

August 8, 2019

Auraria Higher Education Center
Facilities Services
1200 7th Street
Denver, CO

Attention: Emily C. Sanders, MS, CHMM
Manager, Environmental, Health & Life Safety

Subject: Indoor Air Quality Evaluation
West Classroom Building
1050 10th Street
Auraria Campus
Denver, Colorado
Project No. DN50,119-230-L2

CTL | Thompson, Inc. was requested by Auraria Higher Education Center (AHEC) to observe conditions and gather air quality data in selected offices of the West Classroom Building of Metropolitan State University. At the request of AHEC, the offices that were the focus of investigation were on the second floor and included 239C, 239D, 239E and 239F. This letter presents a summary of our observations, readings, and sample results.

Initial Visit and Indoor Air Screening

On July 23, 2019, we visited the Site and observed general conditions. In the four subject offices, we did not observe obvious evidence of fungal growth on building materials, unusual staining, condensation, or other obvious sources of impairment to indoor air quality. Some low-level chemical odors, such as hand sanitizing gel, and markers and pens, were observed which we believe are typical of most office settings.

We obtained Indoor Air Quality (IAQ) readings for carbon dioxide (CO₂), carbon monoxide (CO), temperature and relative humidity (RH) using a TSI Model 7575-X handheld meter. Readings were also obtained outside the building to measure ambient conditions.

We also obtained readings on July 23, 2019 using a Micro-R meter which measures gamma radiation; a Photoionization Detector (PID) which detects numerous volatile organic compounds (VOCs) such as fuel indicators and industrial chemicals such as solvents; and a 4-gas meter which measures for hydrogen sulfide, oxygen, carbon monoxide and Lower Explosive Limit (LEL).

Our readings are summarized in Table I, attached. In general, our readings were



within expected ranges for an office environment, and in most cases were similar to outside conditions. CO₂ was found to be higher than outside, as would be expected in an office setting due to respiration, but were below 700 parts per million (ppm). This is well below 5000 ppm, a level considered “very high” by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). ASHRAE considers, for typical office buildings, steady-state CO₂ concentrations of about 700 ppm above outdoor air levels. Given the highest outdoor concentration was 383 ppm, then a goal or guideline would be 1083 ppm of CO₂ for indoor air quality in the West Classroom Building. Our readings were well below that threshold.

Our VOC readings were generally 0.0 ppm, with occasional readings of 0.1 ppm. In our experience, readings of up to 2.0 ppm in an office setting are not unusual, given the presence of custodial products, hand sanitizer, pens and markers, garments which may have been dry cleaned, and other factors.

Air Sampling

We performed indoor air sampling of the four offices. Simultaneously, other areas were sampled for control/comparison, and these included one of more of the following for various analytes: 239 (lobby/front desk area), 240U (conference room), and the roof (outside). Laboratory results are given in Attachment A.

Our sampling analytes and methods included:

- Total Volatile Organic Compounds (TVOC) using pre-cleaned, 24-hour summa canisters and USEPA Method TO-15;
- Aldehydes (including Formaldehyde) via passive badges (fiberglass coated with 2,4-dinitrophenylhydrazine), via National Institute of Occupational Safety and Health (NIOSH) Method 2016M;
- California Administrative Manual (CAM) 17 Metals using pumps affixed with mixed-cellulose ester (MCE) membrane filters with backup pad in a polystyrene cassette for 16 of the metals, and a sorbent tube for mercury vapor, via Method 7300M/7303/6009/ID140/ID145;
- Radon, using EPA-approved diffusion barrier charcoal canisters for 48 to 120 hours;
- Polynuclear Aromatic Hydrocarbons (PAHs) via sampling train of pumps affixed with 37-mm cassette and then into sorbent tube, via NIOSH 5506;
- Mold air samples collected via pumps affixed with spore trap cassettes and analyzed via Nonviable Spore Trap Analysis.

Volatile Organic Compounds (VOCs)

As briefly discussed above, VOCs include many common chemicals that volatilize and become airborne easily. These include, but are not limited to: gasoline indicators, industrial chemicals such as solvents, building materials such as adhesives and



paint compounds, various cleaning products, beauty products such as nail polish remover, and office products such as markers.

Summa canisters, under negative pressure, were placed and allowed to gather air over approximately 24 hours from July 30 thru July 31. Canister valves were then closed, and the canisters collected and sent to Origins Laboratory in Denver. The results provide a more definitive, compound-specific analysis, with lower detection limits, than the general assessment performed using the PID meter, which is not compound specific.

Our laboratory data is attached, and a summary of the compounds detected, or “hits” is included in Table II.

Most of the VOCs analyzed were not detected. The VOCs that were detected were all below the 8-hour Permissible Exposure Limit (PEL) – where a PEL has been published by the Occupational Safety and Health Administration (OSHA). These include: Methylene Chloride, Acetone, and 2-Hexanone, compounds often used as general solvents and in paints; Freon-12, often used as a refrigerant and aerosol spray propellant; 4-Ethyltoluene, often used for the production of polystyrenes; and gasoline/petroleum indicators such as Benzene, Toluene, Napthalene, and Xylenes.

While the compound concentrations were generally similar to each other within the indoor study area, Office 239D, while still being below published PELs, was somewhat anomalous in that indicators of petroleum were elevated in comparison to the adjacent offices. It is unclear at this time if this is an indicator of petroleum distillate-containing items within the office, laboratory conditions at the time this particular sample was opened and analyzed, or other factors.

We observed the custodial closet on the first floor. Cleaning products generally appeared to be supplied by Spartan® Green Solutions, which would imply citrus-based or other natural sources as opposed to chemical solvents like ammonia. These include an all-purpose cleaner, glass cleaner, and disinfectant.

Aldehydes

Aldehydes were sampled via Assay Passive Diffusion Samplers (badges) via Modified NIOSH 2016, Issue 2, 3/15/03. No pumps were needed or used. Badges were placed during the workday of July 31, with sample times ranging from 6 hours 29 minutes to 8 hours 8 minutes. We sampled the four subject offices, the conference room, and outside (roof). Sample badges were sent to EMSL Analytical, Inc. in Cinnaminson, NJ under laboratory chain of custody.

The results are summarized in Table II. Most of the analytes were non-detect, with the detections summarized in Table II. The detections include Formaldehyde, a common compound which is used in making resins and coatings, and in adhesives used in plywood



and carpeting; Acetaldehyde, which occurs naturally in coffee, bread, and fruit; and Benzaldehyde, which occurs naturally in many foods, such as almonds. We note that Formaldehyde was detected in every sample. The outside sample included all three types of detected aldehydes. The concentrations for these compounds were well below the OSHA PEL in each sample.

California Administrative Manual (CAM) 17 Metals

This is a list of 17 metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc. We sampled the four subject offices, the conference room, and outside (roof). Sample cassettes were sent to EMSL Analytical, Inc. in Cinnaminson, NJ under laboratory chain of custody.

Sixteen (16) of these metals were generally sampled over the course of four hours on July 31. Sample times ranged from 4 hours 0 minutes to 4 hours 27 minutes. Mercury vapor was sampled separately on July 31 with lower flow rates and volumes, with sample times from 24 to 31 minutes. None of the 17 metals sampled were detected in any of the samples above laboratory detection limits.

Radon

Radon samples were collected by placing diffusion barrier charcoal canisters for approximately 72 hours, from July 23, 2019 to July 26, 2019. We sampled the four subject offices and the conference room. Canisters were sent to Rocky Mountain Radon Control, LLC (RMRC) in Littleton, Colorado. The results were all equal or less than 0.5 picocuries per liter (pCi/L) +/- 10%. These are well below the EPA limit of 4.0 pCi/L where remediation is recommended.

Polynuclear Aromatic Hydrocarbons (PAHs)

PAHs are chemicals that occur naturally in materials such as coal, crude oil, and gasoline. They also are byproducts of combustion. A common source of PAHs in historically industrial areas of Denver is coal ash.

PAHs were generally sampled over the course of four hours on July 31. Sample cassettes and tubes were sent to EMSL Analytical, Inc. in Cinnaminson, NJ under laboratory chain of custody. Sample times ranged from 4 hours 8 minutes to 4 hours 25 minutes; the exception was the conference room sample (240U), where midway through sampling the sample pump was found to have stopped working for unknown reasons (charging and operating the pump in the CTL office the next day revealed no obvious malfunction). Since a smaller, uncertain sample volume was collected for Sample 240U, the uncertainty is greater, and the detection limits are not as low.

Nonetheless, each sample was analyzed for the 17 PAHs of Benzo(e)pyrene, Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene,



Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indo(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, and Pyrene. All samples were non-detect, with detection limits still well below the OSHA PEL of 200ug/m³, even in the case of Sample 240U.

Mold Spores

We obtained air samples for non-viable spores, a general indicator of mold concentrations inside and outside the building. Samples were collected on July 23, 2019 at 15 liters per minute for 5 minutes (75 liters). We collected seven (7) air samples. Air samples were obtained from the four subject offices (239C, D, E F), the lobby (239), conference room (239U) and outside (Exterior). Air samples were obtained using one Air-O-Cell cassette at each location to measure total airborne fungi. Air samples were submitted to Reservoirs Environmental in Denver, Colorado for analysis.

- The total fungal spore results for the subject offices were significantly less than outside fungal spore results. Minor differences are anticipated given the different environmental conditions inherent between interior spaces and the outside.
- The types (genera) of mold spores were generally the same in indoor and outdoor samples.

Heating, Ventilation and Air Conditioning (HVAC) Evaluation

We performed a brief visual assessment of the air handling unit (AHU-6) that services the identified offices. Our focus included identifying the potential for standing water, elevated humidity, mold growth, and observing the immediate outdoor environment where fresh air enters the AHU. We were accompanied by Mr. Dennis Gil, HVAC Technician, who has provided maintenance for the West Classroom AHUs since approximately March 2018.

AHU-6 is accessed on the roof and can be entered at various stages, in five accessible chambers. These chambers include, as air flows through it, the Return Air Plenum, Mixing Chamber, Backside of Evaporation Tank, Frontside of Evaporation Tank, and Supply Air.

Return air is conveyed from the offices via a plenum rather than ductwork. At this time of year very little fresh air is used as it is more economical to use already-conditioned air. Given our previous readings of oxygen and CO₂ content, it appears there is sufficient makeup air in the form of opening doors, and general leakage from this older building reportedly constructed in the 1970s. No obvious concerns were observed immediately near the outside air intake, which is located over the main building entrance and is characterized by trees, landscaping, and sidewalks.



The Mixing Chamber is characterized by prefilters. The prefilters appear to be somewhat loaded but, upon temporarily removing and observing a prefilter, not through the filter media. Mr. Gil explained that AHEC HVAC personnel monitor the pressure drop through the filter chamber and when over 1" of water pressure drop is seen, they pull the prefilters, and then replace these or run just the filter boxes only, as pressure readings dictate what components are loaded, in an effort to use up the filter system in the most efficient manner before changeout. He believes the prefilters are likely changed approximately every 6 to 8 months. The box filters were last changed in December 2015.

The evaporative tank circulates cold water for cooling, similar to a swamp cooler. This part of the system runs for a short period each day, but most cooling is from the chilled water system from the chiller plant. The front and back side of the evaporative cooling allows observation of the basin, where water collects after wetting the cardboard media. The water passes through a chlorination tablet release within the basin, prior to being pumped up and circulated down through the media. The chlorination tablets are checked approximately every three months and replaced as needed. We did not observe obvious evidence of mold or algal growth on the evaporative media, nor obvious mold, algal growth or organic debris on the visible water in the metal holding basin.

The supply air room is mainly characterized by the fan unit, which takes in the air mixture following the heating/cooling unit, the frontside of which is also accessible in this chamber. During colder months air moves over the heating coil. Again, most cooling is from the chilled water system from the chiller plant, pipes from which are visible in this chamber. At the time of our visit there was some condensation water present at the bottom of the heating/cooling unit, and cardboard media was placed in such a way to "wick" up the water and allow air to evaporate it into the air current. Mr. Gil stated that the coils do not need cleaning very often. The visible metal components of the coil did not appear to have obvious buildup of dust.

In summary, we did not observe features that would present obvious indoor air quality issues from a cursory observation of the easily visible components of AHU-6. As a precautionary measure it may be prudent to follow a more rigid inspection and replacement process for the chlorination tablets in the evaporative cooling basin, since a potential issue with any area of standing water is buildup of bacteria or mold.



Summary and Conclusions

Our field readings, using handheld instruments for indoor air parameters, as well as our observations, indicate typical office conditions, based on our experience. No unusual readings or observations, such as obvious mold growth or atypical use of chemical products, were made.

Our indoor air sampling was relatively extensive, and included the four study offices and at least one control or outside sample, for: Volatile Organic Compounds (VOCs) using summa canisters; Aldehydes (including Formaldehyde) via passive badges; 17 Metals using mixed-cellulose ester (MCE) membrane filters and sorbent tubes; Radon using charcoal canisters for approximately 72 hours; PAHs via sampling cassettes and sorbent tubes; and Mold via non-viable spore trap cassettes.

Very low levels of some VOCs were found that are generally associated with common solvents and gasoline indicators, but below OSHA Permissible Exposure Limits (PELs). This was also the case with formaldehyde which was detected in all samples, including the outside sample. We do note that Office 239D, while still being below published PELs for VOCs, was somewhat anomalous in that trace indicators of petroleum were elevated in comparison to the adjacent offices. It is unclear at this time if this is an indicator of petroleum distillate-containing items within the office, laboratory conditions at the time this sample was opened and analyzed, or other factors. Further study in this room may be warranted. We reiterate these compounds were below OSHA PELs.

No PAHs (indicators of combustion such as coal ash) or Metals were detected above laboratory detection limits.

The results of Radon were all equal or less than 0.5 picocuries per liter (pCi/L) +/- 10%. These are well below the EPA limit of 4.0 pCi/L where remediation is recommended.

The air sampling results show fairly low concentrations of fungal spores on all interior samples as compared to outside.

We also did not observe features that would present obvious indoor air quality issues from a cursory observation of the easily visible components of the air handling unit. As a precautionary measure it may be prudent to follow a more rigid inspection and replacement process for the chlorine tablets in the evaporative cooling basin, since a potential issue with any area of standing water is buildup of bacteria or mold.



Limitations

Our readings and limited sampling were limited to easily accessible and observable areas.

We believe our services were conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the environmental consulting profession currently practicing under similar conditions in the locality of the project. CTL employees are not mechanical engineers. No warranty, expressed or implied, is made.

We appreciate this opportunity to provide service. Please call if you have questions or if we can be of further assistance.

Very truly yours,

CTL | THOMPSON, INC.

Matthew Wardlow

Matthew L. Wardlow, P.E.
Denver Environmental Department Manager

Reviewed by,

Dana Harris
Fort Collins Environmental Department Manager

Joseph Gifford, CIH
A. G. Wassenaar, Inc.

MLW/DH/JG

Table I – West Classroom Indoor Air Readings
Table II – West Classroom Air Sample Detections

Attachment A – Laboratory Data

Via e-mail: Emily.Sanders@AHEC.edu
mpokorn1@msudenver.edu

Table I - AHEC West Classroom Study
Indoor Air Readings

[illegible]

Table II. West Classroom Air Sample Detections

Aldehydes*																			
Date	Sample Name	Acetone	2- Hexanone	4- Ethyltoluene	Benzene	Ethanol	Freon-12	Methylene Chloride	Toluene	Napthalene	m,p- Xylene	Ethyl- benzene	O- Xylene	Hexane	1,3,5-Tri- methylbenzene	1,2,4-Tri- methylbenzene	Form- aldehyde	Acet- aldehyde	Benz- aldehyde
7/31/2019	239 (Copier Area)	32.6	5.16	ND	0.671	233	1.38	12	3.58	ND	ND	ND	ND	2.22	ND	ND	NS	NS	NS
7/31/2019	239 C	37.8	ND	ND	0.511	224	1.38	34.8	8.97	ND	ND	ND	ND	2.19	ND	ND	0.012	ND	ND
7/31/2019	239 D	55.2	ND	1560	243	138	ND	ND	1010	545	2990	208	726	237	2050	5600	0.011	ND	ND
7/31/2019	239 E	36.7	ND	ND	0.543	106	1.53	30	ND	ND	ND	ND	ND	1.97	ND	ND	0.0093	ND	ND
7/31/2019	239 F	27.6	ND	ND	0.511	124	1.63	19.3	ND	ND	ND	ND	ND	1.97	ND	ND	0.01	ND	0.0049
7/31/2019	240 U (Conference)	31.2	ND	ND	0.575	176	1.53	11.2	ND	ND	ND	ND	ND	1.9	ND	ND	0.01	ND	ND
7/31/2019	Roof	19.8	ND	ND	0.543	12.8	1.63	22.5	ND	ND	ND	ND	ND	1.73	ND	ND	0.0068	0.0077	0.034
OSHA PEL - TWA		2400000	410000	---	3200	1900000	4950	87	754000	52400	435000	435000	435000	1800000	---	---	0.75	200	---
		units for Aldehydes in ppm																	

All values are in micrograms per cubic meter (ug/m³), except Aldehydes

BOLD - Above PEL

ND - Non-Detect

NS - Not sampled for the specified analyte

OSHA PEL - TWA - Occupational Safety & Health Administration Permissible Exposure Limit for a Time Weighted Average, typically over 8 hours

--- No PEL

* Sample time varies from 389 to 488 minutes (6 hours 29 minutes to 8 hours 8 minutes)



ATTACHMENT A
LABORATORY DATA



August 05, 2019

CTL Thompson, Inc.

Matt Wardlow

1971 West 12th Avenue

Denver

CO 80204

Project Name - West Classroom

Project Number - DN50172-260

Attached are your analytical results for West Classroom received by Origins Laboratory, Inc. July 31, 2019. This project is associated with Origins project number Y907503-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

CTL Thompson, Inc.

1971 West 12th Avenue

Denver CO 80204

Matt Wardlow

Project Number: DN50172-260

Project: West Classroom

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
239	Y907503-01	Air	July 31, 2019 13:19	07/31/2019 18:12
240 U	Y907503-02	Air	July 31, 2019 13:20	07/31/2019 18:12
239 C	Y907503-03	Air	July 31, 2019 13:26	07/31/2019 18:12
239 D	Y907503-04	Air	July 31, 2019 13:27	07/31/2019 18:12
239 E	Y907503-05	Air	July 31, 2019 13:28	07/31/2019 18:12
239 F	Y907503-06	Air	July 31, 2019 13:30	07/31/2019 18:12
Roof	Y907503-07	Air	July 31, 2019 13:39	07/31/2019 18:12

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

www.originslaboratory.com

page 1 of 1

7907503

ORIGINS
LABORATORY, INC

Client: CTL Thompson
Address: 1971 W. 12th Ave.
Denver, CO 80204

Project Manager: Matt Wardlow
Project Name: West Classroom
Project Number: DN50172-260

Telephone Number: _____
Email Address: rworiskey@ctlthompson.com

Samples Collected By: RWTSC

7-10-15

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summ #			Other
239	7/31	1319	1	X									1
240 U		1320	1	X									2
239 C		1326	1	X									3
239 D		1327	1	X									4
239 E		1328	1	X									5
239 F		1330	1	X									6
200F		1339	1	X									7
													8
													9
													10

Relinquished By: Ramon White Date: 7/31/19 Time: 6:28AM

Relinquished By: _____ Date: _____ Time: _____

Received By: [Signature] Date: 7-31-19 Time: 8:12

Received By: _____ Date: _____ Time: _____

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☒ 72 Hr ☐ Standard ☐

Temp Received: _____ Date Results Needed: _____

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 7907503

Client: CTL Thompson

Client Project ID: West Classroom

Checklist Completed by: D. L.

Shipped Via: HB
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 7-31-19

Airbill #: RM

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: Air (Describe)

Cooler Number/Temperature: °C °C °C °C

Thermometer ID:

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?			☒	<u>Air</u>
Is there ice present (document if blue ice is used)			☒	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		☒		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		☒		
Were all samples received intact ⁽¹⁾ ?	☒			
Was adequate sample volume provided ⁽¹⁾ ?	☒			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		☒		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	☒			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	☒			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	☒			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	☒			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			☒	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			☒	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JP

Date/Time Reviewed 8/1/19

Origins Laboratory, Inc.

Jen Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239

7/31/2019 1:19:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-01 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	32.6	2.00	"	"	"	DPM	"	"	
Benzene	0.671	0.500	"	"	"	DPM	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239

7/31/2019 1:19:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-01 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	5.16	2.00	"	"	"	DPM	"	"	
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	233	25.0	"	25	"	DPM	"	08/01/2019	
Ethylbenzene	ND	1.00	"	1	"	DPM	"	08/01/2019	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:19:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-01 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.38	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	2.22	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	12.0	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	3.58	2.00	"	"	"	DPM	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:19:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-01 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"		"	
Surrogate: Toluene-d8	96.3 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

240 U

7/31/2019 1:20:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-02 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	31.2	2.00	"	"	"	DPM	"	"	
Benzene	0.575	0.500	"	"	"	DPM	"	"	

Origins Laboratory, Inc.



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1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:20:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-02 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	ND	2.00	"	"	"	DPM	"	"	U
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	176	25.0	"	25	"	DPM	"	08/01/2019	
Ethylbenzene	ND	1.00	"	1	"	DPM	"	08/01/2019	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

240 U

7/31/2019 1:20:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-02 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.53	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	1.90	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	11.2	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	ND	2.00	"	"	"	DPM	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

240 U

7/31/2019 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-02 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"		"	
Surrogate: Toluene-d8	100 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	114 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 C

7/31/2019 1:26:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-03 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	37.8	2.00	"	"	"	DPM	"	"	
Benzene	0.511	0.500	"	"	"	DPM	"	"	

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 C

7/31/2019 1:26:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-03 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	ND	2.00	"	"	"	DPM	"	"	U
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	224	25.0	"	25	"	DPM	"	08/01/2019	
Ethylbenzene	ND	1.00	"	1	"	DPM	"	08/01/2019	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 C

7/31/2019 1:26:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-03 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.38	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	2.19	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	34.8	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	8.97	2.00	"	"	"	DPM	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 C

7/31/2019 1:26:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-03 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"		"	
Surrogate: Toluene-d8	97.3 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	110 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 D

7/31/2019 1:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-04 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	25.0	ug/m³ Air	25	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	25.0	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	25.0	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	25.0	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	25.0	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	125	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	5600	1250	"	250	"	DPM	"	08/02/2019	
1,2-Dichlorobenzene	ND	125	"	25	"	DPM	"	08/01/2019	U
1,2-Dichloroethane	ND	25.0	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	25.0	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	25.0	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	2050	50.0	"	"	"	DPM	"	"	
1,3 Butadiene	ND	22.0	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	375	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	25.0	"	"	"	DPM	"	"	U
4-Ethyltoluene	1560	125	"	"	"	DPM	"	"	
Acetone	55.2	50.0	"	"	"	DPM	"	"	
Benzene	243	12.5	"	"	"	DPM	"	"	

Origins Laboratory, Inc.



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Matt Wardlow
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Project: West Classroom

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7/31/2019 1:27:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-04 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	25.0	ug/m ³ Air	25	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	25.0	"	"	"	DPM	"	"	U
Bromoform	ND	25.0	"	"	"	DPM	"	"	U
2-Hexanone	ND	50.0	"	"	"	DPM	"	"	U
Bromomethane	ND	25.0	"	"	"	DPM	"	"	U
Carbon disulfide	ND	25.0	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	25.0	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	25.0	"	"	"	DPM	"	"	U
Chlorobenzene	ND	25.0	"	"	"	DPM	"	"	U
Chloroethane	ND	25.0	"	"	"	DPM	"	"	U
Chloroform	ND	25.0	"	"	"	DPM	"	"	U
Chloromethane	ND	25.0	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	25.0	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	25.0	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	25.0	"	"	"	DPM	"	"	U
Ethanol	138	25.0	"	"	"	DPM	"	"	
Ethylbenzene	208	25.0	"	"	"	DPM	"	"	
Freon 113	ND	25.0	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:27:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-04 (Air)

VOCs by TO-15

									T
Freon 11	ND	25.0	ug/m ³ Air	25	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	ND	25.0	"	"	"	DPM	"	"	U
Freon 114	ND	25.0	"	"	"	DPM	"	"	U
Heptane	ND	50.0	"	"	"	DPM	"	"	U
Hexane	237	25.0	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	125	"	"	"	DPM	"	"	U
m,p-Xylene	2990	375	"	"	"	DPM	"	"	
Methyl tert-Butyl Ether	ND	25.0	"	"	"	DPM	"	"	U
Methylene Chloride	ND	25.0	"	"	"	DPM	"	"	U
Naphthalene	545	375	"	"	"	DPM	"	"	
o-Xylene	726	125	"	"	"	DPM	"	"	
Styrene	ND	50.0	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	25.0	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	25.0	"	"	"	DPM	"	"	U
Toluene	1010	50.0	"	"	"	DPM	"	"	
trans-1,2-Dichloroethene	ND	25.0	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	25.0	"	"	"	DPM	"	"	U
Trichloroethene	ND	25.0	"	"	"	DPM	"	"	U

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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 D

7/31/2019 1:27:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-04 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	25.0	ug/m ³ Air	25	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	25.0	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	88.8 %	70-130			"	"		"	
Surrogate: Toluene-d8	102 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	111 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 E

7/31/2019 1:28:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-05 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	36.7	2.00	"	"	"	DPM	"	"	
Benzene	0.543	0.500	"	"	"	DPM	"	"	

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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-05 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	ND	2.00	"	"	"	DPM	"	"	U
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	106	25.0	"	25	"	DPM	"	08/01/2019	
Ethylbenzene	ND	1.00	"	1	"	DPM	"	08/01/2019	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

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Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 E

7/31/2019 1:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-05 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.53	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	1.97	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	30.0	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	ND	2.00	"	"	"	DPM	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

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1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 E

7/31/2019 1:28:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-05 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"		"	
Surrogate: Toluene-d8	97.4 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"		"	

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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 F

7/31/2019 1:30:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-06 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	27.6	2.00	"	"	"	DPM	"	"	
Benzene	0.511	0.500	"	"	"	DPM	"	"	

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1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 F

7/31/2019 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-06 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	ND	2.00	"	"	"	DPM	"	"	U
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	124	25.0	"	25	"	DPM	"	08/01/2019	
Ethylbenzene	ND	1.00	"	1	"	DPM	"	08/01/2019	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 F

7/31/2019 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-06 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.63	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	1.97	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	19.3	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	ND	2.00	"	"	"	DPM	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

239 F

7/31/2019 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-06 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	70-130			"	"		"	
Surrogate: Toluene-d8	94.1 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Roof

7/31/2019 1:39:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-07 (Air)

VOCs by TO-15

									T
1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichlorobenzene	ND	5.00	"	"	"	DPM	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	DPM	"	"	U
1,2-Dibromoethane	ND	1.00	"	"	"	DPM	"	"	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	DPM	"	"	U
1,3 Butadiene	ND	0.880	"	"	"	DPM	"	"	U
1,3-Dichlorobenzene	ND	15.0	"	"	"	DPM	"	"	U
1,4-Dichlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
4-Ethyltoluene	ND	5.00	"	"	"	DPM	"	"	U
Acetone	19.8	2.00	"	"	"	DPM	"	"	
Benzene	0.543	0.500	"	"	"	DPM	"	"	

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
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Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Roof

7/31/2019 1:39:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-07 (Air)

VOCs by TO-15

									T
Benzyl chloride	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Bromodichloromethane	ND	1.00	"	"	"	DPM	"	"	U
Bromoform	ND	1.00	"	"	"	DPM	"	"	U
2-Hexanone	ND	2.00	"	"	"	DPM	"	"	U
Bromomethane	ND	1.00	"	"	"	DPM	"	"	U
Carbon disulfide	ND	1.00	"	"	"	DPM	"	"	U
Carbon Tetrachloride	ND	1.00	"	"	"	DPM	"	"	U
4-Methyl-2-pentanone	ND	1.00	"	"	"	DPM	"	"	U
Chlorobenzene	ND	1.00	"	"	"	DPM	"	"	U
Chloroethane	ND	1.00	"	"	"	DPM	"	"	U
Chloroform	ND	1.00	"	"	"	DPM	"	"	U
Chloromethane	ND	1.00	"	"	"	DPM	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	DPM	"	"	U
Ethanol	12.8	1.00	"	"	"	DPM	"	"	
Ethylbenzene	ND	1.00	"	"	"	DPM	"	"	U
Freon 113	ND	1.00	"	"	"	DPM	"	"	U

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1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

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7/31/2019 1:39:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-07 (Air)

VOCs by TO-15

									T
Freon 11	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Freon 12	1.63	1.00	"	"	"	DPM	"	"	
Freon 114	ND	1.00	"	"	"	DPM	"	"	U
Heptane	ND	2.00	"	"	"	DPM	"	"	U
Hexane	1.73	1.00	"	"	"	DPM	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	DPM	"	"	U
m,p-Xylene	ND	15.0	"	"	"	DPM	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	DPM	"	"	U
Methylene Chloride	22.5	1.00	"	"	"	DPM	"	"	
Naphthalene	ND	15.0	"	"	"	DPM	"	"	U
o-Xylene	ND	5.00	"	"	"	DPM	"	"	U
Styrene	ND	2.00	"	"	"	DPM	"	"	U
Tetrachloroethene	ND	1.00	"	"	"	DPM	"	"	U
Tetrahydrofuran	ND	1.00	"	"	"	DPM	"	"	U
Toluene	ND	2.00	"	"	"	DPM	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	DPM	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	DPM	"	"	U
Trichloroethene	ND	1.00	"	"	"	DPM	"	"	U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Roof

7/31/2019 1:39:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y907503-07 (Air)

VOCs by TO-15

									T
Vinyl acetate	ND	1.00	ug/m ³ Air	1	B9H0101	DPM	08/01/2019	08/01/2019	U
Vinyl chloride	ND	1.00	"	"	"	DPM	"	"	U
Surrogate: 1,2-Dichloroethane-d4	114 %	70-130			"	"		"	
Surrogate: Toluene-d8	96.0 %	70-130			"	"		"	
Surrogate: 4-Bromofluorobenzene	111 %	70-130			"	"		"	

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H0101 - Default Prep - Air

Blank (B9H0101-BLK1)

Prepared: 08/01/2019 Analyzed: 08/01/2019

T

1,1,1-Trichloroethane	ND	1.00	ug/m ³ Air							U
1,1,2,2-Tetrachloroethane	ND	1.00	"							U
1,1,2-Trichloroethane	ND	1.00	"							U
1,1-Dichloroethane	ND	1.00	"							U
1,1-Dichloroethene	ND	1.00	"							U
1,2,4-Trichlorobenzene	ND	5.00	"							U
1,2,4-Trimethylbenzene	ND	5.00	"							U
1,2-Dichlorobenzene	ND	5.00	"							U
1,2-Dichloroethane	ND	1.00	"							U
1,2-Dichloropropane	ND	1.00	"							U
1,2-Dibromoethane	ND	1.00	"							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
1,3 Butadiene	ND	0.880	"							U
1,3-Dichlorobenzene	ND	15.0	"							U
1,4-Dichlorobenzene	ND	1.00	"							U
4-Ethyltoluene	ND	5.00	"							U
Acetone	ND	2.00	"							U
Benzene	ND	0.500	"							U
Benzyl chloride	ND	1.00	"							U
Bromodichloromethane	ND	1.00	"							U
Bromoform	ND	1.00	"							U
Bromomethane	ND	1.00	"							U
2-Hexanone	ND	2.00	"							U
Carbon disulfide	ND	1.00	"							U
Carbon Tetrachloride	ND	1.00	"							U
Chlorobenzene	ND	1.00	"							U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H0101 - Default Prep - Air

Blank (B9H0101-BLK1)					Prepared: 08/01/2019 Analyzed: 08/01/2019					T
4-Methyl-2-pentanone	ND	1.00	ug/m ³ Air							U
Chloroethane	ND	1.00	"							U
Chloroform	ND	1.00	"							U
Chloromethane	ND	1.00	"							U
cis-1,2-Dichloroethene	ND	1.00	"							U
cis-1,3-Dichloropropene	ND	1.00	"							U
Dibromochloromethane	ND	1.00	"							U
Ethanol	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Freon 113	ND	1.00	"							U
Freon 11	ND	1.00	"							U
Freon 12	ND	1.00	"							U
Freon 114	ND	1.00	"							U
Heptane	ND	2.00	"							U
Hexane	ND	1.00	"							U
Hexachlorobutadiene	ND	5.00	"							U
m,p-Xylene	ND	15.0	"							U
Methyl tert-Butyl Ether	ND	1.00	"							U
Methylene Chloride	ND	1.00	"							U
Naphthalene	ND	15.0	"							U
o-Xylene	ND	5.00	"							U
Styrene	ND	2.00	"							U
Tetrachloroethene	ND	1.00	"							U
Tetrahydrofuran	ND	1.00	"							U
Toluene	ND	2.00	"							U
trans-1,2-Dichloroethene	ND	1.00	"							U

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H0101 - Default Prep - Air

Blank (B9H0101-BLK1)					Prepared: 08/01/2019 Analyzed: 08/01/2019					T
trans-1,3-Dichloropropene	ND	1.00	ug/m ³ Air							U
Trichloroethene	ND	1.00	"							U
Vinyl acetate	ND	1.00	"							U
Vinyl chloride	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	9.95		ppbv	10.0		99.5	70-130			
Surrogate: Toluene-d8	9.44		"	10.0		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	9.30		"	10.0		93.0	70-130			

LCS (B9H0101-BS1)

Prepared: 08/01/2019 Analyzed: 08/01/2019

T

1,1,1-Trichloroethane	58.9	1.00	ug/m ³ Air	54.6		108	70-130
1,1,2,2-Tetrachloroethane	73.3	1.00	"	68.7		107	70-130
1,1,2-Trichloroethane	51.3	1.00	"	54.6		94.1	70-130
1,1-Dichloroethane	43.4	1.00	"	40.5		107	70-130
1,1-Dichloroethene	41.7	1.00	"	39.6		105	70-130
1,2,4-Trichlorobenzene	72.4	5.00	"	74.2		97.6	70-130
1,2,4-Trimethylbenzene	51.0	5.00	"	49.2		104	70-125
1,2-Dichlorobenzene	64.5	5.00	"	60.1		107	70-130
1,2-Dichloroethane	43.9	1.00	"	40.5		108	70-130
1,2-Dichloropropane	49.5	1.00	"	46.2		107	70-130
1,2-Dibromoethane	81.0	1.00	"	76.8		105	70-130
1,3,5-Trimethylbenzene	53.0	2.00	"	49.2		108	71-130
1,3 Butadiene	23.9	0.880	"	22.1		108	70-130
1,3-Dichlorobenzene	66.8	15.0	"	60.1		111	70-130
1,4-Dichlorobenzene	62.9	1.00	"	60.1		105	70-130
4-Ethyltoluene	50.2	5.00	"	49.2		102	70-130
Acetone	24.3	2.00	"	23.8		102	70-130
Benzene	34.4	0.500	"	31.9		108	70-130

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H0101 - Default Prep - Air

LCS (B9H0101-BS1)

Prepared: 08/01/2019 Analyzed: 08/01/2019

T

Benzyl chloride	57.6	1.00	ug/m ³ Air	51.8		111	70-130			
Bromodichloromethane	73.3	1.00	"	67.0		109	70-130			
Bromoform	113	1.00	"	103		109	70-130			
2-Hexanone	42.4	2.00	"	41.0		103	72-118			
Bromomethane	40.5	1.00	"	38.8		104	70-130			
Carbon disulfide	32.7	1.00	"	31.1		105	70-130			
Carbon Tetrachloride	67.0	1.00	"	62.9		106	70-130			
4-Methyl-2-pentanone	38.4	1.00	"	41.0		93.8	61-120			
Chlorobenzene	49.7	1.00	"	46.0		108	70-130			
Chloroethane	29.3	1.00	"	26.4		111	70-130			
Chloroform	53.5	1.00	"	48.8		110	70-130			
Chloromethane	21.8	1.00	"	20.7		106	72-130			
cis-1,2-Dichloroethene	42.8	1.00	"	39.6		108	70-130			
cis-1,3-Dichloropropene	44.1	1.00	"	45.4		97.2	70-130			
Dibromochloromethane	83.0	1.00	"	85.2		97.4	70-130			
Ethanol	20.3	1.00	"	18.8		108	60-140			
Ethylbenzene	46.1	1.00	"	43.4		106	70-130			
Freon 113	84.3	1.00	"	76.6		110	70-130			
Freon 11	60.1	1.00	"	56.2		107	70-130			
Freon 12	50.5	1.00	"	49.5		102	70-130			
Freon 114	64.0	1.00	"	69.9		91.5	70-130			
Heptane	38.4	2.00	"	41.0		93.6	70-130			
Hexane	39.0	1.00	"	35.2		111	70-130			
Hexachlorobutadiene	103	5.00	"	107		96.8	70-130			
m,p-Xylene	171	15.0	"	174		98.2	70-130			
Methyl tert-Butyl Ether	38.9	1.00	"	36.1		108	70-130			

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9H0101 - Default Prep - Air

LCS (B9H0101-BS1)						Prepared: 08/01/2019 Analyzed: 08/01/2019				T
Methylene Chloride	37.1	1.00	ug/m ³ Air	34.7		107	70-130			
Naphthalene	50.2	15.0	"	52.4		95.8	70-130			
o-Xylene	43.5	5.00	"	43.4		100	70-130			
Styrene	43.2	2.00	"	42.6		101	70-130			
Tetrachloroethene	73.1	1.00	"	67.8		108	70-130			
Tetrahydrofuran	31.2	1.00	"	29.5		106	70-130			
Toluene	44.5	2.00	"	37.7		118	70-130			
trans-1,2-Dichloroethene	43.5	1.00	"	39.6		110	70-130			
trans-1,3-Dichloropropene	44.4	1.00	"	45.4		97.9	70-130			
Trichloroethene	55.9	1.00	"	53.7		104	70-130			
Vinyl acetate	35.9	1.00	"	35.2		102	70-130			
Vinyl chloride	28.1	1.00	"	25.6		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.15		ppbv	10.0		91.5	70-130			
Surrogate: Toluene-d8	9.66		"	10.0		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	9.23		"	10.0		92.3	70-130			

LCS Dup (B9H0101-BSD1)						Prepared: 08/01/2019 Analyzed: 08/01/2019				T
1,1,1-Trichloroethane	57.0	1.00	ug/m ³ Air	54.6		104	70-130	3.39	25	
1,1,2,2-Tetrachloroethane	67.5	1.00	"	68.7		98.3	70-130	8.29	25	
1,1,2-Trichloroethane	52.4	1.00	"	54.6		96.1	70-130	2.10	25	
1,1-Dichloroethane	42.8	1.00	"	40.5		106	70-130	1.41	25	
1,1-Dichloroethene	41.5	1.00	"	39.6		105	70-130	0.381	25	
1,2,4-Trichlorobenzene	75.2	5.00	"	74.2		101	70-130	3.72	25	
1,2,4-Trimethylbenzene	53.2	5.00	"	49.2		108	70-125	4.25	25	
1,2-Dichlorobenzene	65.1	5.00	"	60.1		108	70-130	0.928	25	
1,2-Dichloroethane	42.7	1.00	"	40.5		106	70-130	2.80	25	
1,2-Dichloropropane	49.6	1.00	"	46.2		107	70-130	0.0932	25	

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9H0101 - Default Prep - Air										
LCS Dup (B9H0101-BSD1)					Prepared: 08/01/2019 Analyzed: 08/01/2019					T
1,2-Dibromoethane	76.5	1.00	ug/m ³ Air	76.8		99.6	70-130	5.66	25	
1,3,5-Trimethylbenzene	52.9	2.00	"	49.2		108	71-130	0.278	25	
1,3 Butadiene	23.4	0.880	"	22.1		106	70-130	2.06	25	
1,3-Dichlorobenzene	63.5	15.0	"	60.1		106	70-130	5.08	25	
1,4-Dichlorobenzene	57.8	1.00	"	60.1		96.2	70-130	8.46	25	
4-Ethyltoluene	52.7	5.00	"	49.2		107	70-130	4.78	25	
Acetone	24.8	2.00	"	23.8		104	70-130	1.93	25	
Benzene	33.7	0.500	"	31.9		106	70-130	2.06	25	
Benzyl chloride	54.0	1.00	"	51.8		104	70-130	6.40	25	
Bromodichloromethane	70.2	1.00	"	67.0		105	70-130	4.39	25	
Bromoform	95.9	1.00	"	103		92.8	70-130	16.1	25	
2-Hexanone	42.8	2.00	"	41.0		104	72-118	1.06	25	
Bromomethane	39.8	1.00	"	38.8		102	70-130	1.93	25	
Carbon disulfide	33.3	1.00	"	31.1		107	70-130	1.70	25	
Carbon Tetrachloride	66.9	1.00	"	62.9		106	70-130	0.188	25	
4-Methyl-2-pentanone	38.7	1.00	"	41.0		94.4	61-120	0.638	25	
Chlorobenzene	48.1	1.00	"	46.0		104	70-130	3.20	25	
Chloroethane	28.4	1.00	"	26.4		108	70-130	3.11	25	
Chloroform	51.8	1.00	"	48.8		106	70-130	3.15	25	
Chloromethane	21.5	1.00	"	20.7		104	72-130	1.43	25	
cis-1,2-Dichloroethene	42.0	1.00	"	39.6		106	70-130	1.78	25	
cis-1,3-Dichloropropene	43.5	1.00	"	45.4		95.8	70-130	1.45	25	
Dibromochloromethane	81.9	1.00	"	85.2		96.1	70-130	1.34	25	
Ethanol	19.8	1.00	"	18.8		105	60-140	2.72	25	
Ethylbenzene	45.5	1.00	"	43.4		105	70-130	1.42	25	
Freon 113	83.4	1.00	"	76.6		109	70-130	1.10	25	

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Volatile Organic Compounds by TO-15 in Air - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9H0101 - Default Prep - Air										
LCS Dup (B9H0101-BSD1)					Prepared: 08/01/2019 Analyzed: 08/01/2019					T
Freon 11	55.4	1.00	ug/m ³ Air	56.2		98.6	70-130	8.17	25	
Freon 12	50.2	1.00	"	49.5		102	70-130	0.687	25	
Freon 114	64.7	1.00	"	69.9		92.6	70-130	1.20	25	
Heptane	38.6	2.00	"	41.0		94.3	70-130	0.745	25	
Hexane	37.8	1.00	"	35.2		107	70-130	3.21	25	
Hexachlorobutadiene	102	5.00	"	107		95.9	70-130	0.934	25	
m,p-Xylene	172	15.0	"	174		99.0	70-130	0.811	25	
Methyl tert-Butyl Ether	37.5	1.00	"	36.1		104	70-130	3.58	25	
Methylene Chloride	36.6	1.00	"	34.7		105	70-130	1.41	25	
Naphthalene	52.7	15.0	"	52.4		101	70-130	4.89	25	
o-Xylene	45.1	5.00	"	43.4		104	70-130	3.53	25	
Styrene	39.7	2.00	"	42.6		93.2	70-130	8.33	25	
Tetrachloroethene	72.1	1.00	"	67.8		106	70-130	1.40	25	
Tetrahydrofuran	31.1	1.00	"	29.5		105	70-130	0.474	25	
Toluene	44.4	2.00	"	37.7		118	70-130	0.254	25	
trans-1,2-Dichloroethene	42.7	1.00	"	39.6		108	70-130	1.84	25	
trans-1,3-Dichloropropene	44.6	1.00	"	45.4		98.3	70-130	0.408	25	
Trichloroethene	56.4	1.00	"	53.7		105	70-130	0.861	25	
Vinyl acetate	36.3	1.00	"	35.2		103	70-130	1.27	25	
Vinyl chloride	27.0	1.00	"	25.6		106	70-130	3.71	25	
Surrogate: 1,2-Dichloroethane-d4	9.09		ppbv	10.0		90.9	70-130			
Surrogate: Toluene-d8	10.1		"	10.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	8.89		"	10.0		88.9	70-130			

Origins Laboratory, Inc.



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CTL Thompson, Inc.
1971 West 12th Avenue
Denver CO 80204

Matt Wardlow
Project Number: DN50172-260
Project: West Classroom

Notes and Definitions

U Sample is Non-Detect.

T The TO-15 analysis is not part of the NELAC accreditation

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only):

011909452

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-3502

Report To Contact Name: <u>Matt Wardlaw</u>		Bill To Company: <u>CTL</u>		Client ID #:	
Company Name: <u>CTL/Thompson</u>		Attention To:			
Street: <u>1971 W. 12th Avenue</u>		Street:			
City: <u>Denver</u>	State/Province: <u>CO</u>	Zip/Postal Code: <u>80204</u>	City:	State/Province:	Zip/Postal Code:
Phone: <u>303-825-0777</u>		Fax:			
Project Name: <u>West Classroom</u>		Email Results To: <u>mwardlaw@ctlthompson.com</u> U.S. State where Samples Collected: <u>CO</u>			
# Samples in Shipment: <u>18</u>	Date of Shipment: <u>18</u>	Purchase Order: <u>86302482</u> Sampled By (Signature): <u>Matt Wardlaw</u>			

Turnaround Time (TAT) - Please Check: If No Selection Made, Standard 2 Week TAT Will Apply					
☐ 2 Week	☐ 1 Week	☐ 4 Day	☐ 3 Day	☒ 2 Day	☐ 1 Day
Media Type:			Manufacturer/Part #:		
Lot #:					

Client Sample ID	Sample Date	Location	Description	Sample Type	Flow (lpm)	Sample Time On	Sample Time Off	Air (L) Volume	Analyte Name	Media	Comments
1 Metals-239C	7/31/19	239C	1 cassette	☒ Area ☐ Personal	1.58	949	1416	421.86	CAM 17	37mm MIE	Metals (minus Hg)
2 239D		239D		☒ Area ☐ Personal	1.94	1050	1450	465.6			
3 -239E		239E		☒ Area ☐ Personal	1.88	1011	1425	477.52			
4 -239F		239F		☒ Area ☐ Personal	2.065	1022	1432	516.25			
5 -240V		240V		☒ Area ☐ Personal	2.32	1035	1439	566.08			
6 -Roof		Roof		☒ Area ☐ Personal	1.29	936	1347	323.79			
PAH-239C		239C	1 Cassette 1 Tube	☒ Area ☐ Personal	1.395	953	1418	369.68	PAHs	1 cassette 1 tube	PAHs-NIOSH 5506
PAH-239D		239D		☒ Area ☐ Personal	1.775	1006	1422	454.4			

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By: <u>[Signature]</u>	Date: <u>07/31/19</u>	Received By: <u>[Signature]</u>	Date: <u>7/31/19 4:30pm</u>
Comments: <u>[Signature]</u>		<u>8/1 9:20am w/</u>	

SPLDT

6 Chem
18 IH



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only):

011909452

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-3502

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Client Sample ID	Sample Date	Location	Description	Sample Type	Flow (lpm)	Sample Time		Air Volume	Analyte Name	Media	Comments
						On	Off				
PAH-239E	7/31/19	239E	1 cassette 1 tube	☒ Area ☐ Personal	1.89	1016	1427	474.39	PAHs	cassette tube	PAHs - NIOSH 5506
PAH-239F	↓	239F	↓	☒ Area ☐ Personal	2.175	1025	1433	539.40	↓	↓	↓
PAH-240U	↓	240U	↓	☒ Area ☐ Personal	1.54	1041	1141	92.40 87.0 new	↓	↓	volume assumed - * may change
PAH-Roof	↓	Roof	↓	☒ Area ☐ Personal	2.80	935	1344	697.2	↓	↓	↓
NY 4431	7/31/19	239C	1 badge	☒ Area ☐ Personal	N/A	710	1518	N/A	Aldehydes	Badge	NIOSH-2016M
NY 2936	↓	239D	↓	☒ Area ☐ Personal	↓	712	1519	↓	↓	↓	↓
NY 5584	↓	239E	↓	☒ Area ☐ Personal	↓	713	1520	↓	↓	↓	↓
NY 1481	↓	239F	↓	☒ Area ☐ Personal	↓	716	1522	↓	↓	↓	↓
NY 1407	↓	240U	↓	☒ Area ☐ Personal	↓	718	1524	↓	↓	↓	↓
NY 2759	↓	Roof	↓	☒ Area ☐ Personal	↓	857	1526	↓	↓	↓	↓
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							

Comments:

* PAH - 240U Volume uncertain at this time; will test pump and may revise volume

Page 2 of 2 pages

Controlled Document - Industrial Hygiene CDC - RS - 042617

**Order ID: 281902999**

Attn: Matt Wardlow
 CTL Thompson
 1971 West 12th Avenue
 Denver, CO 80204

Customer ID: CTLT34
 Customer PO:
 Date Received: 08/01/19

Project: **West Classroom**
 Report Date: 08/05/19

EMSL Order: 281902999
 EMSL Project ID:
 Date Analyzed: 08/02/19

Test Report – Aldehyde Analysis by HPLC/UV of Assay Passive Diffusion Samplers via Modified NIOSH 2016, Issue 2, 3/15/03

EMSL ID	Client ID	Compound	Time Sampled	Report Limit (µg)	Report Limit (PPM)	Sample Amount (µg)	Sample Amount (PPM)
281902999-0007	NY4431	Formaldehyde	488	0.050	0.0051	0.12	0.012
		Acetaldehyde		0.050	0.0048	ND	ND
		Acrolein		0.050	0.0027	ND	ND
		Acetone		0.050	0.0026	ND	ND
		Propionaldehyde		0.050	0.0044	ND	ND
		Crotonaldehyde		0.050	0.0041	ND	ND
		Butyraldehyde		0.050	0.0042	ND	ND
		Benzaldehyde		0.050	0.0033	ND	ND
281902999-0008	NY2936	Formaldehyde	487	0.050	0.0051	0.11	0.011
		Acetaldehyde		0.050	0.0048	ND	ND
		Acrolein		0.050	0.0027	ND	ND
		Acetone		0.050	0.0026	ND	ND
		Propionaldehyde		0.050	0.0044	ND	ND
		Crotonaldehyde		0.050	0.0041	ND	ND
		Butyraldehyde		0.050	0.0042	ND	ND
		Benzaldehyde		0.050	0.0033	ND	ND
281902999-0009	NY5584	Formaldehyde	487	0.050	0.0051	0.092	0.0093
		Acetaldehyde		0.050	0.0048	ND	ND
		Acrolein		0.050	0.0027	ND	ND
		Acetone		0.050	0.0026	ND	ND
		Propionaldehyde		0.050	0.0044	ND	ND
		Crotonaldehyde		0.050	0.0041	ND	ND
		Butyraldehyde		0.050	0.0042	ND	ND
		Benzaldehyde		0.050	0.0033	ND	ND

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected unless otherwise noted.
4. Discernable field blank(s) not submitted with samples.
5. ND denotes Not Detected.



Scott VanEtten, CIH- Lab Manager
 Or other approved signatory

AS/TC
Analyst

**Order ID: 281902999**

Attn: Matt Wardlow
 CTL Thompson
 1971 West 12th Avenue
 Denver, CO 80204

Customer ID: CTLT34
 Customer PO:
 Date Received: 08/01/19

Project: **West Classroom**
 Report Date: 08/05/19

EMSL Order: 281902999
 EMSL Project ID:
 Date Analyzed: 08/02/19

Test Report – Aldehyde Analysis by HPLC/UV of Assay Passive Diffusion Samplers via Modified NIOSH 2016, Issue 2, 3/15/03

EMSL ID	Client ID	Compound	Time Sampled	Report Limit (µg)	Report Limit (PPM)	Sample Amount (µg)	Sample Amount (PPM)
281902999-0010	NY1481	Formaldehyde	486	0.050	0.0051	0.10	0.010
		Acetaldehyde		0.050	0.0048	ND	ND
		Acrolein		0.050	0.0027	ND	ND
		Acetone		0.050	0.0026	ND	ND
		Propionaldehyde		0.050	0.0045	ND	ND
		Crotonaldehyde		0.050	0.0041	ND	ND
		Butyraldehyde		0.050	0.0042	ND	ND
		Benzaldehyde		0.050	0.0034	0.073	0.0049
281902999-0011	NY1407	Formaldehyde	486	0.050	0.0051	0.097	0.010
		Acetaldehyde		0.050	0.0048	ND	ND
		Acrolein		0.050	0.0027	ND	ND
		Acetone		0.050	0.0026	ND	ND
		Propionaldehyde		0.050	0.0045	ND	ND
		Crotonaldehyde		0.050	0.0041	ND	ND
		Butyraldehyde		0.050	0.0042	ND	ND
		Benzaldehyde		0.050	0.0034	ND	ND
281902999-0012	NY2759	Formaldehyde	389	0.050	0.0064	0.054	0.0068
		Acetaldehyde		0.050	0.0060	0.064	0.0077
		Acrolein		0.050	0.0034	ND	ND
		Acetone		0.050	0.0033	0.057	0.0037
		Propionaldehyde		0.050	0.0056	ND	ND
		Crotonaldehyde		0.050	0.0051	ND	ND
		Butyraldehyde		0.050	0.0052	ND	ND
		Benzaldehyde		0.050	0.0042	0.40	0.034

Notes:

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5. ND denotes Not Detected.



Scott VanEtten, CIH- Lab Manager
 Or other approved signatory

AS/TC
Analyst



Order ID: 281902999

Attn: Matt Wardlow
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Customer ID: CTLT34
Customer PO:
Date Received: 08/01/19

Project: **West Classroom**
Report Date: 08/05/19

EMSL Order: 281902999
EMSL Project ID:
Date Analyzed: 08/02/19

**Test Report – Aldehyde Analysis by HPLC/UV of
Assay Passive Diffusion Samplers via Modified NIOSH 2016, Issue 2, 3/15/03**

EMSL ID	Client ID	Compound	Time Sampled	Report Limit (µg)	Report Limit (PPM)	Sample Amount (µg)	Sample Amount (PPM)
Desorption Blank	-	Formaldehyde	0	0.050	N/A	N/D	N/D
		Acetaldehyde		0.050	N/A	N/D	N/D
		Acrolein		0.050	N/A	N/D	N/D
		Acetone		0.050	N/A	N/D	N/D
		Propionaldehyde		0.050	N/A	N/D	N/D
		Crotonaldehyde		0.050	N/A	N/D	N/D
		Butyraldehyde		0.050	N/A	N/D	N/D
		Benzaldehyde		0.050	N/A	N/D	N/D

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected unless otherwise noted.
4. Discernable field blank(s) not submitted with samples.
5. ND denotes Not Detected.

AS/TC
Analyst

Scott VanEtten, CIH- Lab Manager
Or other approved signatory



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn:

**Matt Wardlow
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204**

Phone: (303) 825-0777

Fax:

8/5/2019

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 8/1/2019. The results are tabulated on the attached data pages for the following client designated project:

West Classroom

The reference number for these samples is EMSL Order #011909452. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry Laboratory
Director



AIHA-LAP, LLC-IHLAP Lab # 100194
NELAP Certification: NJ 03036; NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements unless specifically indicated. The final results are not blank corrected unless specifically indicated. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011909452

CustomerID: CTLT34

CustomerPO: 86302482

ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777

Fax:

Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results****Client Sample Description** Metals-239C**Collected:** 7/31/2019**Lab ID:** 011909452-0001

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.00012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000024	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cadmium	ND	0.00012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0024	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.00012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.00012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Thallium	ND	0.00012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.0012	mg/m ³	8/1/2019 ES	8/1/2019 JW

Client Sample Description Metals-239D**Collected:** 7/31/2019**Lab ID:** 011909452-0002

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.00011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000021	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cadmium	ND	0.00011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0021	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.00011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.00011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011909452

CustomerID: CTLT34

CustomerPO: 86302482

ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777

Fax:

Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results**

Client Sample Description Metals-239D **Collected:** 7/31/2019 **Lab ID:** 011909452-0002

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Thallium	ND	0.00011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.0011	mg/m ³	8/1/2019 ES	8/1/2019 JW

Client Sample Description Metals-239E **Collected:** 7/31/2019 **Lab ID:** 011909452-0003

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.00010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000021	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cadmium	ND	0.00010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0021	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.00010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.00010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Thallium	ND	0.00010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.0010	mg/m ³	8/1/2019 ES	8/1/2019 JW

Client Sample Description Metals-239F **Collected:** 7/31/2019 **Lab ID:** 011909452-0004

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.000097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000019	mg/m ³	8/1/2019 ES	8/1/2019 JW

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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EMSL Order: 011909452

CustomerID: CTLT34

CustomerPO: 86302482

ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777

Fax:

Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results****Client Sample Description** Metals-239F**Collected:** 7/31/2019**Lab ID:** 011909452-0004

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Cadmium	ND	0.000097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0019	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.000097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.000097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Thallium	ND	0.000097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.00097	mg/m ³	8/1/2019 ES	8/1/2019 JW

Client Sample Description Metals-240U**Collected:** 7/31/2019**Lab ID:** 011909452-0005

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.000088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000018	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cadmium	ND	0.000088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0018	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.000088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.000088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Thallium	ND	0.000088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.00088	mg/m ³	8/1/2019 ES	8/1/2019 JW

**EMSL Analytical, Inc.**

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EMSL Order: 011909452

CustomerID: CTLT34

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ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777
Fax:
Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results****Client Sample Description** Metals-Roof**Collected:** 7/31/2019**Lab ID:** 011909452-0006

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
7300 Modified	Antimony	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Arsenic	ND	0.00015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Barium	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Beryllium	ND	0.000031	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cadmium	ND	0.00015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Chromium	ND	0.0031	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Cobalt	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Copper	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Lead	ND	0.00015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Molybdenum	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Nickel	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Selenium	ND	0.00015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Silver	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Thallium	ND	0.00015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Vanadium	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW
7300 Modified	Zinc	ND	0.0015	mg/m ³	8/1/2019 ES	8/1/2019 JW

Definitions:

MDL - method detection limit

J - Result was below the reporting limit, but at or above the MDL

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only):

011909461

 EMSL ANALYTICAL, INC.
 200 ROUTE 130 NORTH
 CINCINNATI, OH 45207
 PHONE (800) 220-3675
 FAX (856) 858-3502

Report To Contact Name: <u>Matt Wardlaw</u>		Bill To Company: <u>CTL</u>		Client ID #:	
Company Name: <u>CTL Thompson</u>		Attention To:			
Street: <u>1971 West 12th Ave</u>		Street:			
City: <u>Denver</u>		State/Province: <u>CO</u>		Zip/Postal Code: <u>80204</u>	
Phone: <u>303.825.0777</u>		City:		State/Province:	
Fax:		Zip/Postal Code:			
Project Name: <u>West Classroom</u>		Email Results To: <u>wardlaw@ctlthompson.com</u>		U.S. State where Samples Collected: <u>CO</u>	
# Samples in Shipment: <u>610</u>		Purchase Order:		Sampled By (Signature): <u>Matt Wardlaw</u>	
Date of Shipment:		Sampled By (Signature):			

Turnaround Time (TAT) - Please Check: If No Selection Made, Standard 2 Week TAT Will Apply						Media Type: <u>NIOSH 6009 Canvite</u>	
☐ 2 Week	☐ 1 Week	☐ 4 Day	☐ 3 Day	☒ 2 Day	☐ 1 Day	☐ Other (Call Lab)	Lot #:

Client Sample ID	Sample Date	Location	Description	Sample Type	Flow (lpm)	Sample Time		Air Volume	Analyte Name	Media	Comments
						On	Off				
239C	7/31/19	2nd Floor	—	☒ Area ☐ Personal	0.194	743	814	6.014	14g	Air	
239D			—	☒ Area ☐ Personal	0.331	747	817	9.93			
239E			—	☒ Area ☐ Personal	0.155	751	821	4.65			
239F			—	☒ Area ☐ Personal	0.179	756	827	5.55			
240U			blank	☒ Area ☐ Personal	none	802	830	—			
Roof		Roof	—	☒ Area ☐ Personal	0.173	904	928	4.15			
				☐ Area ☐ Personal							
				☐ Area ☐ Personal							

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.	
Released By: <u>Matt Wardlaw</u>	Date: <u>7/31/19</u>
Received By: <u>Barbara Costa</u>	Date: <u>8/1/19</u>
Comments: <u>Barbara Costa 8/1 9:20am</u>	



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn:

**Matt Wardlow
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204**

Phone: (303) 825-0777

Fax:

8/5/2019

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 8/1/2019. The results are tabulated on the attached data pages for the following client designated project:

West Classroom

The reference number for these samples is EMSL Order #011909461. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry Laboratory
Director



AIHA-LAP, LLC-IHLAP Lab # 100194
NELAP Certification: NJ 03036; NY 10872

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the AIHA, unless specifically indicated. The final results are not field blank corrected. The laboratory is not responsible for final results calculated using air volumes that have been provided by non-laboratory personnel. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011909461

CustomerID: CTLT34

CustomerPO:

ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777

Fax:

Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results**

Client Sample Description 239C
2nd Floor **Collected:** 7/31/2019 **Lab ID:** 011909461-0001

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.0017 mg/m ³	8/2/2019 PV	8/2/2019 PV

Client Sample Description 239D
2nd Floor **Collected:** 7/31/2019 **Lab ID:** 011909461-0002

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.0010 mg/m ³	8/2/2019 PV	8/2/2019 PV

Client Sample Description 239E
2nd Floor **Collected:** 7/31/2019 **Lab ID:** 011909461-0003

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.0022 mg/m ³	8/2/2019 PV	8/2/2019 PV

Client Sample Description 239F
2nd Floor **Collected:** 7/31/2019 **Lab ID:** 011909461-0004

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.0018 mg/m ³	8/2/2019 PV	8/2/2019 PV

Client Sample Description 240U
2nd Floor(Blank) **Collected:** 7/31/2019 **Lab ID:** 011909461-0005

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.000010 mg/tube	8/2/2019 PV	8/2/2019 PV

Client Sample Description Roof
Roof **Collected:** 7/31/2019 **Lab ID:** 011909461-0006

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011909461

CustomerID: CTLT34

CustomerPO:

ProjectID:

Attn: **Matt Wardlow**
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204

Phone: (303) 825-0777

Fax:

Received: 08/01/19 9:20 AM

Project: **West Classroom****Analytical Results**

Client Sample Description	Roof	Collected:	7/31/2019	Lab ID:	011909461-0006
	Roof				

Method	Parameter	Result	RL	Units	Prep Date & Analyst	Analysis Date & Analyst
METALS						
NIOSH 6009	Mercury	ND		0.0024 mg/m ³	8/2/2019 PV	8/2/2019 PV

Definitions:

MDL - method detection limit

J - Result was below the reporting limit, but at or above the MDL

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution

Wardlow, Matt

From: DON BRONSON <bronsond@msn.com>
Sent: Sunday, July 28, 2019 3:41 PM
To: Wardlow, Matt
Subject: Radon

Rocky Mountain Radon Control, llc						
8156-E S. Wadsworth Blvd #366						
Littleton, CO 80128 (303) 980-1961						
Customer	CTL					
Address	West Classroom, Denver, CO					
Start date	07/23/19					
Start Time	12:23					
Stop Date	7/26/19					
Stop Time	12:36					
Count Date	07/28/19					
Count Time	16:38					
Canister Counts	3675					
BK Counts	3510					
Standard counts	79355					
Cal factor	0.093					
Location	239E					
Canister #	121713Ra40V					
NOTE:						
	Exposure Time		72.22			
	Decay Time		88.14			
	Decay Factor		0.5136			
	Efficiency		3.1868			
	Radon Concentration	<0.5	pCi/L	+/-	10%	

Rocky Mountain Radon Control, llc (RMRC) is not responsible for the improper use or placement of canisters. Reliability of the results may be subject to marked variability. RMRC's liability is limited solely to the cost of the canisters provided.						
The E.P.A. and the Centers for Disease Control have set a CONTINUOUS EXPOSURE Level of 4pCi/l as a guidance level for further testing and/or remedial action.						
NEHA ID: 100307RT/101098 ALI						

Shelley
Rocky Mountain Radon Control
303-980-1961



Rocky Mountain
Radon Control, LLC

24 hour turn-around radon



Wardlow, Matt

From: DON BRONSON <bronsond@msn.com>
Sent: Sunday, July 28, 2019 3:39 PM
To: Wardlow, Matt
Subject: Radon

Rocky Mountain Radon Control, llc						
8156-E S. Wadsworth Blvd #366						
Littleton, CO 80128 (303) 980-1961						
Customer	CTL					
Address	West Classroom, Denver, CO					
Start date	07/23/19					
Start Time	12:15					
Stop Date	7/26/19					
Stop Time	12:31					
Count Date	07/28/19					
Count Time	16:30					
Canister Counts	3710					
BK Counts	3510					
Standard counts	79355					
Cal factor	0.093					
Location	239C					
Canister #	L182Ra40V					
NOTE:						
	Exposure Time		72.27			
	Decay Time		88.12			
	Decay Factor		0.5137			
	Efficiency		3.1868			
	Radon Concentration	<0.5	pCi/L	+/-	10%	

Rocky Mountain Radon Control, llc (RMRC) is not responsible for the improper use or placement of canisters. Reliability of the results may be subject to marked variability. RMRC's liability is limited solely to the cost of the canisters provided.						
The E.P.A. and the Centers for Disease Control have set a CONTINUOUS EXPOSURE Level of 4pCi/l as a guidance level for further testing and/or remedial action.						
NEHA ID: 100307RT/101098 ALI						

Shelley
Rocky Mountain Radon Control
303-980-1961



**Rocky Mountain
Radon Control, LLC**



24 hour turn-around radon



86 Rn
Radon
(222)
[Hg]6p⁶
10.7485

Wardlow, Matt

From: DON BRONSON <bronsond@msn.com>
Sent: Sunday, July 28, 2019 3:37 PM
To: Wardlow, Matt
Subject: Radon

Rocky Mountain Radon Control, llc						
8156-E S. Wadsworth Blvd #366						
Littleton, CO 80128 (303) 980-1961						
Customer	CTL					
Address	West Classroom, Denver, CO					
Start date	07/23/19					
Start Time	12:26					
Stop Date	7/26/19					
Stop Time	12:38					
Count Date	07/28/19					
Count Time	16:35					
Canister Counts	3855					
BK Counts	3510					
Standard counts	79355					
Cal factor	0.093					
Location	239F					
Canister #	6616Ra40V					
NOTE:						
	Exposure Time		72.20			
	Decay Time		88.05			
	Decay Factor		0.5140			
	Efficiency		3.1868			
	Radon Concentration		0.5pCi/L	+/-	10%	

Rocky Mountain Radon Control, llc (RMRC) is not responsible for the improper use or placement of canisters. Reliability of the results may be subject to marked variability. RMRC's liability is limited solely to the cost of the canisters provided.						
The E.P.A. and the Centers for Disease Control have set a CONTINUOUS EXPOSURE Level of 4pCi/l as a guidance level for further testing and/or remedial action.						
NEHA ID: 100307RT/101098 ALI						

Shelley
Rocky Mountain Radon Control
303-980-1961



**Rocky Mountain
Radon Control, LLC**



24 hour turn-around radon



86 Rn
Radon
(222)
[Hg]6p⁶
10.7485

Wardlow, Matt

From: DON BRONSON <bronsond@msn.com>
Sent: Sunday, July 28, 2019 3:35 PM
To: Wardlow, Matt
Subject: Radon

Rocky Mountain Radon Control, llc						
8156-E S. Wadsworth Blvd #366						
Littleton, CO 80128 (303) 980-1961						
Customer	CTL					
Address	West Classroom, Denver, CO					
Start date	07/23/19					
Start Time	12:20					
Stop Date	7/26/19					
Stop Time	12:34					
Count Date	07/28/19					
Count Time	16:28					
Canister Counts	3795					
BK Counts	3510					
Standard counts	79355					
Cal factor	0.093					
Location	239D					
Canister #	48016Ra40V					
NOTE:						
	Exposure Time		72.23			
	Decay Time		88.02			
	Decay Factor		0.5141			
	Efficiency		3.1868			
	Radon Concentration	<0.5	pCi/L	+/-	10%	

Rocky Mountain Radon Control, llc (RMRC) is not responsible for the improper use or placement of canisters. Reliability of the results may be subject to marked variability. RMRC's liability is limited solely to the cost of the canisters provided.						
The E.P.A. and the Centers for Disease Control have set a CONTINUOUS EXPOSURE Level of 4pCi/l as a guidance level for further testing and/or remedial action.						
NEHA ID: 100307RT/101098 ALI						

Shelley
Rocky Mountain Radon Control
303-980-1961



Rocky Mountain
Radon Control, LLC

24 hour turn-around radon



86 Rn
Radon
(222)
[Hg]6p⁶
10.7485

Wardlow, Matt

From: DON BRONSON <bronsond@msn.com>
Sent: Sunday, July 28, 2019 3:42 PM
To: Wardlow, Matt
Subject: Radon

Rocky Mountain Radon Control, llc						
8156-E S. Wadsworth Blvd #366						
Littleton, CO 80128 (303) 980-1961						
Customer	CTL					
Address	West Classroom, Denver, CO					
Start date	07/23/19					
Start Time	12:28					
Stop Date	7/26/19					
Stop Time	12:41					
Count Date	07/28/19					
Count Time	16:26					
Canister Counts	3865					
BK Counts	3510					
Standard counts	79355					
Cal factor	0.093					
Location	240U					
Canister #	48116Ra40V					
NOTE:						
	Exposure Time		72.22			
	Decay Time		87.86			
	Decay Factor		0.5147			
	Efficiency		3.1868			
	Radon Concentration		0.5pCi/L	+/-	10%	

Rocky Mountain Radon Control, llc (RMRC) is not responsible for the improper use or placement of canisters. Reliability of the results may be subject to marked variability. RMRC's liability is limited solely to the cost of the canisters provided.						
The E.P.A. and the Centers for Disease Control have set a CONTINUOUS EXPOSURE Level of 4pCi/l as a guidance level for further testing and/or remedial action.						
NEHA ID: 100307RT/101098 ALI						

Shelley
Rocky Mountain Radon Control
303-980-1961



**Rocky Mountain
Radon Control, LLC**



24 hour turn-around radon



86 Rn
Radon
(222)
[Hg]6p⁶
10.7485



EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077

Order ID: 281902999

Attn: Matt Wardlow
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204
Project: **West Classroom**
Report Date: 08/05/19

Customer ID: CTLT34
Customer PO:
Date Received: 08/01/19
Date Analyzed: 08/01/19

Test Report – Polynuclear Aromatic Hydrocarbon Analysis by HPLC/FLD/UV of Air Samples via mod. NIOSH 5506, Issue 3, 1/15/98

EMSL ID	281902999-0001	281902999-0002	281902999-0003	281902999-0004
Sample ID	PAH-239C	PAH-239D	PAH-239E	PAH-239F
Sample Volume (L)	369.68	454.4	474.39	539.4
Sample Media	Tube 226-30-04 Filter 225-1713	Tube 226-30-04 Filter 225-1713	Tube 226-30-04 Filter 225-1713	Tube 226-30-04 Filter 225-1713
Compound	Conc. (µg/m3)	Conc. (µg/m3)	Conc. (µg/m3)	Conc. (µg/m3)
Naphthalene	<1.7	<1.4	<1.3	<1.2
Acenaphthylene	<1.7	<1.4	<1.3	<1.2
Acenaphthene	<1.7	<1.4	<1.3	<1.2
Fluorene	<1.7	<1.4	<1.3	<1.2
Phenanthrene	<0.85	<0.69	<0.66	<0.58
Anthracene	<1.7	<1.4	<1.3	<1.2
Fluoranthene	<0.85	<0.69	<0.66	<0.58
Pyrene	<0.85	<0.69	<0.66	<0.58
Benzo(a)anthracene	<0.85	<0.69	<0.66	<0.58
Chrysene	<0.85	<0.69	<0.66	<0.58
Benzo(e)pyrene	<0.85	<0.69	<0.66	<0.58
Benzo(b)fluoranthene	<0.85	<0.69	<0.66	<0.58
Benzo(k)fluoranthene	<0.85	<0.69	<0.66	<0.58
Benzo(a)pyrene	<0.85	<0.69	<0.66	<0.58
Dibenzo(a,h)anthracene	<0.85	<0.69	<0.66	<0.58
Benzo(g,h,i)perylene	<0.85	<0.69	<0.66	<0.58
Indeno(1,2,3-c,d)pyrene	<0.85	<0.69	<0.66	<0.58

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are media blank corrected.
4. Discernible blank submitted with samples if listed.



Scott VanEtten, CIH- Lab Manager
Or other approved signatory

AS/TC
Analyst



EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077

Order ID: 281902999

Attn: Matt Wardlow
CTL Thompson
1971 West 12th Avenue
Denver, CO 80204
Project: **West Classroom**
Report Date: 08/05/19

Customer ID: CTLT34
Customer PO:
Date Received: 08/01/19
Date Analyzed: 08/01/19

Test Report – Polynuclear Aromatic Hydrocarbon Analysis by HPLC/FLD/UV of Air Samples via mod. NIOSH 5506, Issue 3, 1/15/98

EMSL ID	281902999-0005	281902999-0006	Media Blank	Analytical Sensitivity
Sample ID	PAH-240V	PAH-Roof		
Sample Volume (L)	92.4	697.2		
Sample Media	Tube 226-30-04 Filter 225-1713	Tube 226-30-04 Filter 225-1713	Tube 226-30-04 Filter 225-1713	
Compound	Conc. (µg/m3)	Conc. (µg/m3)	Conc. (µg)	
Naphthalene	<6.8	<0.90	<0.63	0.63
Acenaphthylene	<6.8	<0.90	<0.63	0.63
Acenaphthene	<6.8	<0.90	<0.63	0.63
Fluorene	<6.8	<0.90	<0.63	0.63
Phenanthrene	<3.4	<0.45	<0.31	0.31
Anthracene	<6.8	<0.90	<0.63	0.63
Fluoranthene	<3.4	<0.45	<0.31	0.31
Pyrene	<3.4	<0.45	<0.31	0.31
Benzo(a)anthracene	<3.4	<0.45	<0.31	0.31
Chrysene	<3.4	<0.45	<0.31	0.31
Benzo(e)pyrene	<3.4	<0.45	<0.31	0.31
Benzo(b)fluoranthene	<3.4	<0.45	<0.31	0.31
Benzo(k)fluoranthene	<3.4	<0.45	<0.31	0.31
Benzo(a)pyrene	<3.4	<0.45	<0.31	0.31
Dibenzo(a,h)anthracene	<3.4	<0.45	<0.31	0.31
Benzo(g,h,i)perylene	<3.4	<0.45	<0.31	0.31
Indeno(1,2,3-c,d)pyrene	<3.4	<0.45	<0.31	0.31

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are media blank corrected.
4. Discernible blank submitted with samples if listed.



Scott VanEtten, CIH- Lab Manager
Or other approved signatory

AS/TC
Analyst

AIHA-LAP, LLC – IHLAP Lab#100194

Page 2 of 2



July 24, 2019

Laboratory Code: RES
Subcontract Number: NA
Laboratory Report: RES 440672-1
Project # / P.O. # DN50172-260
Project Description: West Classroom

Matt Wardlow
CTL/Thompson (Denver)
1971 West 12th Place
Denver CO 80204

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of pathogenic, non-pathogenic and environmental microorganisms by the American Industrial Hygiene Association, Lab ID 101533 - Accreditation Certificate #480. The laboratory is currently proficient in both EMPAT and FOODLAP programs.

Reservoirs has analyzed the following sample(s) per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the analysis table. Reported sample results were not blank corrected. Results have been sent to your office.

RES 440672-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer
President

RESERVOIRS ENVIRONMENTAL, INC.

5801 Logan St. Suite 100, Denver CO, 80221
AIHA EMPAT #101533

RES Job Number: RES 440672-1
Client: CTL/Thompson (Denver)
Client Project Number / P.O.: DN50172-260
Client Project Description: West Classroom
Date Samples Received: July 24, 2019
Date Samples Analyzed: July 23, 2019
Date Sampled: July 24, 2019
Analysis Type: Spore Trap, Non-Viable Methodology
Spore Trap Type: Air O Cell
Turnaround: Rush
Analyst: AG

Client ID Number:	239C			239D			239E			239F			239 (Lobby)		
Sample Volume (liters)	75			75			75			75			75		
	% Analyzed	Raw Count	Spores/M ³	% Analyzed	Raw Count	Spores/M ³	% Analyzed	Raw Count	Spores/M ³	% Analyzed	Raw Count	Spores/M ³	% Analyzed	Raw Count	Spores/M ³
Acremonium - Like	100	ND		100	ND		100	ND		100	ND		100	ND	
Alternaria	100	ND		100	ND		100	ND		100	ND		100	1	13
Arthrinium	100	ND		100	ND		100	ND		100	ND		100	ND	
Ascospores - Non-Specified	100	ND		100	4	53	100	4	53	100	2	27	100	ND	
Aspergillus/Penicillium - Like	100	ND		100	5	67	100	ND		100	ND		100	ND	
Basidiospores - Non-Specified	100	2	27	100	3	40	100	1	13	100	2	27	100	ND	
Bipolaris/Drechslera - Like	100	ND		100	ND		100	ND		100	ND		100	ND	
Botrytis	100	ND		100	ND		100	ND		100	ND		100	ND	
Cercospora-like	100	ND		100	ND		100	ND		100	ND		100	ND	
Chaetomium	100	ND		100	ND		100	ND		100	ND		100	ND	
Cladosporium	100	47	627	100	47	627	100	19	253	100	1	13	100	13	173
Curvularia	100	ND		100	3	40	100	ND		100	ND		100	ND	
Epicoccum	100	ND		100	ND		100	ND		100	ND		100	ND	
Fusarium	100	ND		100	ND		100	ND		100	ND		100	ND	
Ganoderma	100	ND		100	ND		100	ND		100	ND		100	ND	
Memnoniella	100	ND		100	ND		100	ND		100	ND		100	ND	
Myxomycetes / Periconia / Smuts / Rusts	100	11	147	100	23	307	100	4	53	100	2	27	100	12	160
Nigrospora	100	ND		100	ND		100	ND		100	ND		100	ND	
Oidium (powder mildew)	100	ND		100	ND		100	ND		100	ND		100	ND	
Pestalotiopsis / Pestalotia	100	ND		100	ND		100	ND		100	ND		100	ND	
Pithomyces	100	ND		100	ND		100	ND		100	ND		100	ND	
Scopulariopsis	100	ND		100	ND		100	ND		100	ND		100	ND	
Spegazzinia	100	ND		100	ND		100	ND		100	ND		100	ND	
Stachybotrys	100	ND		100	ND		100	ND		100	ND		100	ND	
Trichocladium	100	ND		100	ND		100	ND		100	ND		100	ND	
Torula	100	ND		100	ND		100	ND		100	ND		100	ND	
Trichoderma-like	100	ND		100	ND		100	ND		100	ND		100	ND	
Ulocladium / Stemphylium	100	ND		100	ND		100	ND		100	ND		100	ND	
Non-specified spore	100	1	13	100	3	40	100	1	13	100	1	13	100	ND	
Hyphal Fragments	100	ND		100	ND		100	ND		100	ND		100	ND	
Pollen	100	ND		100	ND		100	ND		100	1	13	100	ND	
Analytical Sensitivity	100	1	13	100	1	13	100	1	13	100	1	13	100	1	13
Background Debris		3			3			2			2			2	
Total Spores/M ³			810			1200			390			110			350
Raw Total			61			88			29			8			26
Comments															

* Sample analyses have not been blank corrected.

ND = Not Detected

NA = Not Analyzed

TNTC = Too Numerous To Count

Minimum Reporting Limit (MRL) = 1 Cell

Common Allergen
Water Loss Indicator

Analyst / Data QA:


Anita Grigg

RESERVOIRS ENVIRONMENTAL, INC.

5801 Logan St. Suite 100, Denver CO, 80221
AIHA EMPAT #101533

RES Job Number: RES 440672-1
Client: CTL/Thompson (Denver)
Client Project Number / P.O.: DN50172-260
Client Project Description: West Classroom
Date Samples Received: July 24, 2019
Date Samples Analyzed: July 23, 2019
Date Sampled: July 24, 2019
Analysis Type: Spore Trap, Non-Viable Methodology
Spore Trap Type: Air O Cell
Turnaround: Rush
Analyst: AG

Client ID Number:	240 U (Conference)			Exterior		
Sample Volume (liters)	75			75		
	% Analyzed	Raw Count	Spores/M ³	% Analyzed	Raw Count	Spores/M ³
Acremonium - Like	100	ND		35	ND	
Alternaria	100	ND		35	5	190
Arthrinium	100	ND		35	ND	
Ascospores - Non-Specified	100	ND		35	19	724
Aspergillus/Penicillium - Like	100	ND		35	8	305
Basidiospores - Non-Specified	100	ND		35	12	457
Bipolaris/Drechslera - Like	100	ND		35	ND	
Botrytis	100	ND		35	ND	
Cercospora-like	100	ND		35	ND	
Chaetomium	100	ND		35	ND	
Cladosporium	100	ND		35	47	1790
Curvularia	100	ND		35	ND	
Epicoccum	100	ND		35	2	76
Fusarium	100	ND		35	ND	
Ganoderma	100	ND		35	1	38
Memnoniella	100	ND		35	ND	
Myxomycetes / Periconia / Smuts / Rusts	100	5	67	35	11	419
Nigrospora	100	ND		35	ND	
Oidium (powder mildew)	100	ND		35	ND	
Pestalotiopsis / Pestalotia	100	ND		35	ND	
Pithomyces	100	ND		35	1	38
Scopulariopsis	100	ND		35	ND	
Spegazzinia	100	ND		35	ND	
Stachybotrys	100	ND		35	ND	
Tetraploa	100	ND		35	ND	
Torula	100	ND		35	ND	
Trichoderma-like	100	ND		35	ND	
Ulocladium / Stemphylium	100	ND		35	ND	
Non-specified spore	100	ND		35	1	38
Hyphal Fragments	100	ND		35	ND	
Pollen	100	ND		35	ND	
Analytical Sensitivity	100	1	13	35	1	38
Background Debris		2			3	
Total Spores/M ³			67			4,076
Raw Total			5			107
Comments						

* Sample analyses have not been blank corrected.

ND = Not Detected

NA = Not Analyzed

TNTC = Too Numerous To Count

Minimum Reporting Limit (MRL) = 1 Cell

Common Allergen
Water Loss Indicator

Analyst / Data QA:

Anita Grigg
Anita Grigg

ANALYTICAL INFORMATION

Spore traps are a sampling devices that collect aeroallergens such as pollens, mold and fungal spores, fibers, dander, insect components and other air-borne contaminants. Samples are analyzed using light microscopy at 600X magnification with the entire sample trace or a percentage of the trace is counted. The results include both viable and non-viable fungal spores. This technique does not allow for the differentiation between *Aspergillus* and *Penicillium* spores. Small (1-3um) spherical fungal spores that cannot be identified and may included *Aspergillus*, *Penicillium* and *Paecilomyces* and others. Sample traces with greater than 500 spores per slide are difficult to count accurately due to overcrowding and should be considered estimations. Excessive non-microbial particulate debris can mask the presence of fungal spores, thereby reducing counting accuracies. All samples are graded with the following debris scale for data qualification.

AIHA EMPAT #101533

Background Debris Rating	Description	Interpretation
0	No Particles Detected	No particles were observed on slide. The absence of particulates could indicate improper sampling, as most air samples typically contain some particulate
1	Minimal non-microbial debris present.	Reported values are not affected by debris
2	Up to 25% of the slide occluded with particulate debris	Particulate debris could mask the presence of spores but do not provide significant interference with the analyses
3	26 to 50% of the slide occluded with particulate debris	Particulate debris could mask the presence of spores and begin to interfere with the analytical count. As a result actual values could be somewhat higher than reported.
4	51 to 90% of the slide occluded with particulate debris	Particulate debris are heavy and would mask the presence of some fungal spores if present. As a result, the count could be higher than reported.
CBR	Cannot Be Read	Sample could not be read due to excessive debris. Spores observed on the perimeter of debris are reported as present or abundant. The sample should be collected at shorter time interval or other measures taken to reduce the collection of non-microbial debris.

Qualitative Reporting Limits	Description
Infrequent	1 to 5 Structures per 22 x 22 mm
Occasional	5 to 50 Structures per 22 x 22 mm
Moderate	1 to 10 Structures per Field of View
Abundant	10+ Structures per Field of View



REI LAB **Reservoirs Environmental, Inc.**

5801 Logan St Denver, CO 80216 • Ph: 303 964-1986 • Fax 303 477-4275 • Toll Free :866 RESI-ENV

Pager : 303-509-2098

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company:	CTL	Company:	
Address:		Address:	
	Denver		
Project Number and/or P.O. #: DN50172-260		Contact:	
Project Description/Location: West classroom		Phone:	
		Fax:	
		Cell/pager:	
		Final Data Deliverable Email Address:	
		mwardlow@ctlthompson.com	

Deliverable Email Address: mwardlow@c1thompson.com

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm PLM / PCM / TEM _____ RUSH (Same Day) _____ PRIORITY (Next Day) _____ STANDARD (Rush PCM = 2hr, TEM = 6hr.)	
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm Metal(s) / Dust _____ RUSH 24 hr. _____ 3-5 Day RCRA 8 / Metals & Welding _____ RUSH 5 day _____ 10 day Fume Scan / TCLP _____ Organics _____ 24 hr. _____ 3 day _____ 5 Day **Prior notification is required for RUSH turnarounds.**	
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm E.coli O157:H7, Coliforms, S.aureus _____ 24 hr. _____ 2 Day _____ 3-5 Day Salmonella, Listeria, E.coli, APC, Y & M _____ 48 Hr. _____ 3-5 Day Mold _____ RUSH 24 Hr. _____ 48 Hr. _____ 5 Day **Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.**	
Special Instructions:	
Client sample ID number _____ (Sample ID's must be unique)	
1 239C	
2 239D	
3 239E	
4 239F	
5 239G (lobby)	
6 2410U (Conference)	
7 Exterior	
8	
9	
10	

Number of samples received:

(Additional samples shall be listed on attached long form)

Number of samples received: 7 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <i>Matthew Handlow</i>		Date/Time: <i>07/24/19 11:35 AM</i>		Sample Condition:		On Ice		Sealed		Intact	
Laboratory Use Only											
Received By: <i>[Signature]</i>		Date/Time: <i>7/24/19 11:40A</i>		Carrier: <i>Hand</i>		Temp. (F°) _____		Yes / No		Yes / No <i>0</i>	
Results:		Date		Time		Date		Time		Initials	
Contact	Phone	Email	Fax	Contact	Initials	Contact	Phone	Email	Fax	Date	Initials
Contact	Phone	Email	Fax	Contact	Initials	Contact	Phone	Email	Fax	Date	Initials