TETRA TECH

Date: **February 20, 2023**

To: **Hannah Ashenafi, Department of Energy & Environment (DOEE)**

From: **Jimmy Kehs, Tetra Tech, Inc. (Tetra Tech)**

Cc: **Elliot Sanders, Tetra Tech, Rafiq Jennings and Stephen Ours, DOEE**

Subject: **Nepseal Air Survey for National Engineering Products located at 1950 Capitol Avenue, NE, Washington, DC 20002**

Introduction

The purpose of this memorandum is to provide the District of Columbia Department of Energy & Environment (DOEE) with Tetra Tech, Inc.'s (Tetra Tech) evaluation of a completed air survey at the National Engineering Products facility located at 1950 Capitol Avenue, NE, Washington, D.C. (Site, **Figure 1** of **Attachment 1**).

Background

The National Engineering Products facility located at 1950 Capitol Avenue, NE, Washington, D.C. (Site, **Figure 1** of **Attachment 1**) is currently used as a manufacturing facility for high pressure and fire-resistant sealants for the U.S. Navy. DOEE has received complaints of odors from neighboring residents, potentially in association with elevated Volatile Organic Compounds (VOCs) related to the manufacturing of company products Copaltite and Nepseal. DOEE requested Tetra Tech complete an air survey of potential contaminants in the Site building, as well as calculate the air flow rates from exhaust fans located in the building to evaluate the contaminant mass released from the building. Tetra Tech understands DOEE will use these data to evaluate applicable regulatory requirements as part of a review to determine permit applicability for the facility. DOEE and Tetra Tech performed a site reconnaissance visit of the facility during mixing activities on March 1, 2022, and has conducted several conference calls with the facility owner and DOEE in preparation of the sampling memorandum provided to DOEE.

Figure 1 of **Attachment 1** shows the location and orientation of the Site. The building footprint is approximately 4,400 square feet northwest of the intersection of Capitol Avenue, NE, and Fenwick Street, NE. The building is a single-story, slab-on-grade structure with a production floor and storage areas. The northern half of the production floor is where the majority of manufacturing activity takes place, including mixing and product packaging. Fifty-five-gallon drums and bags of product ingredients are stored along the northern and northwestern walls of the facility on an elevated platform. The platform contains two mixers and associated ventilation systems with an exhaust fan directly above the mixers on the roof. Roll-up garage doors are present on the northern and eastern walls of the building proximate to the northeastern corner of the facility.

They are reportedly opened for additional ventilation when manufacturing activities are not in operation. An additional exhaust fan is located on the roof of the facility in the north/central portion of the roof reportedly associated with a kiln that is no longer in-use. The final exhaust port is associated with a ventilation hood located along the eastern wall on the south end of the building for general building exhaust. This exhaust port is approximately 15 feet above street level along the southeastern corner of the facility.

Screening Level Discussion

The Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) are utilized for site "screening" to help identify contaminants and conditions that may require further attention. The risk-based contaminant concentrations are derived from standardized equations combining exposure information assumptions with EPA toxicity data. These standards were developed by the EPA under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for use on Superfund sites to evaluate if contaminants pose a risk to human health and the environment. EPA RSL values are continually updated and re-released every four months and includes a comprehensive list of potential contaminants to ensure these risk-based screening levels continue to be protective based on additional studies of potential contaminants. RSLs are considered by the EPA to be protective for humans (including sensitive groups) over a lifetime. Generally, at sites where contaminant concentrations fall below RSLs, no further action or study is warranted, so long as the exposure assumptions at a site match those taken into account by the RSL calculations. Chemical concentrations above the RSL does not necessarily trigger response actions; however, exceeding a RSL suggests that further evaluation of the potential risks by site contaminants may be appropriate.

Note that the Residential RSLs used in this report assume the community is exposed to 24 hours of continuous exposure to associated chemicals over a period of 26 years for non-carcinogenic chemicals and a period of 70 years for carcinogenic chemicals. The sample period described in this report was intentionally during a period of Site manufacturing operations and is therefore, not representative of chemical concentrations at the Site during day-to-day operations.

Industrial RSLs used in this report assume the workers are exposed to associated chemicals for 8 hours per day for 250 days per year over a 25-year work life for non-carcinogenic chemicals and a period of 70 years for carcinogenic chemicals. Industrial screening levels were utilized for comparison purposes for samples collected at the Site.

The RSL values selected have a Target Risk (TR) of 1x10-6 which corresponds to a one-in-a-million cancer risk for chemicals that present a risk of cancerous effects. For chemicals with noncancerous health impacts a Target Hazard Quotient (THQ) of 0.1 was selected. A hazard quotient represents the ratio of potential exposure to a contaminant and the level at which no adverse effects are likely to occur. A THQ of 1.0 is used to identify the levels at which a single chemical will not cause harmful health effects, however because the Site data is being screened against multiple chemicals of concern, there is a possibility that the effects of multiple chemicals could result in harmful health effects despite the individual chemicals never exceeding their THQ 1.0 screening criteria. The selection of 0.1 THQ adds a layer of protection against this possibility by lowering the screening criteria to account for the potential effects of multiple chemicals of concern. This additional layer of protection also introduces the potential to overestimate the risk that individual

contaminants of concern pose, as the 0.1 THQ is an intentionally conservative comparison point to ensure potential risk is identified.

American Conference of Governmental Industrial Hygienist (ACGIH) Threshold Limit Values (TLVs) and United States Department of Labor Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are used throughout this report where RSL values are unavailable and for instances of sample locations where industrial workers at the facility are the primary receptor. OSHA PELs are regulatory limits for exposure of employees to a chemical substance or physical agent in order to protect the workers from potential adverse health effects in the short and long term. These limits are formulated based on average exposure over an 8-hour period to reflect typical worker exposure. ACGIH TLVs are not regulatory limits, but guidelines set by a private scientific organization which are also based on average exposure over an 8-hour period to be protective of human health. ACGIH guidelines are used by both OSHA and the EPA for reference in development of their PELs and RSLs respectively.

Nepseal Production Field Summary

On August 1-2, 2022, Tetra Tech completed air sampling during Nepseal production from the outermost exhaust ports of the three ventilation systems and interior air sampling within the facility. **Figure 2** of **Attachment 1** shows the sampling locations.

Samples collected at the exhaust ports were intended to assess the contents and concentration of chemicals and particulates in the industrial process exhaust produced by typical Site operations on Nepseal production days. In order to assess the representative constituents within air released by the Site, samples were collected at the three observed exhaust points: production associated mixer exhaust port (E1), the unused kiln exhaust port (E2), and the hood ventilator exhaust port (E3) used for general building ventilation. Of note, the kiln was not used in the Nepseal manufacturing process, and the exhaust port where sample E2 was collected was not actively ventilating; however, there was measurable airflow to the exterior.

Interior air samples were collected in the northern portion of the facility where production processes are concentrated (PF-1) in order to assess interior air quality during manufacturing. Another purpose of collecting interior ambient samples was to evaluate compounds remaining within the building by comparing concentrations present on the interior against what was being exhausted.

Based on the ingredient list for Nepseal provided by the owner and the Safety Data Sheet (SDS), sampling analytes consisted of fiberglass, respirable dust, and total dust. Volatile organic compounds (VOC[1]) were sampled within the facility to assess inside-building ancillary processes and storage for potential VOC emissions.

Production activities at the Site occurred from approximately 1000 hours until 1400 hours on August 1st and 1000 until 1600 hours on August 2nd. On August 1st, 2022, the main activity in

[1] For the purposes of this report the term VOC is used to designate Volatile Organic Compounds as it pertains to analytes identified in United States Environmental Protection Agency (EPA) method TO-15 and includes chemicals different from those defined by the same term in District of Columbia Municipal Regulations 20 DCMR 199.

production was allowing a drum of Unidyme 60, a viscous ingredient, to drain into the mixer. On August 2nd, 2022, the majority of mixing events involving other ingredients occurred. A visible amount of dust was observed exiting Exhaust Port 1 (E1) on two separate occurrences during the sampling on August 2nd. Tetra Tech observed this dust generation just after addition of Bentone 38 into the mixer. Per discussion with DOEE, sample run times ceased after Nepseal production was completed.

The personal air sampling pumps were calibrated to flow at approximately 2 Liters per minute (L/min) for airborne fibers, total dust and respirable dust. Ambient temperatures were between 77 – 90 degrees Fahrenheit and barometric pressure was approximately 29-30" Hg.

Table 1 lists the samples collected during Nepseal production by location and analysis.

Table 1. Nepseal Sample Count

Analysis	Exhaust Port Samples	Production Floor Samples	Field Blank Samples
Respirable Dust	3	1	2
Total Aerosol Mass	3	1	2
Fiber Count	3	1	2
VOC	0	2	0

Tetra Tech measured the dimensions of all exhaust ports at the Site and collected air velocity measurements in a grid pattern to evaluate an average flow rate for each exhaust based on the velocity of air and area of the exhaust ports. The exhaust port associated with the kiln, designated Exhaust 2 (E-2), was not actively circulating air during Nepseal production. However, air flow was measured exiting the exhaust port during measurement of airflow velocity from all exhaust ports and a sample set was collected from the port to best capture Site mass emissions. **Table 2** below lists the average air velocity at each exhaust port and the exhaust dimensions.

Table 2. Exhaust Port Dimensions and Flow Rate

Exhaust Port	Dimensions (inches)	Average Velocity (feet/Minute)	Air Flow Rate ($meter^3$/Minute)
E1 – Mixer Exhaust	12 x 16	2802.5	105.810
E2 – Kiln Exhaust	24 x 24	27.75	3.143
E3 – Hood Ventilator	16 x 16	876.25	44.111

All samples were packed in the field and sent via FedEx to EMSL Analytical, Inc., of Cinnaminson, New Jersey. All samples were accompanied by chains of custody during transportation to the laboratories.

Indoor Air Analytical Results

Twelve VOC constituents were detected in the indoor air production floor VOC samples collected during Nepseal production (**Table 1** in **Attachment 2** and **Table 3** below). The indoor air results were compared to US Environmental Protection Agency (EPA) Regional Screening Levels (RSL) for Industrial Air and the ACGIH TLVs for workers. Methylene chloride was the only constituent that exceeded EPA Industrial RSLs, however Methylene Chloride did not exceed ACHIG TLVs. The Site is currently utilized as an industrial facility.

The production floor sample PF-2 was collected at the south end of the building interior proximate to the offices and facility access from Capital Avenue, NE, as an interior background sample to compare against the interior sample collected proximate to the mixers and production activity (PF-1). The VOC analyte concentrations at PF-1 and PF-2 were found to be generally consistent with each other with two exceptions. Ethanol and Isopropyl Alcohol were elevated at the PF-2 location as compared with concentrations found at PF-1 on August 1st. On August 2nd the results for both these analytes are again generally consistent with each other.

Table 1. Detected VOC Analytical Results

Sample ID	Sample Date	Analyte / Location	Chloromethane	n-Butane	Ethanol	Isopropyl alcohol(2-Propanol)	Acetone	Methylene chloride	n-Hexane	2-Butanone(MEK)	Ethyl acetate	n-Heptane	4-Methyl-2-pentanone(MIBK)	Toluene
		CAS#	74-87-3	106-97-8	64-17-5	67-63-0	67-64-1	75-09-2	110-54-3	78-93-3	141-78-6	142-82-5	108-10-1	108-88-3
NEP-PF1-080122	8/1/2022	Production Floor Mixing Area	ND	8.4	100	7.3	55	300 D	5.7	ND	10	ND	ND	8.5
NEP-PF2-080122	8/1/2022	Production Floor Near Offices	ND	8.0	320 E	27	50	310	ND	ND	15	ND	ND	6.1
NEP-PF1-080222	8/2/2022	Production Floor Mixing Area	3.7	29.0	140	15	30	370 D	24	4.6	7.7	14	4.7	11
NEP-PF2-080222	8/2/2022	Production Floor Near Offices	2.2	15.0	130	12	23	260	9	ND	8.2	5.7	ND	6
ACGIH [1]	N/A	Threshold Limit Value 8 hr TWA	103300	2376300	1885500	491600	594100	173700	176300	589800	1441300	1639300	81900	75300
EPA RSL [2]	N/A	Regional Screening Levels for Industrial Workers	39	N/A	N/A	88	N/A	260	310	2200	31	180	1300	2200

Notes:
Only Detected Data is Presented
All results presented in µg/m^3
Shaded cells indicate and exceedance of RSL or ACGIH TLV
*The term VOC here is used to designate Volatile Organic Compounds as it pertains to analytes identified in EPA method TO-15 and may include chemicals in addition to those defined by the same term in District of Columbia Municipal Regulations 20 DCMR 199.
1. ACGIH. Documentation of threshold limit values for substances in work environment. See annual publication for most recent information. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.
2. EPA Region 3 Air Regional Screening Levels for Industrial Workers, TR=1x10^{-6}, THQ=0.1, November 2022

Abbreviations:
CAS - Chemical Abstract Service Registry Number
D - Compound reported from additional diluted analysis
E - Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute
EPA - United States Environmental Protection Agency
N/A - Screening Levels Not Available
ND - Analyte not detected
µg/m3 - Micrograms per cubic meter

Fiber count, total respirable dust, and total undifferentiated aerosol particles were sampled proximate to production floor activity (PF-1) and all were below detection limits except one total undifferentiated aerosol particle sample. This sample result was 0.16 mg/cubic meter which is significantly below the ACGIH TLV of 10 mg/cubic meter.

Exhaust Ports

Fiber counts were not detected above the laboratory method detection limit at any exhaust port.

Total undifferentiated aerosol particles and respirable dust samples were detected above the reporting limit at exhaust port 1 (the only exhaust port that had detectible concentrations of sampled analytes). Because many of these analytes were undetected the mass emission calculation for these analytes can only be assigned an upper limit based on the reporting limit, the true mass emissions could be anywhere from zero to the upper limit based on the reporting limit. See **Tables 2 through 4** of **Attachment 2** for the range of hourly mass emissions for each analyte based on the air flow rates from each exhaust port.

Mass emissions were calculated for each analyte detected in exhaust port samples based on the air flow rates and the concentrations detected.

Data Quality

Air sampling at the community production floor, and exhaust ports was completed in accordance with the methods described in the sampling scope memorandum with the following exceptions:

- The production floor samples run time coincided with production due to the completion of production activity and securing of the facility as National Engineering Products Staff left.
- VOC samples PF-1 and PF-2 on the production floor required dilution with clean air by the analytical laboratory in order to meet the minimum volume requirements for analysis. The laboratory has qualified these results but determined no narrative was required.
- Analytical results designated by the analytical laboratory with 'D' qualifiers indicate that the sample had to be diluted with certified clean air before analysis. Lab dilutions of air samples are necessary when there is not enough air in the sample to perform all analyses or when certain chemicals exceed the calibrated range of the instruments used to perform the analyses. These dilutions generally do not introduce any novel chemicals into the air sample but do require the analytical result to be a partially calculated result due to the introduction of additional volume. Chemical concentrations provided by the laboratory where dilution was required are considered reliable data for risk-based screening decisions.

Data Quality

While this assessment was conducted in general conformance with validated sampling and analytical methodologies, the results should not be construed as a constant state of chemical concentrations at the Site and in the community. Sampling design and implementation was directed at assessing and capturing a snapshot during a 'worst-case scenario' of Site production activities. The results from this sampling can be considered as typical when production occurs with similar ingredients and processes. This effort was conducted at a point in time in which specific ingredients would be utilized, mixed and transferred. The sample period described in this report was intentionally during a period of Site manufacturing operations and is therefore, not representative of chemical and particulate concentrations at the Site during day-to-day operations. Further assessment should be conducted during non-production activities with differing wind patterns, weather and off-Site activities in order to gain a better understanding of

the longer-term conditions present at the Site.

Conclusions

Sampling design and implementation of this effort was directed at components identified from production constituents as described in provided SDS documentation. VOC samples were collected in the interior of the facility as a precaution to identify potential fugitive emissions and sources not necessarily associated with Nepseal production. Several analytes identified at the Site after completion of lab analyses were not listed in the SDS reviewed, including Isopropanol, Ethyl Acetate, Methylene Chloride, and Toluene. Additional sampling is required to identify the sources of these analytes within the facility.

Fiber counts were not detected above the lab's detection limit in samples during or after Nepseal production and do not appear to pose an exposure risk to site workers or the community. Respirable dust and total undifferentiated aerosol particles were detected above the lab's reporting limit only in exhaust port 1. The concentrations identified do not indicate an exposure concern at the Site or the community.

Methylene Chloride was detected in indoor air samples at levels that exceeded Industrial Air EPA RSLs of 260 µg/cubic meter but did not exceed the 8-hour exposure OSHA PEL or ACGIH TLV of 86,841 and 173,682 µg/cubic meter respectively. The highest concentration in the interior of the facility was 370 µg/cubic meter. This compound was not identified in the review of ingredient safety data sheets prior to sampling and in order to understand potential sources and community exposure, additional sampling in the facility and surrounding community is recommended.

Total mass emitted during production over time is provided in the tables and can be extrapolated to the frequency and duration of the Site's planned Nepseal production.

Attachments

Attachment 1: Figures

- Figure 1 – Site Location
- Figure 2 – Site Features and Sample Locations

Attachment 2: Tables

- Table 1 – Detected VOC Results in Indoor Air Samples
- Table 2 – Fiber Count by Phase Contrast Microscopy Analytical Results
- Table 3 – Total Undifferentiated Aerosol Particles Analytical Results
- Table 4 – Respirable Dust Analytical Results

Attachment 3: Analytical Lab Results

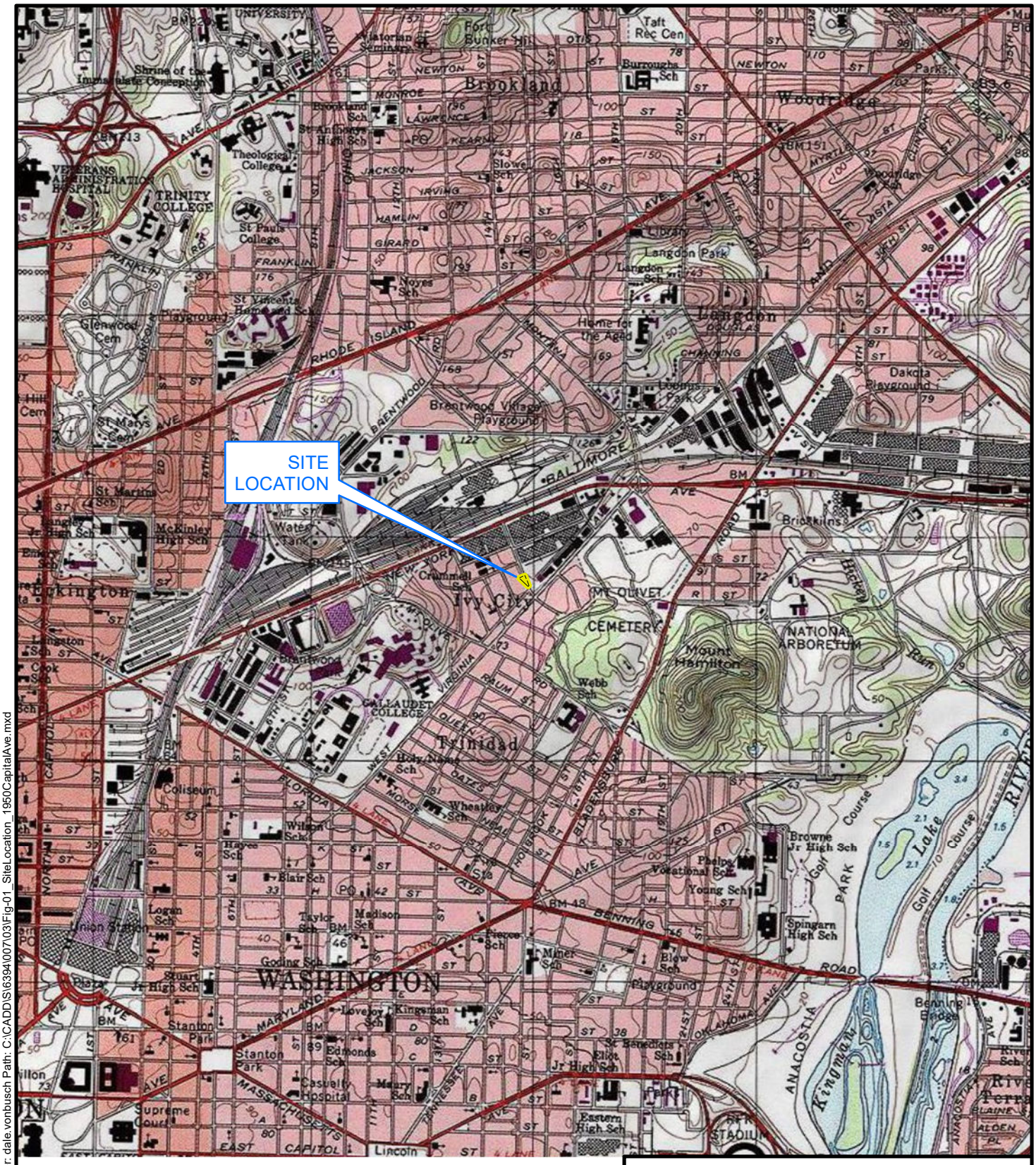
References:

EPA. 2022. Regional Screening Level (RSL) Tables (TR = 1E-6, HI = 0.1) May 2022 (Revised). www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm

ACGIH. 2022. Documentation of threshold limit values for substances in work environment. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.

TETRA TECH

Attachment 1: Figures



Legend

Approximate Property Boundary

N
W E
S

0 1,000 2,000
Feet

SOURCE: MODIFIED FROM USGS TOPOGRAPHIC MAPS; WASHINGTON WEST. DC 1984 AND WASHINGTON WEST, DC 1983.

NATIONAL ENGINEERING PRODUCTS
1950 CAPITOL AVENUE NE
WASHINGTON, DC

FIGURE 1
SITE LOCATION MAP

TETRA TECH

Date Saved: 6/1/2022 10:32:50 AM User: dale.vonbusch Path: C:\CADD\S\6394\007\03\Fig-01_SiteLocation_1950CapitalAve.mxd

Legend

- 1 Exhaust Port (E1)
- 2 Exhaust Port (E2)
- 3 Hood Ventilator (E3)
- K Kiln
- M Mixer
- P Product Vats
- 1 PF-1
- 2 PF-2
- Sample Location
- Approximate Property Boundary
- Drum Storage Area
- Garage Door

0 20 40
Feet

NATIONAL ENGINEERING PRODUCTS
1950 CAPITOL AVENUE NE
WASHINGTON, DC

FIGURE 2
SAMPLE LOCATIONS

TETRA TECH

Date Saved: 9/13/2022 8:20:02 PM User: dale.vonbusch Path: C:\CADD\S\6394\007\03\Fig-02_Sample_Locations_1950CapitolAve.mxd

TETRA TECH

Attachment 2: Tables

Table 1. Detected VOC Analytical Results

Sample ID	Sample Date	Analyte / CAS# / Location	Chloromethane 74-87-3	n-Butane 106-97-8	Ethanol 64-17-5	Isopropyl alcohol(2-Propanol) 67-63-0	Acetone 67-64-1	Methylene chloride 75-09-2	n-Hexane 110-54-3	2-Butanone(MEK) 78-93-3	Ethyl acetate 141-78-6	n-Heptane 142-82-5	4-Methyl-2-pentanone(MIBK) 108-10-1	Toluene 108-88-3
NEP-PF1-080122	8/1/2022	Production Floor Mixing Area	ND	**8.4**	**100**	**7.3**	**55**	**300 D**	**5.7**	ND	**10**	ND	ND	**8.5**
NEP-PF2-080122	8/1/2022	Production Floor Near Offices	ND	**8.0**	**320 E**	**27**	**50**	**310**	ND	ND	**15**	ND	ND	**6.1**
NEP-PF1-080222	8/2/2022	Production Floor Mixing Area	**3.7**	**29.0**	**140**	**15**	**30**	**370 D**	**24**	**4.6**	**7.7**	**14**	**4.7**	**11**
NEP-PF2-080222	8/2/2022	Production Floor Near Offices	**2.2**	**15.0**	**130**	**12**	**23**	**260**	**9**	ND	**8.2**	**5.7**	ND	**6**
ACGIH [1]	N/A	Threshold Limit Value 8 hr TWA	103300	2376300	1885500	491600	594100	173700	176300	589800	1441300	1639300	81900	75300
EPA RSL [2]	N/A	Regional Screening Levels for Industrial Workers	39	N/A	N/A	88	N/A	260	310	2200	31	180	1300	2200

Notes:

Only Detected Data is Presented

All results presented in µg/m^3

Shaded cells indicate and exceedance of RSL or ACGIH TLV

*The term VOC here is used to designate Volatile Organic Compounds as it pertains to analytes identified in EPA method TO-15 and may include chemicals in addition to those defined by the same term in District of Columbia Municipal Regulations 20 DCMR 199.

1. ACGIH. Documentation of threshold limit values for substances in work environment. See annual publication for most recent information. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.

2. EPA Region 3 Air Regional Screening Levels for Industrial Workers, TR=1x10^{-6}, THQ=0.1, November 2022

Abbreviations:

CAS - Chemical Abstract Service Registry Number

D - Compound reported from additional diluted analysis

E - Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute

EPA - United States Environmental Protection Agency

N/A - Screening Levels Not Available

ND - Analyte not detected

µg/m3 - Micrograms per cubic meter

Table 2. Fiber Count by Phase Contract Microscopy Analytical Results

Fiber Count			
Sample ID	**Result fibers/sample**	**Result fibers/cubic centimeter**	**Mass Emission (mg/Hr)**
NEP-E1-080222-AF	<5.5	<0.0050	N/A
NEP-E2-080222-AF	<5.5	<0.0051	N/A
NEP-E3-080222-AF	<5.5	<0.0051	N/A
NEP-PF1-080222-AF	<5.5	<0.0052	N/A
NEP-PF1-080122-AF	<5.5	<0.0056	N/A
NEP-E1-080122-AF	<5.5	<0.0037	N/A
NEP-E2-080122-AF	<5.5	<0.0038	N/A
NEP-E3-080122-AF	<5.5	<0.0038	N/A

Abbreviations:
N/A - Not Applicable
mg - Milligrams
Hr - Hour

Table 3. Total Undifferentiated Aerosol Particles Analytical Results

Total Undifferentiated Aerosol Particles			
Sample ID	**Result mg/sample**	**Result mg/m^3**	**Mass Emission (mg/Hour)**
NEP-E1-TOT-080222	0.4	0.75	1069.99
NEP-E2-TOT-080222	<0.050	<0.094	<4.014
NEP-E3-TOT-080222	<0.050	<0.095	<57.361
NEP-PF1-TOT-080222	0.084	0.16	N/A
NEP-PF1-TOT-080122	<0.050	<0.1	N/A
NEP-E1-TOT-080122	0.5	0.69	734.178
NEP-E2-TOT-080122	<0.050	<0.070	<2.218
NEP-E3-TOT-080122	<0.050	<0.070	<31.225

Abbreviations:

N/A - Not Applicable

ND - Analyte not detected

mg - Milligrams

mg/m3 - Milligrams per cubic meter

Table 4. Respirable Dust Analytical Results

Total Respirable Dust			
Sample ID	**Result mg/sample**	**Result mg/m^3**	**Mass Emission (mg/Hour)**
NEP-E1-RES-080222	0.15	0.29	413.73
NEP-E2-RES-080222	<0.050	<0.094	<4.015
NEP-E3-RES-080222	<0.050	<0.095	<57.36
NEP-PF1-RES-080222	<0.050	<0.10	N/A
NEP-PF1-RES-080122	<0.050	<0.096	N/A
NEP-E1-RES-080122	0.62	0.85	904.42
NEP-E2-RES-080122	<0.050	<0.070	<2.218
NEP-E3-RES-080122	<0.050	<0.070	<31.225

Abbreviations:

N/A - Not Applicable

ND - Analyte not detected

mg - Milligrams

mg/m3 - Milligrams per cubic meter

TETRA TECH

Attachment 3: Analytical Data

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order: 042218981
Customer ID: TTVA42
Customer PO:
Project ID:

Attention: Jamie Benson
Tetra Tech
14151 Newbrook Drive
Suite 400
Chantilly, VA 20151
Project: National Engineering Products

Phone: (703) 444-1685
Fax:
Received Date: 08/03/2022 09:25 AM
Analysis Date: 08/04/2022
Collected Date:

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 3, 6/15/2019

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm²	Fibers/cc	Notes
NEP-E1-080222-AF *042218981-0001*	Exhaust 1		534	<5.5	100	0.0050	<7.01	<0.0050	
NEP-E2-080222-AF *042218981-0002*	Exhaust 2		530	<5.5	100	0.0051	<7.01	<0.0051	
NEP-PF1-080122-AF *042218981-0003*	PF-1		484	<5.5	100	0.0056	<7.01	<0.0056	
NEP-PF1-080222-AF *042218981-0004*	PF-1		520	<5.5	100	0.0052	<7.01	<0.0052	
NEP-E1-080122-AF *042218981-0005*	E-1		724	<5.5	100	0.0037	<7.01	<0.0037	
NEP-E2-080122-AF *042218981-0006*	E-1		714	<5.5	100	0.0038	<7.01	<0.0038	
NEP-E3-080122-AF *042218981-0007*	E-2		712	<5.5	100	0.0038	<7.01	<0.0038	
NEP-E3-080222-AF *042218981-0008*	E-3		526	<5.5	100	0.0051	<7.01	<0.0051	
NEP-FB-AF-080222-1 *042218981-0009*	Field Blank			<5.5	100		<7.01		
NEP-FB-AF-080222-2 *042218981-0010*	Field Blank			<5.5	100		<7.01		

This method requires the submission of field blanks with each sample set. No discernable field blanks were submitted, samples are not blank corrected.

Analyst(s):
Amiri Lewis PCM 10

Samantha Rundstrom, Laboratory Manager
or other Approved Signatory

Initial report from: 08/04/2022 09:15 PM

Industrial Hygiene
Chain of Custody

EMSL Order Number (Lab Use Only): 042218981

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

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

OrderID: 042218981

Report To Contact Name: Jamie Benson		Bill To Company: Tetra Tech	Client ID #:
Company Name: Tetra Tech		Attention To: Jamie Benson	
Street: 14151 Newbrook Dr. Suite 400		Street: Same	
City: Chantilly	State/Province: VA	Zip/Postal Code: 20151	City: "	State/Province:	Zip/Postal Code:
Phone: 703-885-5466	Fax: 703-444-1685		Phone:	Fax:
Project Name: National Engineering Products		Email Results To: Jamie.Benson@Tetratech.com	U.S. State where Samples Collected: D.C.
# Samples in Shipment: 27	Date of Shipment: 8/2	Purchase Order:	Sampled By (Signature):

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 ☐ Other (Call Lab)

Media Type:

Manufacturer/Part #: Lot #:

Client Sample ID	Sample Date	Location	Description	Sample Type	Flow (lpm)	Sample Time On	Sample Time Off	Air Volume	Analyte Name	Media	Comments
NEP-E1-TOT-080222	8/2	E-1	Exhaust 1	☒ Area ☐ Personal	2	0925	1352	534	NIOSH 0500	cassette	Inside Exhaust
NEP-E1-Res-080222				☒ Area ☐ Personal	2			534	0600		
NEP-E1-080222-AF				☒ Area ☐ Personal	2			534	7400	PCM cassette	
NEP-E2-TOT-080222		E-2	Exhaust 2	☒ Area ☐ Personal	2	0927	1352	530	0500	Cassette	
NEP-E2-Res-080222				☒ Area ☐ Personal	2			530	0600		
NEP-E2-080222-AF				☒ Area ☐ Personal	2			530	7400	PCM cassette	
NEP-E3-TOT-080222		E-3	Exhaust 3	☒ Area ☐ Personal	2	0929	1352	526	0500	Cassette	
NEP-E3-Res-080222		E-3		☒ Area ☐ Personal	2	0929	1352	526	0600		

RECEIVED EMSL CINNAMINSON NJ 22 AUG -3 AM 10:42

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	Date	Received By	Date
[signature] TE 1700	8/2/22	MB-FX-925A	8-3-22

Comments: Split Silica / Asb 20 10

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Industrial Hygiene
Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL Analytical, Inc
200 Route 130 North
Cinnaminson, NJ 08077
Phone (800) 220-3675
Fax (856) 858-3502

OrderID: 042218981

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 On	Sample Time Off	Air Volume	Analyte Name	Media	Comments
NEP-PF1-TOT-080122	8/1/22	Production Floor North	PF-1	☒ Area ☐ Personal	2 1.728	1019	1426	484	TOTAL Dust	Cassette	Indoor Air
NEP-PF1-Res-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	484	Respirable Dust	↓	
NEP-PF1-080122-AF				☒ Area ☐ Personal	2			484	Airborne Fibers (7400)	PCM cassette	
NEP-PF1-080222-AF	8/2/22	Production Floor North	PF-1	☒ Area ☐ Personal	2	0924	1344	520	Niosh 7400	PCM cassette	
NEP-PF1-TOT-080222				☒ Area ☐ Personal	2			520	0500	Cassette	
NEP-PF1-Res-080222	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	520	0600		
NEP-E1-TOT-080122	8/1	Exhaust Fan 1	E-1	☒ Area ☐ Personal	2	1014	1612	724	Niosh 0500		Industrial Exhaust
NEP-E1-Res-080122				☒ Area ☐ Personal	2			724	0600	↓	
NEP-E1-080122-AF		↓	↓	☒ Area ☐ Personal	2	↓	↓	724	7400	PCM Cassette	
NEP-E2-080122-AF		Exhaust Fan 2	E-2	☒ Area ☐ Personal	2	1014	1611	714	↓	↓	
NEP-E2-TOT-080122				☒ Area ☐ Personal	2			714	0500	Cassette	
NEP-E2-Res-080122		↓	↓	☒ Area ☐ Personal	2	↓	↓	714	0600		
NEP-E3-Res-080122		Exhaust Fan 3	E-3	☒ Area ☐ Personal	2	1015	1611	712	↓		
NEP-E3-TOT-080122				☒ Area ☐ Personal	2			712	0500	↓	
NEP-E3-080122-AF	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	712	Niosh 7400	PCM Cassette	↓

RECEIVED
CINNAMINSON, NJ
2022 AUG -3 AM 10:43

Comments:

Sealed: 8/2/22 1700

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

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

PHONE: (800) 220-3675
EMAIL: c@emsl.com

Industrial Hygiene - Chain of Custody

EMSL Order Number / Lab Use Only

OrderID: 042218981

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Volume/Area	Sample Type	Sample Date	Comments
NEP-E3-080222-AF	Exhaust 3	NIOSH 7400	PCM cassette	2	0929	1352	526 L	☒ Area ☐ Personal	8/2/22	Incl. Exhaust
NEP-FB-AF-080222	Field Blank	↓	↓	Ø			Ø	☒ Area ☐ Personal	↓	x 2 cassettes (PCM)
NEP-FB-TOT-080222	Field Blank	0500	cassette ↓	Ø			Ø	☒ Area ☐ Personal		x2 cassettes
NEP-FB-Res-080222	Field Blank	0600	↓	Ø			Ø	☒ Area ☐ Personal	↓	x2 cassettes
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 1700 8/2/22	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

RECEIVED
EMSL
CINNAMINSON, N.J.
2022 AUG -3 AM 10:43

Controlled Document - COC-21 Industrial Hygiene R4 05/12/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 3 of 3

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:19
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Laboratory Report- Sample Summary

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
492200513-0001	NEP-PFI-080122	8/1/2022	10:19 AM
492200513-0002	NEP-PF2-080122	8/1/2022	10:20 AM
492200513-0003	NEP-PFI-080222	8/2/2022	9:24 AM
492200513-0004	NEP-PF2-080222	8/2/2022	9:23 AM

If "Preliminary Report" is displayed in the signature box; this indicates that there are samples that have not yet been analyzed, that are in a preliminary state, or that analysis is in progress but not completed at the time of report issue.

Report Date	Report Revision	Revision Comments
8/12/2022	R0	Initial Report

Owen McKenna, Chemistry Laboratory Director
or other approved signatory

Test results meet all NELAP requirements unless otherwise specified. NJDEP Certification #: 03036

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted.

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:19
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Case Narrative

Method Reference
USEPA: Compendium Method TO-15, “Determination of Volatile Organic Compounds (VOCs) in Air…" Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

Column
Restek RTX-502.2, 60m, 0.25mm ID, 1.4um

Concentrator Traps:
Entech Dual Cold Traps: (1) 1/8” No Packing, (2) 1/8” Tenax.

Gas Standards:
Certified Gas standards were used for all analyses.

Sample Volumes:
Sample volume aliquots for this procedure are 250cc for indoor/ ambient air and 25cc for soil gas. Other volumes for sample dilutions are reflected on each result page.

Holding Times:
Standard holding times of 30 days were met for all samples.

Sampling Pressures:
All samples were received at acceptable pressure/vacuum unless listed below.
All samples were received by the lab under high vacuum. Lab grade air was added prior to analysis. Client notified.

Sample Dilutions:
Dilutions reported are designated by the sample # with a "DL" suffix resulting from initial analysis having compounds exceeding calibration as reported with an "E" qualifier. Ethanol and Isopropanol are not diluted for and may be reported with an "E" qualifier on the final result.

QA/QC criteria outside method specifications are listed below (if applicable).

Initial Calibration
All Initial Calibration criteria met method specification.

Initial Calibration Verification Standard (ICVS)- Second Source
ICVS met method specification with 70-130% recovery for 100% of compounds.

Laboratory Control Sample (LCS)
LCS met method specification with 70-130% recovery for 100% of compounds.*(If the LCS does not meet criteria but any compounds which have recoveries >130% are not found in the samples, samples may be reported)*

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:19
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Case Narrative

Continuing Calibration Verification Standard (CCVS)
CCVS met method specification with all compounds within 30% deviation.

Ending Calibration Verification Standard (ECVS)
ECVS met method specification with all compounds within 30% deviation.

Method Blanks (MB)
Method Blank met method specification.

Reporting Limit Laboratory Control Samples (RLLCS)
RLLCS met method specification with 90% of compounds within the 60-140% recovery range. Individual compounds outside of the recovery range may be listed below.

Manual Integration*: -Listed below if applicable. Before and after documentation provided in extended deliverable packages.*

The following data qualifiers that may have been reported with the data,
ND- Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.
U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.
J (Target)- Concentration estimated between Reporting Limit and MDL.
J- Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed
B- Compound found in associated method blank as well as in the sample.
E- Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.
D- Compound reported from additional diluted analysis.
N- indicates presumptive evidence of a compound based on library search match.

EMSL Analytical, Inc. certifies that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer –readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

Owen McKenna, Chemistry Laboratory Director
or other approved signatory

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0001
CUSTOMER SAMPLE ID: NEP-PFI-080122

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:19
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	08/10/2022	KW/CP	y08096.D	E0643	356.25 cc	2
Dilution1	08/11/2022	KW/CP	y08107.D	E0643	71.25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	2.0		ND	3.4	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	1.0		ND	4.9	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	1.0		ND	7.0	
Chloromethane	74-87-3	50.49	ND	1.0		ND	2.1	
n-Butane	106-97-8	58.12	**3.5**	1.0		**8.4**	2.4	
Vinyl chloride	75-01-4	62.50	ND	1.0		ND	2.6	
1,3-Butadiene	106-99-0	54.09	ND	1.0		ND	2.2	
Bromomethane	74-83-9	94.94	ND	1.0		ND	3.9	
Chloroethane	75-00-3	64.51	ND	1.0		ND	2.6	
Ethanol	64-17-5	46.07	**51**	1.0		**100**	1.9	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	1.0		ND	4.4	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	1.0		ND	5.6	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	**3.0**	1.0		**7.3**	2.5	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	1.0		ND	7.7	
Acetone	67-64-1	58.08	**23**	1.0		**55**	2.4	
1,1-Dichloroethene	75-35-4	96.94	ND	1.0		ND	4.0	
Acetonitrile	75-05-8	41.05	ND	1.0		ND	1.7	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	1.0		ND	3.0	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	1.0		ND	4.5	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	1.0		ND	3.1	
Carbon disulfide	75-15-0	76.14	ND	1.0		ND	3.1	
Methylene chloride	75-09-2	84.93	**87**	5.0	D	**300**	17	***Reported Dilution1***
Acrylonitrile	107-13-1	53.08	ND	1.0		ND	2.2	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	1.0		ND	3.6	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	1.0		ND	4.0	
n-Hexane	110-54-3	86.18	**1.6**	1.0		**5.7**	3.5	
1,1-Dichloroethane	75-34-3	98.96	ND	1.0		ND	4.0	
Vinyl acetate	108-05-4	86.09	ND	1.0		ND	3.5	
2-Butanone(MEK)	78-93-3	72.11	ND	1.0		ND	2.9	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	1.0		ND	4.0	
Ethyl acetate	141-78-6	88.11	**2.7**	1.0		**10**	3.6	
Chloroform	67-66-3	119.4	ND	1.0		ND	4.9	
Tetrahydrofuran	109-99-9	72.11	ND	1.0		ND	2.9	
1,1,1-Trichloroethane	71-55-6	133.4	ND	1.0		ND	5.5	
Cyclohexane	110-82-7	84.16	ND	1.0		ND	3.4	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	1.0		ND	4.7	
Carbon tetrachloride	56-23-5	153.8	ND	1.0		ND	6.3	
n-Heptane	142-82-5	100.2	ND	1.0		ND	4.1	
1,2-Dichloroethane	107-06-2	98.96	ND	1.0		ND	4.0	
Benzene	71-43-2	78.11	ND	1.0		ND	3.2	
Trichloroethene	79-01-6	131.4	ND	1.0		ND	5.4	
1,2-Dichloropropane	78-87-5	113.0	ND	1.0		ND	4.6	
Methyl Methacrylate	80-62-6	100.1	ND	1.0		ND	4.1	
Bromodichloromethane	75-27-4	163.8	ND	1.0		ND	6.7	
1,4-Dioxane	123-91-1	88.11	ND	1.0		ND	3.6	

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0001
CUSTOMER SAMPLE ID: NEP-PFI-080122

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:19
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	08/10/2022	KW/CP	y08096.D	E0643	356.25 cc	2
Dilution1	08/11/2022	KW/CP	y08107.D	E0643	71.25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	1.0		ND	4.1	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	1.0		ND	4.5	
Toluene	108-88-3	92.14	**2.3**	1.0		**8.5**	3.8	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	1.0		ND	4.5	
1,1,2-Trichloroethane	79-00-5	133.4	ND	1.0		ND	5.5	
2-Hexanone(MBK)	591-78-6	100.2	ND	1.0		ND	4.1	
Tetrachloroethene	127-18-4	165.8	ND	1.0		ND	6.8	
Dibromochloromethane	124-48-1	208.3	ND	1.0		ND	8.5	
1,2-Dibromoethane	106-93-4	187.9	ND	1.0		ND	7.7	
Chlorobenzene	108-90-7	112.6	ND	1.0		ND	4.6	
Ethylbenzene	100-41-4	106.2	ND	1.0		ND	4.3	
Xylene (p,m)	1330-20-7	106.2	ND	2.0		ND	8.7	
Xylene (Ortho)	95-47-6	106.2	ND	1.0		ND	4.3	
Styrene	100-42-5	104.1	ND	1.0		ND	4.3	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	1.0		ND	4.9	
Bromoform	75-25-2	252.7	ND	1.0		ND	10	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	1.0		ND	6.9	
4-Ethyltoluene	622-96-8	120.2	ND	1.0		ND	4.9	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	1.0		ND	4.9	
2-Chlorotoluene	95-49-8	126.6	ND	1.0		ND	5.2	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	1.0		ND	4.9	
1,3-Dichlorobenzene	541-73-1	147.0	ND	1.0		ND	6.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	1.0		ND	6.0	
Benzyl chloride	100-44-7	126.6	ND	1.0		ND	5.2	
1,2-Dichlorobenzene	95-50-1	147.0	ND	1.0		ND	6.0	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	1.0		ND	7.4	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	1.0		ND	11	
Naphthalene	91-20-3	128.2	ND	1.0		ND	5.2	
Total Target Compound Concentrations:			**170**	**ppbv**		**490**	**ug/m3**	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10	10	100%

Qualifier Definitions
ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.
J= Concentration estimated between Reporting Limit and MDL.

Method Reference
USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air…" Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0002
CUSTOMER SAMPLE ID: NEP-PF2-080122

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:20
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis Initial	Analysis Date 08/10/2022	Analyst Init. KW/CP	Lab File ID y08097.D	Canister ID E0290	Sample Vol. 341.67 cc	Dil. Factor 3

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	3.0		ND	5.2	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	1.5		ND	7.4	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	1.5		ND	10	
Chloromethane	74-87-3	50.49	ND	1.5		ND	3.1	
n-Butane	106-97-8	58.12	**3.4**	1.5		**8.0**	3.6	
Vinyl chloride	75-01-4	62.50	ND	1.5		ND	3.8	
1,3-Butadiene	106-99-0	54.09	ND	1.5		ND	3.3	
Bromomethane	74-83-9	94.94	ND	1.5		ND	5.8	
Chloroethane	75-00-3	64.51	ND	1.5		ND	4.0	
Ethanol	64-17-5	46.07	**170**	1.5	E	**320**	2.8	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	1.5		ND	6.6	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	1.5		ND	8.4	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	**11**	1.5		**27**	3.7	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	1.5		ND	11	
Acetone	67-64-1	58.08	**21**	1.5		**50**	3.6	
1,1-Dichloroethene	75-35-4	96.94	ND	1.5		ND	5.9	
Acetonitrile	75-05-8	41.05	ND	1.5		ND	2.5	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	1.5		ND	4.5	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	1.5		ND	6.7	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	1.5		ND	4.7	
Carbon disulfide	75-15-0	76.14	ND	1.5		ND	4.7	
Methylene chloride	75-09-2	84.93	**89**	1.5		**310**	5.2	
Acrylonitrile	107-13-1	53.08	ND	1.5		ND	3.3	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	1.5		ND	5.4	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	1.5		ND	5.9	
n-Hexane	110-54-3	86.18	ND	1.5		ND	5.3	
1,1-Dichloroethane	75-34-3	98.96	ND	1.5		ND	6.1	
Vinyl acetate	108-05-4	86.09	ND	1.5		ND	5.3	
2-Butanone(MEK)	78-93-3	72.11	ND	1.5		ND	4.4	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	1.5		ND	5.9	
Ethyl acetate	141-78-6	88.11	**4.2**	1.5		**15**	5.4	
Chloroform	67-66-3	119.4	ND	1.5		ND	7.3	
Tetrahydrofuran	109-99-9	72.11	ND	1.5		ND	4.4	
1,1,1-Trichloroethane	71-55-6	133.4	ND	1.5		ND	8.2	
Cyclohexane	110-82-7	84.16	ND	1.5		ND	5.2	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	1.5		ND	7.0	
Carbon tetrachloride	56-23-5	153.8	ND	1.5		ND	9.4	
n-Heptane	142-82-5	100.2	ND	1.5		ND	6.1	
1,2-Dichloroethane	107-06-2	98.96	ND	1.5		ND	6.1	
Benzene	71-43-2	78.11	ND	1.5		ND	4.8	
Trichloroethene	79-01-6	131.4	ND	1.5		ND	8.1	
1,2-Dichloropropane	78-87-5	113.0	ND	1.5		ND	6.9	
Methyl Methacrylate	80-62-6	100.1	ND	1.5		ND	6.1	
Bromodichloromethane	75-27-4	163.8	ND	1.5		ND	10	
1,4-Dioxane	123-91-1	88.11	ND	1.5		ND	5.4	

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0002
CUSTOMER SAMPLE ID: NEP-PF2-080122

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/01/2022 10:20
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis Initial	Analysis Date 08/10/2022	Analyst Init. KW/CP	Lab File ID y08097.D	Canister ID E0290	Sample Vol. 341.67 cc	Dil. Factor 3

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	1.5		ND	6.1	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	1.5		ND	6.8	
Toluene	108-88-3	92.14	**1.6**	1.5		**6.1**	5.7	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	1.5		ND	6.8	
1,1,2-Trichloroethane	79-00-5	133.4	ND	1.5		ND	8.2	
2-Hexanone(MBK)	591-78-6	100.2	ND	1.5		ND	6.1	
Tetrachloroethene	127-18-4	165.8	ND	1.5		ND	10	
Dibromochloromethane	124-48-1	208.3	ND	1.5		ND	13	
1,2-Dibromoethane	106-93-4	187.9	ND	1.5		ND	12	
Chlorobenzene	108-90-7	112.6	ND	1.5		ND	6.9	
Ethylbenzene	100-41-4	106.2	ND	1.5		ND	6.5	
Xylene (p,m)	1330-20-7	106.2	ND	3.0		ND	13	
Xylene (Ortho)	95-47-6	106.2	ND	1.5		ND	6.5	
Styrene	100-42-5	104.1	ND	1.5		ND	6.4	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	1.5		ND	7.4	
Bromoform	75-25-2	252.7	ND	1.5		ND	16	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	1.5		ND	10	
4-Ethyltoluene	622-96-8	120.2	ND	1.5		ND	7.4	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	1.5		ND	7.4	
2-Chlorotoluene	95-49-8	126.6	ND	1.5		ND	7.8	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	1.5		ND	7.4	
1,3-Dichlorobenzene	541-73-1	147.0	ND	1.5		ND	9.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	1.5		ND	9.0	
Benzyl chloride	100-44-7	126.6	ND	1.5		ND	7.8	
1,2-Dichlorobenzene	95-50-1	147.0	ND	1.5		ND	9.0	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	1.5		ND	11	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	1.5		ND	16	
Naphthalene	91-20-3	128.2	ND	1.5		ND	7.9	
Total Target Compound Concentrations:			**300**	**ppbv**		**740**	**ug/m3**	

Surrogate	**Result**	**Spike**	**Recovery**
4-Bromofluorobenzene	9.0	10	90%

Qualifier Definitions
ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.
J= Concentration estimated between Reporting Limit and MDL.

Method Reference
USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air…" Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0003
CUSTOMER SAMPLE ID: NEP-PFI-080222

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/02/2022 09:24
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	08/10/2022	KW/CP	y08098.D	E40582	326.25 cc	2
Dilution1	08/11/2022	KW/CP	y08108.D	E40582	65.25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	2.0		ND	3.4	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	1.0		ND	4.9	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	1.0		ND	7.0	
Chloromethane	74-87-3	50.49	**1.8**	1.0		**3.7**	2.1	
n-Butane	106-97-8	58.12	**12**	1.0		**29**	2.4	
Vinyl chloride	75-01-4	62.50	ND	1.0		ND	2.6	
1,3-Butadiene	106-99-0	54.09	ND	1.0		ND	2.2	
Bromomethane	74-83-9	94.94	ND	1.0		ND	3.9	
Chloroethane	75-00-3	64.51	ND	1.0		ND	2.6	
Ethanol	64-17-5	46.07	**76**	1.0		**140**	1.9	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	1.0		ND	4.4	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	1.0		ND	5.6	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	**6.2**	1.0		**15**	2.5	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	1.0		ND	7.7	
Acetone	67-64-1	58.08	**13**	1.0		**30**	2.4	
1,1-Dichloroethene	75-35-4	96.94	ND	1.0		ND	4.0	
Acetonitrile	75-05-8	41.05	ND	1.0		ND	1.7	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	1.0		ND	3.0	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	1.0		ND	4.5	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	1.0		ND	3.1	
Carbon disulfide	75-15-0	76.14	ND	1.0		ND	3.1	
Methylene chloride	75-09-2	84.93	**110**	5.0	D	**370**	17	***Reported Dilution1***
Acrylonitrile	107-13-1	53.08	ND	1.0		ND	2.2	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	1.0		ND	3.6	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	1.0		ND	4.0	
n-Hexane	110-54-3	86.18	**6.7**	1.0		**24**	3.5	
1,1-Dichloroethane	75-34-3	98.96	ND	1.0		ND	4.0	
Vinyl acetate	108-05-4	86.09	ND	1.0		ND	3.5	
2-Butanone(MEK)	78-93-3	72.11	**1.6**	1.0		**4.6**	2.9	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	1.0		ND	4.0	
Ethyl acetate	141-78-6	88.11	**2.1**	1.0		**7.7**	3.6	
Chloroform	67-66-3	119.4	ND	1.0		ND	4.9	
Tetrahydrofuran	109-99-9	72.11	ND	1.0		ND	2.9	
1,1,1-Trichloroethane	71-55-6	133.4	ND	1.0		ND	5.5	
Cyclohexane	110-82-7	84.16	ND	1.0		ND	3.4	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	1.0		ND	4.7	
Carbon tetrachloride	56-23-5	153.8	ND	1.0		ND	6.3	
n-Heptane	142-82-5	100.2	**3.4**	1.0		**14**	4.1	
1,2-Dichloroethane	107-06-2	98.96	ND	1.0		ND	4.0	
Benzene	71-43-2	78.11	ND	1.0		ND	3.2	
Trichloroethene	79-01-6	131.4	ND	1.0		ND	5.4	
1,2-Dichloropropane	78-87-5	113.0	ND	1.0		ND	4.6	
Methyl Methacrylate	80-62-6	100.1	ND	1.0		ND	4.1	
Bromodichloromethane	75-27-4	163.8	ND	1.0		ND	6.7	
1,4-Dioxane	123-91-1	88.11	ND	1.0		ND	3.6	

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0003
CUSTOMER SAMPLE ID: NEP-PFI-080222

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/02/2022 09:24
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	08/10/2022	KW/CP	y08098.D	E40582	326.25 cc	2
Dilution1	08/11/2022	KW/CP	y08108.D	E40582	65.25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	**1.1**	1.0		**4.7**	4.1	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	1.0		ND	4.5	
Toluene	108-88-3	92.14	**2.9**	1.0		**11**	3.8	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	1.0		ND	4.5	
1,1,2-Trichloroethane	79-00-5	133.4	ND	1.0		ND	5.5	
2-Hexanone(MBK)	591-78-6	100.2	ND	1.0		ND	4.1	
Tetrachloroethene	127-18-4	165.8	ND	1.0		ND	6.8	
Dibromochloromethane	124-48-1	208.3	ND	1.0		ND	8.5	
1,2-Dibromoethane	106-93-4	187.9	ND	1.0		ND	7.7	
Chlorobenzene	108-90-7	112.6	ND	1.0		ND	4.6	
Ethylbenzene	100-41-4	106.2	ND	1.0		ND	4.3	
Xylene (p,m)	1330-20-7	106.2	ND	2.0		ND	8.7	
Xylene (Ortho)	95-47-6	106.2	ND	1.0		ND	4.3	
Styrene	100-42-5	104.1	ND	1.0		ND	4.3	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	1.0		ND	4.9	
Bromoform	75-25-2	252.7	ND	1.0		ND	10	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	1.0		ND	6.9	
4-Ethyltoluene	622-96-8	120.2	ND	1.0		ND	4.9	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	1.0		ND	4.9	
2-Chlorotoluene	95-49-8	126.6	ND	1.0		ND	5.2	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	1.0		ND	4.9	
1,3-Dichlorobenzene	541-73-1	147.0	ND	1.0		ND	6.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	1.0		ND	6.0	
Benzyl chloride	100-44-7	126.6	ND	1.0		ND	5.2	
1,2-Dichlorobenzene	95-50-1	147.0	ND	1.0		ND	6.0	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	1.0		ND	7.4	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	1.0		ND	11	
Naphthalene	91-20-3	128.2	ND	1.0		ND	5.2	
Total Target Compound Concentrations:			**240**	**ppbv**		**650**	**ug/m3**	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	11	10	110%

Qualifier Definitions
ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.
J= Concentration estimated between Reporting Limit and MDL.

Method Reference
USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air…" Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0004
CUSTOMER SAMPLE ID: NEP-PF2-080222

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/02/2022 09:23
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis Initial	Analysis Date 08/10/2022	Analyst Init. KW/CP	Lab File ID y08099.D	Canister ID E31304	Sample Vol. 273.75 cc	Dil. Factor 2

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	2.0		ND	3.4	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	1.0		ND	4.9	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	1.0		ND	7.0	
Chloromethane	74-87-3	50.49	**1.1**	1.0		**2.2**	2.1	
n-Butane	106-97-8	58.12	**6.2**	1.0		**15**	2.4	
Vinyl chloride	75-01-4	62.50	ND	1.0		ND	2.6	
1,3-Butadiene	106-99-0	54.09	ND	1.0		ND	2.2	
Bromomethane	74-83-9	94.94	ND	1.0		ND	3.9	
Chloroethane	75-00-3	64.51	ND	1.0		ND	2.6	
Ethanol	64-17-5	46.07	**68**	1.0		**130**	1.9	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	1.0		ND	4.4	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	1.0		ND	5.6	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	**4.7**	1.0		**12**	2.5	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	1.0		ND	7.7	
Acetone	67-64-1	58.08	**9.6**	1.0		**23**	2.4	
1,1-Dichloroethene	75-35-4	96.94	ND	1.0		ND	4.0	
Acetonitrile	75-05-8	41.05	ND	1.0		ND	1.7	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	1.0		ND	3.0	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	1.0		ND	4.5	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	1.0		ND	3.1	
Carbon disulfide	75-15-0	76.14	ND	1.0		ND	3.1	
Methylene chloride	75-09-2	84.93	**74**	1.0		**260**	3.5	
Acrylonitrile	107-13-1	53.08	ND	1.0		ND	2.2	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	1.0		ND	3.6	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	1.0		ND	4.0	
n-Hexane	110-54-3	86.18	**2.6**	1.0		**9.0**	3.5	
1,1-Dichloroethane	75-34-3	98.96	ND	1.0		ND	4.0	
Vinyl acetate	108-05-4	86.09	ND	1.0		ND	3.5	
2-Butanone(MEK)	78-93-3	72.11	ND	1.0		ND	2.9	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	1.0		ND	4.0	
Ethyl acetate	141-78-6	88.11	**2.3**	1.0		**8.2**	3.6	
Chloroform	67-66-3	119.4	ND	1.0		ND	4.9	
Tetrahydrofuran	109-99-9	72.11	ND	1.0		ND	2.9	
1,1,1-Trichloroethane	71-55-6	133.4	ND	1.0		ND	5.5	
Cyclohexane	110-82-7	84.16	ND	1.0		ND	3.4	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	1.0		ND	4.7	
Carbon tetrachloride	56-23-5	153.8	ND	1.0		ND	6.3	
n-Heptane	142-82-5	100.2	**1.4**	1.0		**5.7**	4.1	
1,2-Dichloroethane	107-06-2	98.96	ND	1.0		ND	4.0	
Benzene	71-43-2	78.11	ND	1.0		ND	3.2	
Trichloroethene	79-01-6	131.4	ND	1.0		ND	5.4	
1,2-Dichloropropane	78-87-5	113.0	ND	1.0		ND	4.6	
Methyl Methacrylate	80-62-6	100.1	ND	1.0		ND	4.1	
Bromodichloromethane	75-27-4	163.8	ND	1.0		ND	6.7	
1,4-Dioxane	123-91-1	88.11	ND	1.0		ND	3.6	

EMSL ANALYTICAL, INC.
200 Route 130 North
Cinnaminson, NJ 08077
Telephone: (856)858-4800 FAX: (856)858-4571
to15lab@EMSL.com | http://www.EMSL.com

EMSL ORDER ID: 492200513
EMSL CUSTOMER ID: TTRA62
EMSL SAMPLE ID: 492200513-0004
CUSTOMER SAMPLE ID: NEP-PF2-080222

Attention: Jamie Benson
Tetra Tech EMI, Inc.
737 Bishop Street
Suite 2340
Honolulu, HI 96813

Phone: 808-441-6600
Email: Jamie.Benson@tetratech.com

Customer PO:
EMSL Project ID:
Project Name: National Eng. Prod.

Collected: 08/02/2022 09:23
Received: 08/03/2022 10:35
Analyzed: See Results
Reported: 8/12/2022

Analysis Initial	Analysis Date 08/10/2022	Analyst Init. KW/CP	Lab File ID y08099.D	Canister ID E31304	Sample Vol. 273.75 cc	Dil. Factor 2

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	1.0		ND	4.1	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	1.0		ND	4.5	
Toluene	108-88-3	92.14	**1.6**	1.0		**6.0**	3.8	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	1.0		ND	4.5	
1,1,2-Trichloroethane	79-00-5	133.4	ND	1.0		ND	5.5	
2-Hexanone(MBK)	591-78-6	100.2	ND	1.0		ND	4.1	
Tetrachloroethene	127-18-4	165.8	ND	1.0		ND	6.8	
Dibromochloromethane	124-48-1	208.3	ND	1.0		ND	8.5	
1,2-Dibromoethane	106-93-4	187.9	ND	1.0		ND	7.7	
Chlorobenzene	108-90-7	112.6	ND	1.0		ND	4.6	
Ethylbenzene	100-41-4	106.2	ND	1.0		ND	4.3	
Xylene (p,m)	1330-20-7	106.2	ND	2.0		ND	8.7	
Xylene (Ortho)	95-47-6	106.2	ND	1.0		ND	4.3	
Styrene	100-42-5	104.1	ND	1.0		ND	4.3	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	1.0		ND	4.9	
Bromoform	75-25-2	252.7	ND	1.0		ND	10	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	1.0		ND	6.9	
4-Ethyltoluene	622-96-8	120.2	ND	1.0		ND	4.9	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	1.0		ND	4.9	
2-Chlorotoluene	95-49-8	126.6	ND	1.0		ND	5.2	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	1.0		ND	4.9	
1,3-Dichlorobenzene	541-73-1	147.0	ND	1.0		ND	6.0	
1,4-Dichlorobenzene	106-46-7	147.0	ND	1.0		ND	6.0	
Benzyl chloride	100-44-7	126.6	ND	1.0		ND	5.2	
1,2-Dichlorobenzene	95-50-1	147.0	ND	1.0		ND	6.0	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	1.0		ND	7.4	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	1.0		ND	11	
Naphthalene	91-20-3	128.2	ND	1.0		ND	5.2	
Total Target Compound Concentrations:			**170**	**ppbv**		**470**	**ug/m3**	

Surrogate	Result	Spike	Recovery
4-Bromofluorobenzene	10	10	100%

Qualifier Definitions
ND = Non Detect
B = Compound also found in method blank.
E= Estimated concentration exceeding upper calibration range.
D= Result reported from diluted analysis.
J= Concentration estimated between Reporting Limit and MDL.

Method Reference
USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air…" Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).

EMSL Eurofins Cinnaminson

4922005 13

Analysis Request /Canister Chain of Custody

Air Toxics

For Laboratory Use Only

PID: _____ Workorder #: _____

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Order# 86403922

Click links below to view:
Canister Sampling Guide
Helium Shroud Video

Client: Tetra Tech PID: _____
Project Name: National Eng. Lab.
Project Manager: _____ P.O.# _____
Sampler: J. Benson
Site Name: 1930 Capitol Ave NE

Special Instructions/Notes:
Dilute Short Samples for analysis

Turnaround Time (Rush surcharges may apply)
Select TAT from drop down box: 10 Business Days

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He				
	NEP-PF1-080122	0645	05691	8/1	1019	8/1	1426	-30	-20	-19.0					
	NEP-PF2-080122	0290	05983	8/1	1020	8/1	1429	-30	-22	-22.4					
	NEP-PF1-080222	40582	06755	8/2	0924	8/2	1344	-30	-16	-18.0					
	NEP-PF2-080222	31304	07843	8/2	0923	8/2	1341	-26	-14	-16.0					

RECEIVED
22 AUG -3 AM 10:26
CINNAMINSON, NJ
EMSL

Relinquished by: (Signature/Affiliation) [signature] TT	Date 8/3/22	Time 1700	Received by: (Signature/Affiliation) [signature] FX	Date 8/3/22	Time 10 35
Relinquished by: (Signature/Affiliation) [signature] FX	Date 8/3/22	Time 10 35	Received by: (Signature/Affiliation) [signature] Air Tox	Date 8/3/22	Time 11:42 AM
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: | Custody Seals Intact? Yes No None | 1422 2553 4581

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

12

8/3/22
@ No reg check because the sampling time was 4hr on 8hr regs - RL 11:53AM

EMSL Eurofins CincinnatiSoy

Air Toxics

49220513

Analysis Request /Canister Chain of Custody

1 of 1

For Laboratory Use Only

PID: _____ Workorder #: _____

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Click links below to view:
Canister Sampling Guide
Helium Shroud Video

Client: Tetra Tech PID: _____
Project Name: National Eng. Prod.
Project Manager: _____ P.O.# _____
Sampler: J. Benson
Site Name: 1950 Capitol Ave NE

Special Instructions/Notes: Dilute Short Samples for analysis

Turnaround Time (Rush surcharges may apply)
Select TAT from drop down box: 10 Business Days

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses			
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N_2 / He				
	NEP-PF1-080122	0643	05691	8/1	1019	8/1	1426	-30	-20						
	NEP-PF2-080122	0290	05983	8/1	1020	8/1	1424	-30	-22						
	NEP-PF1-080222	40582	06755	8/2	0924	8/2	1344	-30	-16						
	NEP-PF2-080222	31304	07843	8/2	0923	8/2	1341	-26	-14						

22 AUG -3 AM 10:39
CINNAMINSON, NJ
EMSL

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
TT	8/2/22	1700	Chalem FX	8/3/22	1035
Chalem FX	8/3/22	1035			

Lab Use Only

Shipper Name: _____ Custody Seals Intact? Yes No None

1422 2553 4581

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

OrderID: 49220513

Page 1 Of 1

EMSL Analytical - Industrial Hygiene
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 /
http://www.EMSL.com silicaLab@emsl.com

EMSL Order: 722200270
CustomerID: TTVA42
CustomerPO:
ProjectID:

Attn: **Jamie Benson**
Tetra Tech
14151 Newbrook Drive
Suite 400
Chantilly, VA 20151

Phone: (703) 885-5465
Fax:
Received: 8/3/2022 10:00 AM
Analysis Date: 8/5/2022
Collected: 8/2/2022

Project: **National Engineering Products**

Test Report: Total Dust by NIOSH 0500

Sample	*Location*	*Volume (L)*	*Sample Weight (mg)*	*Concentration (mg/m³)*	*Reporting Limit (mg/m³)*	*Notes*
NEP-E1-TOT-080222 *722200270-0001*	Exhaust 1	534	0.40	0.75	0.094	
NEP-E2-TOT-080222 *722200270-0003*	Exhast 2	530	<0.050	<0.094	0.094	
NEP-E3-TOT-080222 *722200270-0005*	Exhaust 3	526	<0.050	<0.095	0.095	
NEP-PFI-TOT-080122 *722200270-0007*	Production Floor North	484	<0.050	<0.10	0.10	
NEP-PFI-TOT-080222 *722200270-0009*	Production North	520	0.084	0.16	0.096	
NEP-E1-TOT-080122 *722200270-0011*	Exhaust Fan 1	724	0.50	0.69	0.069	
NEP-E2-TOT-080122 *722200270-0013*	Exhaust Fan 2	714	<0.050	<0.070	0.070	
NEP-E3-TOT-080122 *722200270-0016*	Exhaust Fan 3	712	<0.050	<0.070	0.070	
NEP-FB-TOT-080222-1 *722200270-0017*	Field Blank		<0.050	N/A	N\A	Field Blank

Analyst(s)

Emma Muller (10)

Scott Van Etten, CIH, Laboratory Manager
or other approved signatory

Initial report from 08/16/2022 11:44:04

EMSL Analytical - Industrial Hygiene
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 /
http://www.EMSL.com silicaLab@emsl.com

EMSL Order:	722200270
CustomerID:	TTVA42
CustomerPO:	
ProjectID:	

Attn: **Jamie Benson**
Tetra Tech
14151 Newbrook Drive
Suite 400
Chantilly, VA 20151

Phone:	(703) 885-5465
Fax:	
Received:	8/3/2022 10:00 AM
Analysis Date:	8/5/2022
Collected:	8/2/2022

Project: **National Engineering Products**

Test Report: Total Dust by NIOSH 0500

Sample	*Location*	*Volume (L)*	*Sample Weight (mg)*	*Concentration (mg/m³)*	*Reporting Limit (mg/m³)*	*Notes*
NEP-FB-TOT-080222-2	Field Blank		<0.050	N/A	N\A	Field Blank
722200270-0018						

Notes: Discernable field blank submitted with samples.
Results are not field blank corrected.

Analyst(s)

Emma Muller (10)

Scott Van Etten, CIH, Laboratory Manager
or other approved signatory

Initial report from 08/16/2022 11:44:04

EMSL Analytical - Industrial Hygiene
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 /
http://www.EMSL.com silicaLab@emsl.com

EMSL Order:	722200270
CustomerID:	TTVA42
CustomerPO:	
ProjectID:	

Attn: **Jamie Benson**
Tetra Tech
14151 Newbrook Drive
Suite 400
Chantilly, VA 20151

Phone:	(703) 885-5465
Fax:	
Received:	8/3/2022 10:00 AM
Analysis Date:	8/5/2022
Collected:	8/2/2022

Project: **National Engineering Products**

Test Report: Respirable Dust by NIOSH 0600

Sample	*Location*	*Volume (L)*	*Sample Weight (mg)*	*Concentration (mg/m³)*	*Reporting Limit (mg/m³)*	*Notes*
NEP-E1-RES-080222 *722200270-0002*	Exhaust 1	534	0.15	0.29	0.094	
NEP-E2-RES-080222 *722200270-0004*	Exhast 2	530	<0.050	<0.094	0.094	
NEP-E3-RES-080222-080122 *722200270-0006*	Exhaust 3	526	<0.050	<0.095	0.095	
NEP-PFI-RES-080122 *722200270-0008*	Production Floor North	484	<0.050	<0.10	0.10	
NEP-PFI-RES-080222 *722200270-0010*	Production North	520	<0.050	<0.096	0.096	
NEP-E1-RES-080122 *722200270-0012*	Exhaust Fan 1	724	0.62	0.85	0.069	
NEP-E2-RES-080122 *722200270-0014*	Exhaust Fan 2	714	<0.050	<0.070	0.070	
NEP-E3-RES-080122 *722200270-0015*	Exhaust Fan 3	712	<0.050	<0.070	0.070	
NEP-FB-RES-080222-2 *722200270-0020*	Field Blank		<0.050	N/A	N\A	

Analyst(s)

Emma Muller (10)

Scott Van Etten, CIH, Laboratory Manager
or other approved signatory

Initial report from 08/16/2022 11:44:04

EMSL Analytical - Industrial Hygiene
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 /
http://www.EMSL.com silicaLab@emsl.com

EMSL Order:	722200270
CustomerID:	TTVA42
CustomerPO:	
ProjectID:	

Attn: **Jamie Benson**
Tetra Tech
14151 Newbrook Drive
Suite 400
Chantilly, VA 20151

Phone:	(703) 885-5465
Fax:	
Received:	8/3/2022 10:00 AM
Analysis Date:	8/5/2022
Collected:	8/2/2022

Project: **National Engineering Products**

Test Report: Respirable Dust by NIOSH 0600

Sample	*Location*	*Volume (L)*	*Sample Weight (mg)*	*Concentration (mg/m³)*	*Reporting Limit (mg/m³)*	*Notes*
NEP-FB-RES-080222-1	Field Blank		<0.050	N/A	N\A	Field Blank
722200270-0019						

Notes: Discernable field blank submitted with samples.
Results are not field blank corrected.

Analyst(s)

Emma Muller (10)

Scott Van Etten, CIH, Laboratory Manager
or other approved signatory

Initial report from 08/16/2022 11:44:04

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only): 722200270

RECEIVED EMSL CINNAMINSON, NJ
22 AUG -3 AM 11:32

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

Report To Contact Name: Jamie Benson		Bill To Company: Tetra Tech	Client ID #:
Company Name: Tetra Tech		Attention To: Jamie Benson	
Street: 14151 Newbrook Dr. Suite 400		Street: Same	
City: Chantilly	State/Province: VA	Zip/Postal Code: 20151	City: "	State/Province:	Zip/Postal Code:
Phone: 703-885-5466	Fax: 703-444-1685		Phone:	Fax:
Project Name: National Engineering Products		Email Results To: Jamie.Benson@Tetratech.com	U.S. State where Samples Collected: D.C.
# Samples in Shipment: 27	Date of Shipment: 8/2	Purchase Order:	Sampled By (Signature):

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 ☐ Other (Call Lab)

Media Type:
Manufacturer/Part #: Lot #:

Client Sample ID	Sample Date	Location	Description	Sample Type	Flow (lpm)	Sample Time On	Sample Time Off	Air Volume	Analyte Name	Media	Comments
NEP-E1-TOT-080222	8/2	E-1	Exhaust 1	☒ Area ☐ Personal	2	0925	1352	534	Nios# 0500	cassette	Industrial Exhaust
NEP-E1-Reg-080222				☒ Area ☐ Personal	2			534	0600		
NEP-E1-080222-AF				☒ Area ☐ Personal	2			534	7400	PCM cassette	
NEP-E2-TOT-080222		E-2	Exhaust 2	☒ Area ☐ Personal	2	0927	1352	530	0500	cassette	
NEP-E2-Reg-080222				☒ Area ☐ Personal	2			530	0600		
NEP-E2-080222-AF				☒ Area ☐ Personal	2			530	7400	PCM cassette	
NEP-E3-TOT-080222		E-3	Exhaust 3	☒ Area ☐ Personal	2	0929	1352	526	0500	cassette	
NEP-E3-Reg-080222		E-3		☒ Area ☐ Personal	2	0929	1352	526	0600		

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	Date	Received By	Date
[signature] TE 1700	8/2/22	[signature]	8/3/2022 10:00

Comments: Split Silica/Asb 20 10

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Industrial Hygiene Chain of Custody

EMSL Order Number (Lab Use Only):

722000270

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

RECEIVED
EMSL
CINNAMINSON, NJ
22 AUG -3 AM 11:32

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 On	Sample Time Off	Air Volume	Analyte Name	Media	Comments
NEP-PF1-TOT-080122	8/1/22	Production Floor North	PF-1	☒ Area ☐ Personal	2.728	1019	1426	484	Total Dust	Cassette	Indoor Air
NEP-PF1-RES-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	484	Respirable Dust	↓	↓
NEP-PF1-080122-AF	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	484	Airborne Fibers (7400)	PCM Cassette	↓
NEP-PF1-080222-AF	8/2/22	Production Floor North	PF-1	☒ Area ☐ Personal	2	0924	1344	520	Niosh 7400	PCM Cassette	↓
NEP-PF1-TOT-080222	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	520	0500	Cassette	↓
NEP-PF1-RES-080222	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	520	0600	↓	↓
NEP-E1-TOT-080122	8/1	Exhaust Fan 1	E-1	☒ Area ☐ Personal	2	1014	1612	724	Niosh 0500	↓	Industrial Exhaust
NEP-E1-RES-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	724	0600	↓	↓
NEP-E1-080122-AF	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	724	7400	PCM Cassette	↓
NEP-E2-080122-AF	↓	Exhaust Fan 2	E-2	☒ Area ☐ Personal	2	1014	1611	714	↓	↓	↓
NEP-E2-TOT-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	714	0500	Cassette	↓
NEP-E2-RES-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	714	0600	↓	↓
NEP-E3-RES-080122	↓	Exhaust Fan 3	E-3	☒ Area ☐ Personal	2	1015	1611	712	↓	↓	↓
NEP-E3-TOT-080122	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	712	0500	↓	↓
NEP-E3-080122-AF	↓	↓	↓	☒ Area ☐ Personal	2	↓	↓	712	Niosh 7400	PCM Cassette	↓

Comments:

Sealed:
8/2/22
1700

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: (800) 220-3675
EMAIL: c@emsl.com

Industrial Hygiene - Chain of Custody

EMSL Order Number / Lab Use Only

722200270

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Volume/Area	Sample Type	Sample Date	Comments
NEP-E3-080222-AF	Exhaust 3	NIOSH 7400	PCM cassette	2	0929	1352	526 L	☒ Area ☐ Personal	8/2/22	Ind. Exhaust
NEP-FB-AF-080222	Field Blank	↓	↓	Ø			Ø	☒ Area ☐ Personal	↓	x2 cassettes (PCM)
NEP-FB-TOT-080222-1/2	Field Blank	0500	cassette	Ø			Ø	☒ Area ☐ Personal		x2 cassettes
NEP-FB-Res-080222-1/2	Field Blank	0600	↓	Ø			Ø	☒ Area ☐ Personal		x2 cassettes
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		
								☐ Area ☐ Personal		

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 1700 8/2/22	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-21 Industrial Hygiene R4 05/12/2021

☐ **AGREE TO ELECTRONIC SIGNATURE** (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 3 of 3