5.** Consider including 100 cfm negative air machines in critical areas. The unit must contain HEPA filtration and placed in the recirculation mode.

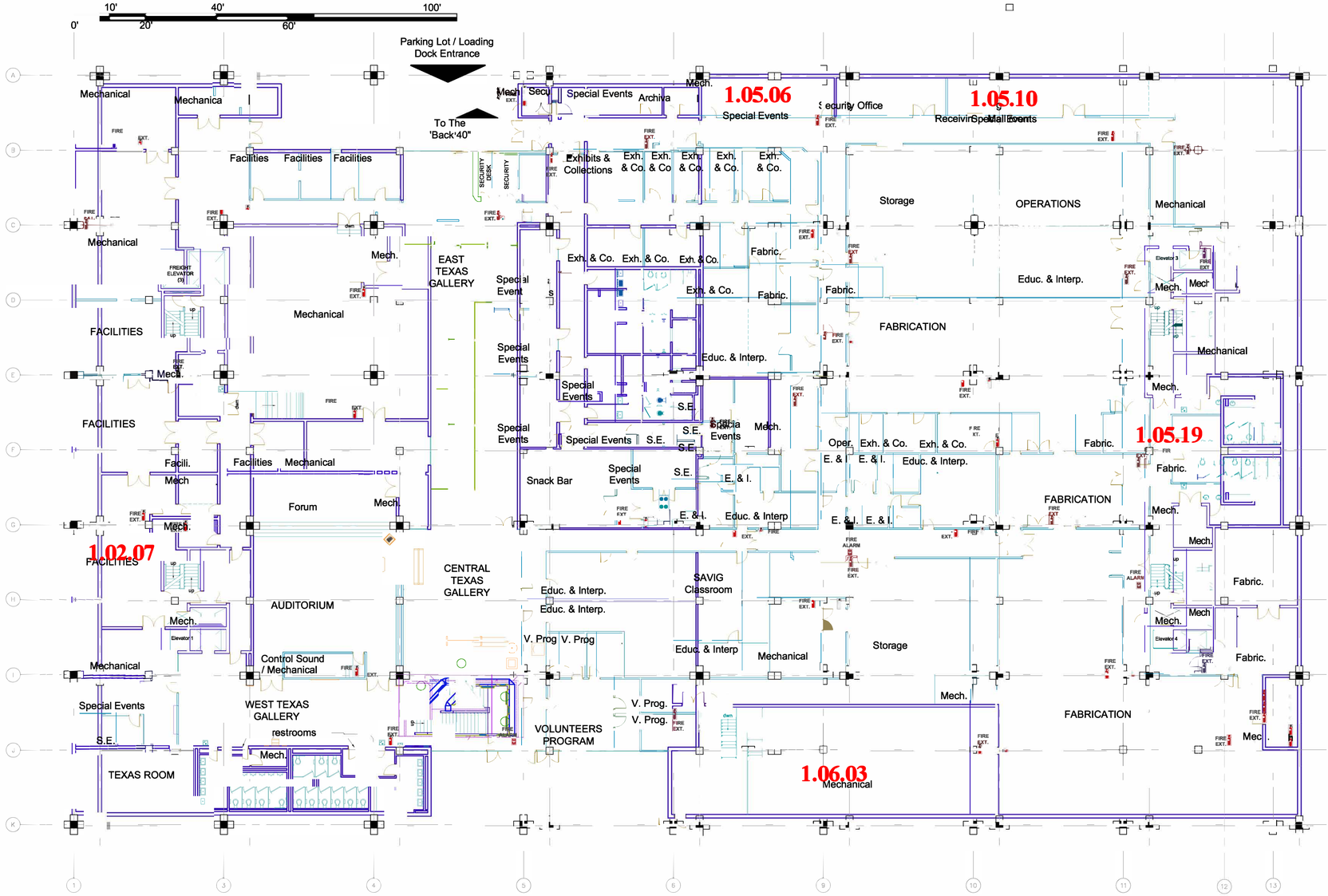
**6.6.** Consider installing charcoal filtration on the supply air diffusers to remove minute levels of VOCs.

## 7.0 DISCLAIMER.

This report of findings is given for the sole benefit of the aforementioned client (s). The client expressly confirms their understanding that the conclusions/recommendations stated in this report are limited to and based solely upon the scope of the assignment, and samples and field measurements taken. In addition, the client understands that any field observations contained herein reflect the conditions present on the date and time of inspection. No representations or warranties are made or may be implied as to the validity of their applicability to any other days or times.

Ronald M. Bishop, MPH, CIH
ABIH No. 814, Expiration December 1, 2025
8 June 2023

Appendix A
Diagram




1 ITC - FIRST LEVEL FLOOR PLAN (Lower Galleries)

SCALE : $\frac{1}{16}$"=1'-0"

TRUE NORTH

UTSA Institute of Texan Cultures

IN ASSOCIATION WITH THE SMITHSONIAN INSTITUTION

Submitted by:

Job Name & Number:

Issue/Delivery Dates:

Approval: Initial & date

Editor

Fabrication

Director

No corrections

Make corrections

Make corrections and submit new drawing

Client Review:

No corrections

Make corrections

Make corrections and submit new drawing

Date:

Signature:

Comments:

| Revision Date | Description | Initials |
|---|---|---|
| | | |

COMMENTS

INTERIM REVIEW DOCUMENTS

THE DESIGN DOCUMENTS DEPICTED HEREIN ARE INCOMPLETE AND MAY NOT BE USED FOR REGULATORY APPROVAL, PERMIT OR CONSTRUCTION

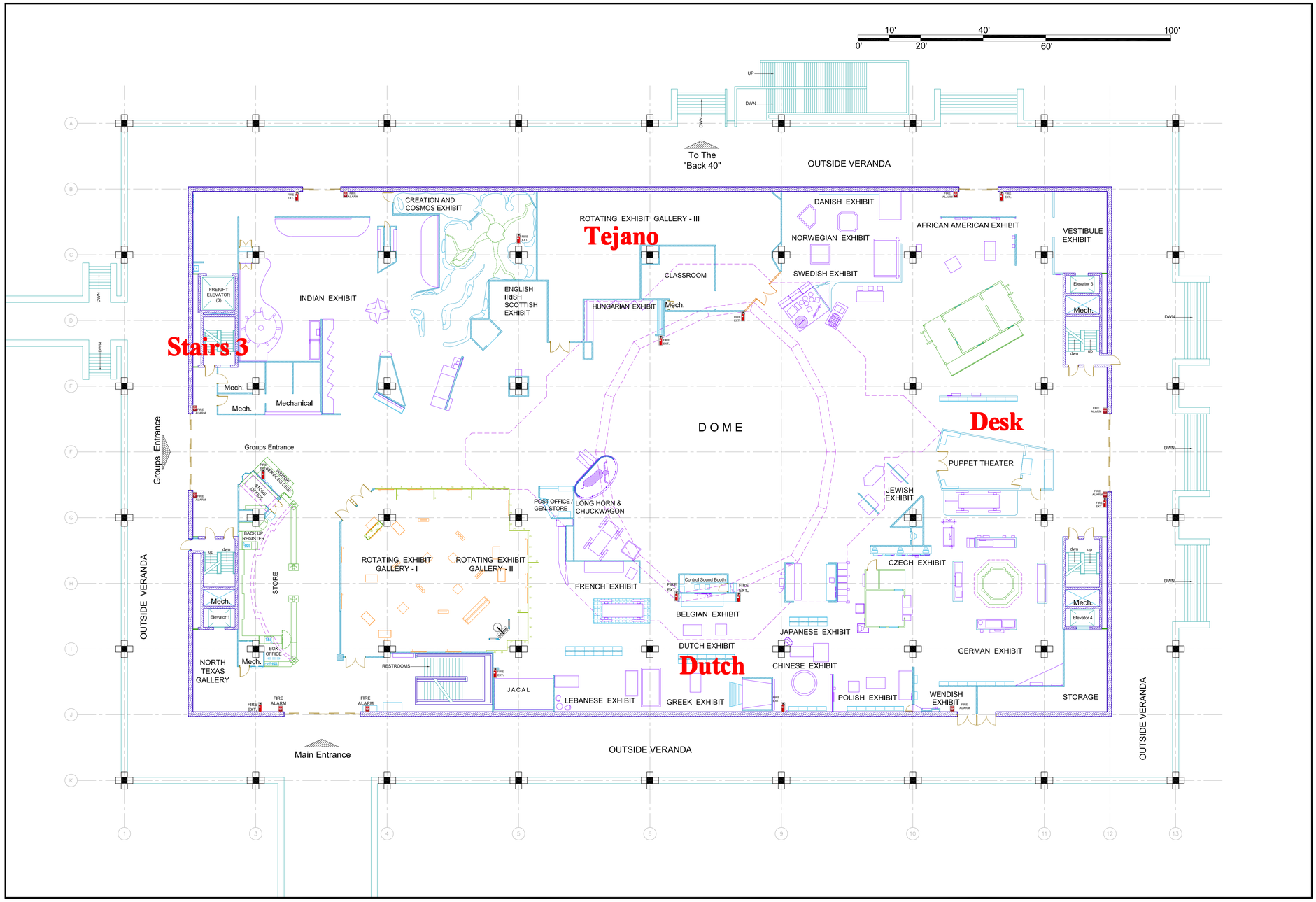
UTSA - ITC

Drawn by:

C.P.P. (Jun-03-2010)

Sheet title: ITC - FIRST LEVEL FLOOR PLAN

Sheet No.: A-01




1 ITC - SECOND LEVEL FLOOR PLAN (Ehibit Floor)

SCALE : 1/16"=1'-0"

TRUE NORTH

UTSA® Institute of Texan Cultures
IN ASSOCIATION WITH THE SMITHSONIAN INSTITUTION

Submitted by:

Job Name & Number:

Issue/Delivery Dates:

Approval: Initial & date

- ☐ Editor
- ☐ Fabrication
- ☐ Director

- ☐ No corrections
- ☐ Make corrections
- ☐ Make corrections and submit new drawing

Client Review:

- ☐ No corrections
- ☐ Make corrections
- ☐ Make corrections and submit new drawing

Date:

Signature:

Comments:

| Revision Date: | Description | Initials |
|---|---|---|
| | | |

COMMENTS

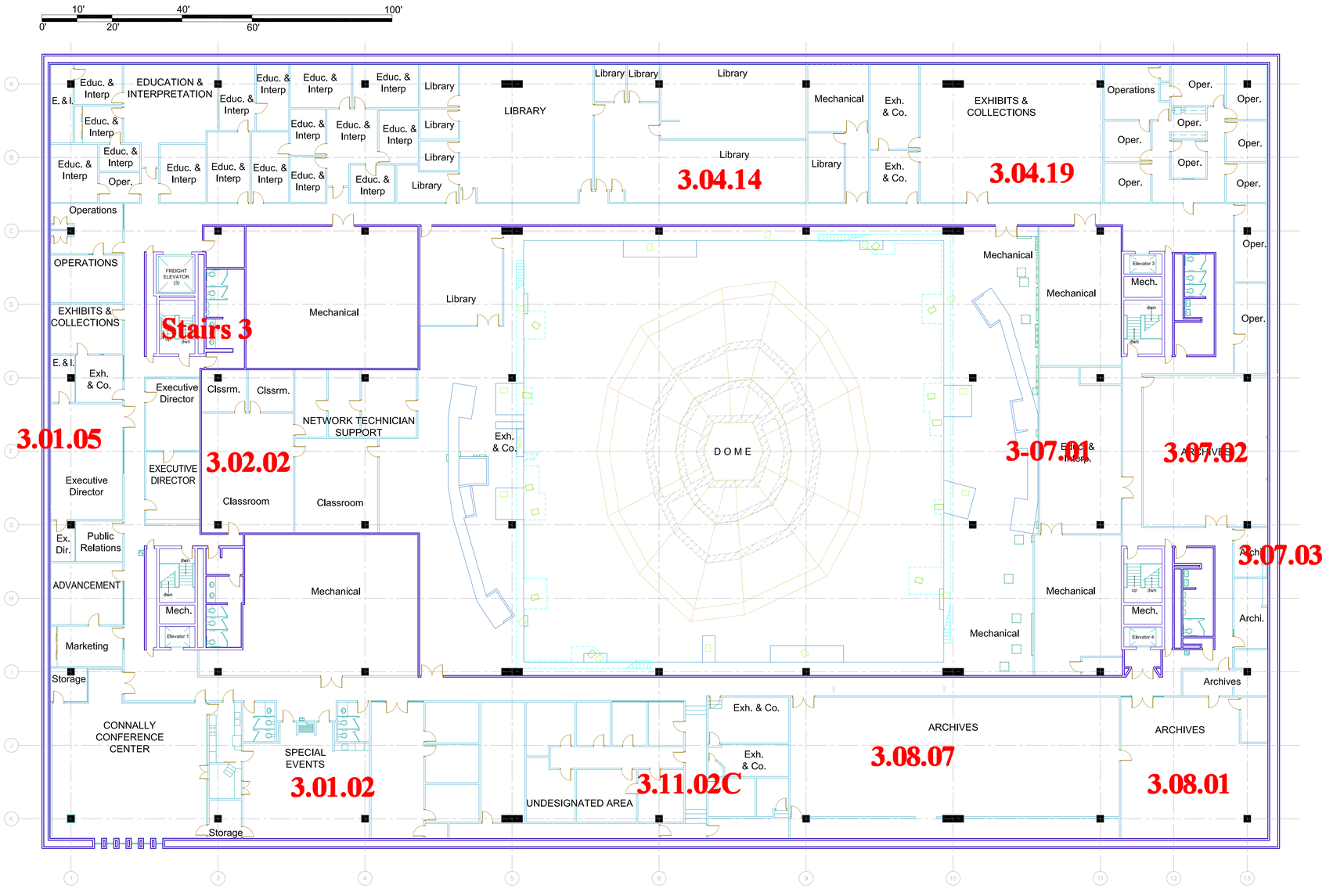
**INTERIM REVIEW DOCUMENTS**

THE DESIGN DOCUMENTS DEPICTED HEREIN ARE INCOMPLETE AND MAY NOT BE USED FOR REGULATORY APPROVAL, PERMIT OR CONSTRUCTION
UTSA - ITC

Drawn by:
C.R.P. (Jun-03-2010)

Sheet Title: ITC - SECOND LEVEL FLOOR PLAN

Sheet: A - 02




1 ITC - THIRD LEVEL FLOOR PLAN (Offices & Dome)

SCALE : 1/16"=1'-0"

UTSA Institute of Texan Cultures
IN ASSOCIATION WITH THE SMITHSONIAN INSTITUTION

Submitted by:

Job Name & Number:

Issue/Delivery Dates:

Approval:

Initial & date

- Editor
- Fabrication
- Director
- No corrections
- Make corrections
- Make corrections and submit new drawing

Client Review:

- No corrections
- Make corrections
- Make corrections and submit new drawing

Date:

Signature:

Comments:

| Revision Date: | Description | Initials |
|---|---|---|
| | | |

COMMENTS

**INTERIM REVIEW DOCUMENTS**

THE DESIGN DOCUMENTS DEPICTED HEREIN ARE INCOMPLETE AND MAY NOT BE USED FOR REGULATORY APPROVAL, PERMIT OR CONSTRUCTION
UTSA - ITC

Drawn by:
C.R.P. (Jun-03-2010)

Sheet Title: ITC - THIRD LEVEL FLOOR PLAN

Sheet: A - 03

Appendix B
Photographs

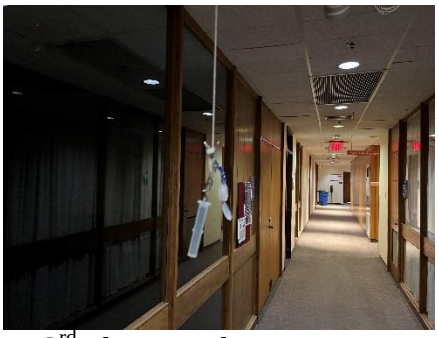
**Institute of Texan Cultures**
**801 East Cesar Chavez Blvd.**
**San Antonio, Texas**

1. 1st Floor North


2. 1st Floor South


3. 2nd Floor East

4. 1st Floor West



5. 3rd Floor North

6. 3rd Floor East

7. Room 3.02.04, Dirt and limited mold

8. Room 3.02.04, Dirt

9. Deposit Library, Water Stain

10. AH 1, Improperly seated filters

11. AH 1, Too heavy laden before changing

12 AH 1, Not properly maintained

# Appendix C
# Particulates

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Instrument Model: HH 3016 IAQ | | | | | | | | | |
| 2 | Instrument Serial #: 200944001 | | | | | | | | | |
| 3 | Downloaded On: 5/21/2023 10:19:31 | | | | | | | | | |
| 4 | Particle Data: Differential | | | | | | | | | |
| 5 | Particle Density: 2.500 g/ml | | | | | | | | | |
| 6 | Data Duration: 5/18/2023 09:04:46 to 5/18/2023 10:47:27 | | | | | | | | | |
| 7 | Timestamp | Location | 0.3 micron | 0.5 micron | 1.0 micron | 2.5 micron | 5.0 micron | 10.0 micron | Temp | Rel Hum |
| 8 | | (Name) | (Counts) | (Counts) | (Counts) | (Counts) | (Counts) | (Counts) | (F) | (%) |
| 9 | 5/18/2023 09:04:46 | Outside East | 108396 | 7554 | 2360 | 1143 | 193 | 31 | 89.5 | 50.8 |
| 10 | 5/18/2023 09:08:48 | Outside North | 110758 | 7957 | 2509 | 1259 | 222 | 44 | 88.1 | 49.5 |
| 11 | 5/18/2023 09:11:55 | Outside West | 120485 | 8387 | 2561 | 1403 | 241 | 30 | 79.3 | 64.6 |
| 12 | 5/18/2023 09:15:41 | Outside South | 114292 | 7963 | 2385 | 1208 | 187 | 35 | 78.8 | 66.1 |
| 13 | | Average | 113482.75 | 7965.25 | 2453.75 | 1253.25 | 210.75 | 35.00 | | |
| 14 | | Maximum | 120485.00 | 8387.00 | 2561.00 | 1403.00 | 241.00 | 44.00 | | |
| 15 | | Minimum | 108396.00 | 7554.00 | 2360.00 | 1143.00 | 187.00 | 30.00 | | |
| 16 | | | | | | | | | | |
| 17 | 5/18/2023 09:20:44 | 1st Floor East(1.02.07) | 23753 | 1693 | 408 | 235 | 74 | 33 | 73.9 | 48.6 |
| 18 | 5/18/2023 09:36:02 | 1st Floor North (1.06.03) | 13185 | 1577 | 596 | 390 | 136 | 62 | 78.3 | 47.9 |
| 19 | 5/18/2023 09:38:11 | 1st Floor West(1.05.19) | 17535 | 1245 | 152 | 14 | 0 | 0 | 77.8 | 44.2 |
| 20 | 5/18/2023 09:40:17 | 1st Floor South(1.05.010) | 19713 | 1368 | 215 | 46 | 8 | 3 | 75.8 | 46.6 |
| 21 | 5/18/2023 09:44:02 | 2nd Floor East, Dest/Doors | 24277 | 2071 | 844 | 640 | 202 | 62 | 72.4 | 59.0 |
| 22 | 5/18/2023 09:48:42 | 2nd Floor North, Tejano | 27771 | 2086 | 789 | 495 | 171 | 66 | 71.9 | 60.8 |
| 23 | 5/18/2023 09:51:16 | 2nd Floor East, Stairway 3 & 4 | 20078 | 1327 | 350 | 173 | 37 | 11 | 73.4 | 55.6 |
| 24 | 5/18/2023 09:54:29 | 2nd Floor South, Dutch | 21761 | 1681 | 506 | 338 | 104 | 24 | 72.4 | 58.0 |
| 25 | 5/18/2023 09:56:35 | 3rd Floor East, 3.01.05 | 20010 | 1365 | 329 | 193 | 51 | 22 | 72.9 | 56.1 |
| 26 | 5/18/2023 10:01:27 | 3rd Floor North, 3.04.14 | 22614 | 2221 | 1133 | 810 | 232 | 101 | 74.4 | 55.6 |
| 27 | 5/18/2023 10:04:18 | 3rd Floor West, 3.07.02 | 13486 | 945 | 379 | 265 | 90 | 38 | 73.9 | 46.9 |
| 28 | 5/18/2023 10:08:11 | 3rd Floor South 3.12.04C-1 | 12693 | 1127 | 510 | 545 | 191 | 51 | 70.0 | 46.6 |
| 29 | 5/18/2023 10:10:17 | 3rd Floor Deposit Room (3.07.02) | 10787 | 605 | 112 | 36 | 8 | 15 | 65.6 | 42.9 |
| 30 | 5/18/2023 10:12:46 | 3rd Floor (3.08.01) | 13992 | 1572 | 668 | 454 | 118 | 42 | 67.0 | 50.0 |
| 31 | 5/18/2023 10:15:10 | 3rd Floor (3.08.07) | 12451 | 743 | 151 | 26 | 7 | 2 | 63.6 | 49.2 |
| 32 | 5/18/2023 10:22:42 | Gov Dolth Briscoe Jr (3.12.08) | 18941 | 800 | 119 | 22 | 6 | 3 | 70.0 | 59.8 |
| 33 | 5/18/2023 10:35:43 | Collection (3.04.19) | 12402 | 664 | 142 | 76 | 24 | 15 | 65.6 | 47.7 |
| 34 | 5/18/2023 10:41:06 | Collection (3.02.04) | 25154 | 1513 | 392 | 168 | 49 | 15 | 70.5 | 61.6 |
| 35 | 5/18/2023 10:43:08 | Collection (3.02.02) | 23489 | 1797 | 695 | 353 | 113 | 32 | 75.3 | 57.2 |
| 36 | 5/18/2023 10:47:27 | Collection (3.07.01) | 14310 | 794 | 216 | 100 | 32 | 7 | 72.9 | 49.2 |
| 37 | | Average | **18420.10** | **1359.70** | **435.30** | **268.95** | **82.65** | **30.20** | 73.9 | 53.1 |
| 38 | | Maximum | **27771.00** | **2221.00** | **1133.00** | **810.00** | **232.00** | **101.00** | 89.5 | 66.1 |
| 39 | | Minimum | **10787.00** | **605.00** | **112.00** | **14.00** | **0.00** | **0.00** | 63.6 | 42.9 |
| 40 | | Standard Deviation | **5176.56** | **492.27** | **281.87** | **229.36** | **73.09** | **27.00** | 6.2 | 6.6 |

# Appendix D
# Direct Reading Instrument Results

## Direct Reading Instruments

| Location | Oxygen (%) | Methane (ppm) | Carbon Monoxide (ppm) | Hydrogen Sulfide (ppm) | Carbon Dioxide (ppm) | VOCs (ppb) |
|---|---|---|---|---|---|---|
| Outside East | 20.9 | 0 | 2 | 0 | 430 | 0 |
| Outside North | 20.9 | 0 | 3 | 0 | 436 | 35 |
| Outside West | 20.9 | 0 | 5 | 0 | 420 | 65 |
| Outside South | 20.9 | 0 | 4 | 0 | 415 | 0 |
| 1st Floor East (1.02.07) | 20.9 | 0 | 0 | 0 | 462 | 52 |
| 1st Floor North (1.05.06) | 20.9 | 0 | 0 | 0 | 806 | 0 |
| 1st Floor West (1.05.19) | 20.9 | 0 | 0 | 0 | 481 | 0 |
| 1st Floor South (1.06.03) | 20.9 | 0 | 0 | 0 | 460 | 0 |
| 2nd Floor East (Desk) | 20.9 | 0 | 0 | 0 | 460 | 0 |
| 2nd Floor North (Tejano) | 20.9 | 0 | 0 | 0 | 512 | 0 |
| 2nd Floor West (Stairway 3) | 20.9 | 0 | 0 | 0 | 480 | 0 |
| 2nd Floor South (Dutch) | 20.9 | 0 | 0 | 0 | 464 | 0 |
| 3rd Floor East (3.01.05) | 20.9 | 0 | 0 | 0 | 570 | 0 |
| 3rd Floor North (3.04.14) | 20.9 | 0 | 0 | 0 | 520 | 0 |
| 3rd Floor West (3.07.03) | 20.9 | 0 | 0 | 0 | 470 | 0 |
| 3rd Foor South (3.12.02C) | 20.9 | 1 | 0 | 0 | 502 | 7 |
| Deposit Lib East (3.07.02) | 20.9 | 0 | 0 | 0 | 517 | 1 |
| North (3.08.01) | 20.9 | 1 | 0 | 0 | 461 | 5 |
| West Archives (3.08.07) | 20.9 | 1 | 0 | 0 | 468 | 0 |
| South GOV Briscoe (3.12.08) | 20.9 | 0 | 0 | 0 | 450 | 8 |
| Collection (3.04.19) | 20.9 | 3 | 0 | 0 | 488 | 3 |
| Collection (3.02.04) | 20.9 | 4 | 0 | 0 | 463 | 18 |
| Collection (3.02.02) | 20.9 | 0 | 0 | 0 | 484 | 0 |
| Collection (3.07.01) | 20.9 | 0 | 0 | 0 | 486 | 0 |

**Interior Statistics Only**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Minimum** | **20.9** | **0** | **0** | **0** | **450** | **0** |
| **Maximum** | **20.9** | **4** | **0** | **0** | **806** | **52** |
| **Mean** | **20.9** | **0.5** | **0** | **0** | **500.2** | **4.7** |
| **Mode** | **20.9** | **0** | **0** | **0** | **460** | **0** |
| **Median** | **20.9** | **0** | **0** | **0** | **480.5** | **0** |
| **Standard Deviation** | **0.0** | **1.1** | **0.0** | **0.0** | **77.5** | **12.0** |

# Appendix E
# Passive Dosimetry Results

assay technology

**Lab Report**

*The Innovation & Value Leader in Occupational Hygiene Analysis*

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

Exposure results are the average concentration for the period of time monitored. '< ' means the result is 'less than the RptLmt'. RptLmt = Reporting Limit. The results relate only to the items tested. Unless noted below, samples were received in acceptable condition, all applicable quality control were within method specifications, lab blanks were subtracted before a result was reported, and any customer supplied field blanks were not subtracted from sample results. The molar volume at 25 C (24.45 L/mole) was used to calculate parts per million, ppm. Air concentrations reported are based upon field sampling information provided by the customer. For assistance with the content of this report, please visit the Customer Support section of our web site at http://www.assaytech.com or contact Technical Support at 1-800-833-1258. For details of significant method modifications go to www.assaytech.com/methmod.

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found | | | Sample | | Concentration | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Total | RptLmt | Units | Vol. (L) | Time (min) | Found | | Units |
| **23026068** | ATOH | 05/18/2023 | DEPOSIT LIBRARY 3.07.02 | 571A | 3H23 - QG12334 | FORMALDEHYDE | 0.13 | 0.10 | UG | 23.3 | 1440 | **0.0044** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026069** | ATOH | 05/18/2023 | 2ND FLOOR WEST | 571A | 3H23 - QG12361 | FORMALDEHYDE | 0.13 | 0.10 | UG | 23.3 | 1440 | **0.0046** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026070** | ATOH | 05/18/2023 | 3RD FLOOR EAST | 571A | 3H23 - QG12193 | FORMALDEHYDE | < | 0.10 | UG | 23.3 | 1440 | **<** | **0.0035** | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026071** | ATOH | 05/18/2023 | 1ST FLOOR SOUTH | 571A | 3H23 - QG12757 | FORMALDEHYDE | 0.20 | 0.10 | UG | 23.3 | 1440 | **0.0068** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026072** | ATOH | 05/18/2023 | 1ST FLOOR EAST | 571A | 3H23 - QG12652 | FORMALDEHYDE | 0.14 | 0.10 | UG | 23.3 | 1440 | **0.0049** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026073** | ATOH | 05/18/2023 | 1ST FLOOR WEST | 571A | 3H23 - QG13714 | FORMALDEHYDE | 0.14 | 0.10 | UG | 23.3 | 1440 | **0.0049** | | **PPM** |



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026074** | ATOH | 05/18/2023 | 3RD FLOOR NORTH | 571A | 3H23 - QG12473 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | < | 0.10 | UG | 23.3 | 1440 | < | **0.0035** | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026075** | ATOH | 05/18/2023 | 2ND FLOOR SOUTH | 571A | 3H23 - QG12202 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | 0.11 | 0.10 | UG | 23.3 | 1440 | **0.0039** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026076** | ATOH | 05/18/2023 | 2ND FLOOR EAST | 571A | 3H23 - QG12814 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | < | 0.10 | UG | 23.3 | 1440 | < | **0.0035** | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026077** | ATOH | 05/18/2023 | 1ST FLOOR NORTH | 571A | 3H23 - QG13037 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | 0.11 | 0.10 | UG | 23.3 | 1440 | **0.0037** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026078** | ATOH | 05/18/2023 | ARCHIVES 3.08.07-1 | 571A | 3H23 - QG12456 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | 0.11 | 0.10 | UG | 23.3 | 1440 | **0.0037** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026079** | ATOH | 05/18/2023 | 2ND FLOOR NORTH | 571A | 3H23 - QG13261 | | | | | | | | | |
| | | | | | | FORMALDEHYDE | 0.14 | 0.10 | UG | 23.3 | 1440 | **0.0050** | | **PPM** |
| Analyzed By: JZATCHOK | | | Analyzed On: 5/25/2023 | | Approved By: BEWING | Approved On: 5/31/2023 | | | | | | | | |
| **23026080** | ATOH | 05/18/2023 | 2ND FLOOR SOUTH | 525 | 2J23 - QF24636 | | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < | **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < | **0.0059** | **PPM** |



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026080** | ATOH | 05/18/2023 | 2ND FLOOR SOUTH | 525 | | | | | | | | | | |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < | **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < | **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < | **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < | **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < | **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < | **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < | **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < | **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.34 | 1.0 | UG | 96.8 | 1440 | **0.0056** | | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < | **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < | **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < | **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < | **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < | **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < | **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < | **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < | **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < | **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < | **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < | **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < | **0.0026** | **PPM** |

Analyzed By: MWAGNER Analyzed On: 5/24/2023 Approved By: KTAYLOR Approved On: 5/24/2023



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026081** | ATOH | 05/18/2023 | 2ND FLOOR NORTH | 525 | 2J23 - QF24601 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | < | 1.0 | UG | 96.8 | 1440 | < **0.0042** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026082** | ATOH | 05/18/2023 | 1ST FLOOR SOUTH | 525 | 2J23 - QF24380 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | < | 1.0 | UG | 96.8 | 1440 | < **0.0042** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026082** | ATOH | 05/18/2023 | 1ST FLOOR SOUTH | 525 | | | | | | | | | |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026083** | ATOH | 05/18/2023 | 1ST FLOOR EAST | 525 | 2J23 - QF23771 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | < | 1.0 | UG | 96.8 | 1440 | < **0.0042** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026083** | ATOH | 05/18/2023 | 1ST FLOOR EAST | 525 | | | | | | | | | |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026084** | ATOH | 05/18/2023 | 2ND FLOOR EAST | 525 | 2J23 - QF24504 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.15 | 1.0 | UG | 96.8 | 1440 | **0.0048** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026084** | ATOH | 05/18/2023 | 2ND FLOOR EAST | 525 | | | | | | | | | | |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < | **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < | **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < | **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < | **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < | **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < | **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < | **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | | |
| **23026085** | ATOH | 05/18/2023 | 1ST FLOOR WEST | 525 | 2J23 - QF24691 | | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < | **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < | **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < | **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < | **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < | **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < | **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < | **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < | **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < | **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < | **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.12 | 1.0 | UG | 96.8 | 1440 | **0.0047** | | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < | **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < | **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < | **0.0027** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026085** | ATOH | 05/18/2023 | 1ST FLOOR WEST | 525 | | | | | | | | | |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026086** | ATOH | 05/18/2023 | 2ND FLOOR WEST | 525 | 2J23 - QF24133 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.93 | 1.0 | UG | 96.8 | 1440 | **0.0081** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026086** | ATOH | 05/18/2023 | 2ND FLOOR WEST | 525 | | | | | | | | | |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026087** | ATOH | 05/18/2023 | DEPOSIT LIBRARY 3.07.02 | 525 | 2J23 - QF24954 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026087** | ATOH | 05/18/2023 | DEPOSIT LIBRARY 3.07.02 | 525 | | | | | | | | | |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.19 | 1.0 | UG | 96.8 | 1440 | **0.0050** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | |
| **23026088** | ATOH | 05/18/2023 | ARCHIVES 3.08.07-1 | 525 | 2J23 - QF24871 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026088** | ATOH | 05/18/2023 | ARCHIVES 3.08.07-1 | 525 | | | | | | | | | | |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < | **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < | **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < | **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < | **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < | **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.33 | 1.0 | UG | 96.8 | 1440 | **0.0056** | | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < | **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < | **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < | **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < | **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < | **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < | **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < | **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < | **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < | **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < | **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < | **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < | **0.0026** | **PPM** |
| Analyzed By: MWAGNER | | | Analyzed On: 5/24/2023 | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | | |
| **23026089** | ATOH | 05/18/2023 | 3RD FLOOR NORTH | 525 | 2J23 - QF24362 | | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < | **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < | **0.0059** | **PPM** |



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026089** | ATOH | 05/18/2023 | 3RD FLOOR NORTH | 525 | | | | | | | | | | | |
| | | | | | | ACETONE | < | | 2.0 | UG | 126 | 1440 | < | **0.0067** | **PPM** |
| | | | | | | BENZENE | < | | 0.40 | UG | 110 | 1440 | < | **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | | 3.0 | UG | 106 | 1440 | < | **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | | 0.60 | UG | 96.2 | 1440 | < | **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | | 2.0 | UG | 103 | 1440 | < | **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | | 10 | UG | 120 | 1440 | < | **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | | 0.50 | UG | 91.6 | 1440 | < | **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | | 0.50 | UG | 81.1 | 1440 | < | **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.15 | | 1.0 | UG | 96.8 | 1440 | **0.0048** | | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | | 0.80 | UG | 116 | 1440 | < | **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | | 0.70 | UG | 95.3 | 1440 | < | **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | | 1.0 | UG | 90.7 | 1440 | < | **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | | 3.0 | UG | 105 | 1440 | < | **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | | 6.5 | UG | 84.1 | 1440 | < | **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | | 0.90 | UG | 80.5 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | | 1.0 | UG | 103 | 1440 | < | **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | | 0.60 | UG | 87.7 | 1440 | < | **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | | 2.0 | UG | 95.6 | 1440 | < | **0.0031** | **PPM** |
| | | | | | | STYRENE | < | | 0.50 | UG | 84.1 | 1440 | < | **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | | 0.80 | UG | 112 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | | 2.0 | UG | 100 | 1440 | < | **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | | 2.0 | UG | 105 | 1440 | < | **0.0035** | **PPM** |
| | | | | | | XYLENES | < | | 1.0 | UG | 87.1 | 1440 | < | **0.0026** | **PPM** |

Analyzed By: MWAGNER Analyzed On: 5/24/2023 Approved By: KTAYLOR Approved On: 5/24/2023



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Project ID:* ITC
*PO No.:*

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026090** | ATOH | 05/18/2023 | 1ST FLOOR NORTH | 525 | 2J23 - QF24391 | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < **0.0059** | **PPM** |
| | | | | | | ACETONE | < | 2.0 | UG | 126 | 1440 | < **0.0067** | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | < | 1.0 | UG | 96.8 | 1440 | < **0.0042** | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < **0.0053** | **PPM** |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | < **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | < **0.0026** | **PPM** |



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyzed By: MWAGNER | | Analyzed On: 5/24/2023 | | | Approved By: KTAYLOR | Approved On: 5/24/2023 | | | | | | | | |
| **23026091** | ATOH | 05/18/2023 | 2ND FLOOR EAST | 525 | 2J23 - QF24802 | | | | | | | | | |
| | | | | | | 1,1,1-TRICHLOROETHANE | < | 3.0 | UG | 86.8 | 1440 | < | **0.0063** | **PPM** |
| | | | | | | 4-PHENYL CYCLOHEXENE | < | 3.0 | UG | 78.6 | 1440 | < | **0.0059** | **PPM** |
| | | | | | | ACETONE | 2.10 | 2.0 | UG | 126 | 1440 | **0.0070** | | **PPM** |
| | | | | | | BENZENE | < | 0.40 | UG | 110 | 1440 | < | **0.0011** | **PPM** |
| | | | | | | CHLOROFORM | < | 3.0 | UG | 106 | 1440 | < | **0.0058** | **PPM** |
| | | | | | | CYCLOHEXANONE | < | 0.60 | UG | 96.2 | 1440 | < | **0.0016** | **PPM** |
| | | | | | | ETHYL ACETATE | < | 2.0 | UG | 103 | 1440 | < | **0.0054** | **PPM** |
| | | | | | | ETHYL ALCOHOL | < | 10 | UG | 120 | 1440 | < | **0.044** | **PPM** |
| | | | | | | ETHYLBENZENE | < | 0.50 | UG | 91.6 | 1440 | < | **0.0013** | **PPM** |
| | | | | | | HEPTANE | < | 0.50 | UG | 81.1 | 1440 | < | **0.0015** | **PPM** |
| | | | | | | ISOPROPYL ALCOHOL | 1.62 | 1.0 | UG | 96.8 | 1440 | **0.0068** | | **PPM** |
| | | | | | | METHYL ETHYL KETONE | < | 0.80 | UG | 116 | 1440 | < | **0.0023** | **PPM** |
| | | | | | | METHYL ISOBUTYL KETONE | < | 0.70 | UG | 95.3 | 1440 | < | **0.0018** | **PPM** |
| | | | | | | METHYL METHACRYLATE | < | 1.0 | UG | 90.7 | 1440 | < | **0.0027** | **PPM** |
| | | | | | | METHYLENE CHLORIDE | < | 3.0 | UG | 105 | 1440 | < | **0.0082** | **PPM** |
| | | | | | | NAPHTHALENE | < | 6.5 | UG | 84.1 | 1440 | < | **0.015** | **PPM** |
| | | | | | | N-BUTYL ACETATE | < | 0.90 | UG | 80.5 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | n-BUTYL ALCOHOL | < | 1.0 | UG | 103 | 1440 | < | **0.0032** | **PPM** |
| | | | | | | n-HEXANE | < | 0.60 | UG | 87.7 | 1440 | < | **0.0019** | **PPM** |
| | | | | | | PERCHLOROETHYLENE | < | 2.0 | UG | 95.6 | 1440 | < | **0.0031** | **PPM** |
| | | | | | | STYRENE | < | 0.50 | UG | 84.1 | 1440 | < | **0.0014** | **PPM** |
| | | | | | | TETRAHYDROFURAN | < | 0.80 | UG | 112 | 1440 | < | **0.0024** | **PPM** |
| | | | | | | TOLUENE | < | 2.0 | UG | 100 | 1440 | < | **0.0053** | **PPM** |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | RptLmt | Units | Sample Vol. (L) | Time (min) | Concentration Found | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **23026091** | ATOH | 05/18/2023 | 2ND FLOOR EAST | 525 | | | | | | | | | | |
| | | | | | | TRICHLOROETHYLENE | < | 2.0 | UG | 105 | 1440 | **<** | **0.0035** | **PPM** |
| | | | | | | XYLENES | < | 1.0 | UG | 87.1 | 1440 | **<** | **0.0026** | **PPM** |

Analyzed By: MWAGNER Analyzed On: 5/24/2023 Approved By: KTAYLOR Approved On: 5/24/2023



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

*Project ID:* ITC
*PO No.:*

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found Total | Quantity Found RptLmt | Quantity Found Units | Sample Vol. (L) | Sample Time (min) | Concentration Found | Concentration Units |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Method References:

| TestCode | Analytes Requested | Method Reference | Regulatory Agency | TWA Limit | STEL Limit | Exposure Units |
|---|---|---|---|---|---|---|
| 71556A | 1,1,1-TRICHLOROETHANE | AT L-OV (GC/FID) | OSHA PEL | 350 | | PPM |
| 4994165A | 4-PHENYL CYCLOHEXENE | AT L-OV (GC/FID) | | | | |
| 67641A | ACETONE | AT L-OV (GC/FID) | OSHA PEL | 1000 | | PPM |
| 71432A | BENZENE | AT L-OV (GC/FID) | OSHA PEL | 1 | 5 | PPM |
| 67663A | CHLOROFORM | AT L-OV (GC/FID) | OSHA CEIL | | 50 | PPM |
| 108941A | CYCLOHEXANONE | AT L-OV (GC/FID) | OSHA PEL | 50 | | PPM |
| 141786A | ETHYL ACETATE | AT L-OV (GC/FID) | OSHA PEL | 400 | | PPM |
| 64175A | ETHYL ALCOHOL | AT L-OV (GC/FID) | OSHA PEL | 1000 | | PPM |
| 100414A | ETHYLBENZENE | AT L-OV (GC/FID) | OSHA PEL/NIOSH | 100 | 125 | PPM |
| 50000A | FORMALDEHYDE | MOD OSHA 1007 | OSHA PEL / STEL | 0.75 | 2 | PPM |
| 142825A | HEPTANE | AT L-OV (GC/FID) | OSHA PEL | 500 | | PPM |
| 67630A | ISOPROPYL ALCOHOL | AT L-OV (GC/FID) | OSHA PEL/NIOSH STEL | 400 | 500 | PPM |
| 78933A | METHYL ETHYL KETONE | AT L-OV (GC/FID) | OSHA PEL | 200 | | PPM |
| 108101A | METHYL ISOBUTYL KETONE | AT L-OV (GC/FID) | OSHA PEL | 100 | | PPM |
| 80626A | METHYL METHACRYLATE | AT L-OV (GC/FID) | OSHA PEL | 100 | | PPM |
| 75092A | METHYLENE CHLORIDE | AT L-OV (GC/FID) | OSHA PEL | 25 | 125 | PPM |
| 123864A | N-BUTYL ACETATE | AT L-OV (GC/FID) | OSHA PEL | 150 | | PPM |
| 71363A | n-BUTYL ALCOHOL | AT L-OV (GC/FID) | OSHA PEL/NIOSH CEIL | 100 | 50 | PPM |
| 110543A | n-HEXANE | AT L-OV (GC/FID) | OSHA PEL | 500 | | PPM |
| 91203A | NAPHTHALENE | AT L-OV (GC/FID) | OSHA PEL/NIOSH STEL | 10 | 15 | PPM |
| 127184A | PERCHLOROETHYLENE | AT L-OV (GC/FID) | OSHA PEL/CEILING | 100 | 200 | PPM |
| 100425A | STYRENE | AT L-OV (GC/FID) | OSHA PEL/CEILING | 100 | 200 | PPM |
| 109999A | TETRAHYDROFURAN | AT L-OV (GC/FID) | OSHA PEL | 200 | | PPM |
| 108883A | TOLUENE | AT L-OV (GC/FID) | OSHA PEL/CEILING | 200 | 300 | PPM |
| 79016A | TRICHLOROETHYLENE | AT L-OV (GC/FID) | OSHA PEL/CEILING | 100 | 200 | PPM |
| 1330207A | XYLENES | AT L-OV (GC/FID) | OSHA PEL/NIOSH STEL | 100 | 150 | PPM |

**Lab Work Order: 2023050825**

*Customer:* AEHS INC
*Attention:* RONALD BISHOP
*Address:* 4402 CENTERGATE ST
SAN ANTONIO, TX 78217
USA

*Phone No.:* (210) 656-9300
*Fax No.:* (210) 656-8499

*Project ID:* ITC
*PO No.:*

*Customer No.:* 46490
*Received Date:* May 22, 2023
*Date Reported:* May 31, 2023

| Lab Sample ID | Lab Code | Date Sampled | Client Sample ID | Media | Media Lot / Serial # | Analytes Requested | Quantity Found | | | Sample | | Concentration | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Total | RptLmt | Units | Vol. (L) | Time (min) | **Found** | **Units** |

Applicable OSHA PELs or NIOSH RELS have been included in this lab report for guidance, but may not be sufficient for regulatory compliance. Clients should be aware that more stringent international, state, local, or organizational exposure limits may supersede the limits included with this report. Visit www.OSHA.gov/dsg/annotated-pels for detailed information on exposure limits and OSHA policies.



AIHA LAP, LLC ACCREDITATION. LAB # 101728 (ATCA)
AIHA LAP, LLC ACCREDITATION. LAB # 100903 (ATOH)

1382 Stealth Street • Livermore, CA 94551 • (800) 833-1258 • FAX: (925) 461-7149
250 DeBartolo Place, Suite 2525 • Boardman, OH 44512 • (800) 833-1258 • FAX: (330) 758-1245

# Appendix F
# Temperature and Relative Humidity Results

| | A | B | C | D |
|---|---|---|---|---|
| 1 | Instrument Model: HH 3016 IAQ | | | |
| 2 | Instrument Serial #: 200944001 | | | |
| 3 | Downloaded On: 5/21/2023 10:19:31 | | | |
| 4 | Data Duration: 5/18/2023 09:04:46 to 5/18/2023 10:47:27 | | | |
| 5 | Timestamp | Location | Temperature | Relative Humidity |
| 6 | | (Name) | (F) | (%) |
| 7 | 5/18/2023 09:04:46 | Outside East | 89.5 | 50.8 |
| 8 | 5/18/2023 09:08:48 | Outside North | 88.1 | 49.5 |
| 9 | 5/18/2023 09:11:55 | Outside West | 79.3 | 64.6 |
| 10 | 5/18/2023 09:15:41 | Outside South | 78.8 | 66.1 |
| 11 | | Mean | 83.9 | 57.8 |
| 12 | | Maximum | 89.5 | 66.1 |
| 13 | | Minimum | 78.8 | 49.5 |
| 14 | | Standard Deviation | 5.7 | 8.8 |
| 15 | | | | |
| 16 | 5/18/2023 09:20:44 | 1st Floor East(1.02.07) | 73.9 | 48.6 |
| 17 | 5/18/2023 09:36:02 | 1st Floor North (1.06.03) | 78.3 | 47.9 |
| 18 | 5/18/2023 09:38:11 | 1st Floor West(1.05.19) | 77.8 | 44.2 |
| 19 | 5/18/2023 09:40:17 | 1st Floor South(1.05.010) | 75.8 | 46.6 |
| 20 | 5/18/2023 09:44:02 | 2nd Floor East, Dest/Doors | 72.4 | 59.0 |
| 21 | 5/18/2023 09:48:42 | 2nd Floor North, Tejano | 71.9 | 60.8 |
| 22 | 5/18/2023 09:51:16 | 2nd Floor East, Stairway 3 & 4 | 73.4 | 55.6 |
| 23 | 5/18/2023 09:54:29 | 2nd Floor South, Dutch | 72.4 | 58.0 |
| 24 | 5/18/2023 09:56:35 | 3rd Floor East, 3.01.05 | 72.9 | 56.1 |
| 25 | 5/18/2023 10:01:27 | 3rd Floor North, 3.04.14 | 74.4 | 55.6 |
| 26 | 5/18/2023 10:04:18 | 3rd Floor West, 3.07.02 | 73.9 | 46.9 |
| 27 | 5/18/2023 10:08:11 | 3rd Floor  South 3.12.04C-1 | 70.0 | 46.6 |
| 28 | 5/18/2023 10:10:17 | 3rd Floor Deposit Room (3.07.02) | 65.6 | 42.9 |
| 29 | 5/18/2023 10:12:46 | 3rd Floor (3.08.01) | 67.0 | 50.0 |
| 30 | 5/18/2023 10:15:10 | 3rd Floor (3.08.07) | 63.6 | 49.2 |
| 31 | 5/18/2023 10:22:42 | Gov Dolth Briscoe Jr (3.12.08) | 70.0 | 59.8 |
| 32 | 5/18/2023 10:35:43 | Collection (3.04.19) | 65.6 | 47.7 |
| 33 | 5/18/2023 10:41:06 | Collection (3.02.04) | 70.5 | 61.6 |
| 34 | 5/18/2023 10:43:08 | Collection (3.02.02) | 75.3 | 57.2 |
| 35 | 5/18/2023 10:47:27 | Collection (3.07.01) | 72.9 | 49.2 |
| 36 | | Mean | 71.9 | 52.2 |
| 37 | | Maximum | 78.3 | 61.6 |
| 38 | | Minimum | 63.6 | 42.9 |
| 39 | | Standard Deviation | 4.0 | 6.0 |