



AGENDA

Board of Health Meeting

January 24, 2025

8:00 – 9:30 a.m.

Zoom Only

To listen/view this meeting, download the “Zoom Cloud Meeting” app in any app store or at www.zoom.us. At the above date and time, click on “Join a Meeting”.

Webinar ID: 299 501 159 329

Passcode: 969417

Or click the link below to register:

<https://needham-k12-ma-us.zoom.us/j/86192535426?pwd=mEPCsp8b8A35ORsIOHMSXnlLSeja7.1>

	8:00	Welcome & Public Comment Period Attendees are encouraged to inform the Needham Public Health Division of their intent to participate in the public comment period in advance via email (healthdepartment@needhamma.gov), telephone (781) 455-7940, or in person by the end of the business day prior to the meeting. The Chair will first recognize those who have communicated in advance their desire to speak for up to three minutes. If time allows, others wishing to speak will be recognized in an order determined by the Chair for up to three minutes.
1.	8:03	Review of Minutes: December 13, 2024
2.	8:05	Proposed Citizen’s Petition to Ban Gas-Powered Leaf Blowers David Rudolph, Green Needham
3.	8:20	Community Crisis Intervention Team (CCIT) Presentation

		Needham Public Health and Needham Police
4.	8:35	Environmental Testing of Synthetic Turf Fields Tara Gurge, Assistant Director of Public Health
5.	8:50	North Central MetroWest Training Hub Samantha Menard, Assistant Manager of Shared Services & Lead Trainer of Local Public Health Training Hub
6.	9:00	Staff Reports - Public Health Preparedness –Taleb Abdelrahim - Epidemiology – Julie McCarthy - Nursing – Ginnie Chacon-Lopez, Hanna Burnett & Tiffany Benoit - Environmental Health – Sai Palani & Tara Gurge - Accreditation – Lynn Schoeff & Alison Bodenheimer - Traveling Meals – Rebecca Hall - Substance Use Prevention: Regional – Carol Read & Lydia Cunningham - Substance Use Prevention: Needham – Karen Shannon, Karen Mullen, Monica DeWinter, Angi MacDonnell, Vanessa Wronski - Shared Public Health Services – Kerry Dunnell & Samantha Menard
7.	9:25	Other Items - Needham Public Health Staff Introductions - Updated - Next Meeting Date and Time

(Please note that all times are approximate)

Next Meeting – Friday February 21, 2025 at 9:00 a.m.



Board of Health Meeting Minutes DRAFT

Date: December 13, 2024

Location: Public Service Administration Building & via Zoom

Members: Tejal K. Gandhi, MD, MPH Chair (remote); Stephen Epstein, MD, MPP, Member; Robert A. Partridge, MD, MPH, Member [9:30AM]; Edward Cosgrove, PhD, Member; Aarti Sawant-Basak, PhD, Member

Staff Present: Timothy Muir McDonald, Director of Health, and Human Services; Tara Gurge, Assistant Director of Public Health; Tiffany (Zike) Benoit, Assistant Director of Public Health; Carol Read; Kerry Dunnell; Ginnie Chacon-Lopez; Karen Shannon; Sai Palani; Taleb Abdelrahim

Welcome & Public Comment Period

Dr. Epstein called the meeting to order at 8:30AM.

According to Chapter 107 of the Acts of 2022, as an act relative to extending certain states of emergency accommodations, as passed by the General Court, and signed into law by Acting Governor Karyn Polito, on July 16, 2022, revised Section 20 of Chapter 20, the Acts of 2021. In so doing, provided modifications to the Massachusetts Open Meeting Law, which allow for flexibility to hold remote only, and hybrid meetings, while preserving public access and, where appropriate, public participation. Currently, that additional flexibility will expire on March 31, 2025, unless additional legislative action occurs. As part of today's hybrid meeting, all votes will occur via a roll call.

Dr. Jonathan Winickoff and Dr. Lester Hartman addressed the Board in support of Nicotine Free Generation. Dr. Winickoff provided information about other municipalities in Massachusetts where Nicotine Free Generation has been adopted.

Stephen Helfer, Cambridge Citizens for Smokers' Rights, spoke in opposition to Nicotine Free Generation. He stated that youth tobacco use is at a historic low and that the proposed approach is designed to deny rights to adults rather than to prevent youth tobacco use.

Lindsey Stroud, Senior Fellow at the Taxpayers Protection Alliance, reminded the public health community that it should be focusing on the adults who smoke. She reviewed smoking rates among adults and young adults in Massachusetts and other New England states and said that many adults continue to struggle with quitting tobacco. Harm reduction products, such as oral nicotine products and pouches offer these individuals safer alternative to cigarettes.

Elizabeth Hicks, Consumer Choice Center, spoke in opposition to Nicotine Free Generation and the proposal to move the sale of nicotine pouches exclusively to adult-only locations. Ms. Hicks stated that these proposals will create unintended consequences, that, according to the CDC,

from 2023-2024 e-cig use declined among middle and high school students and there was no significant change in nicotine pouch use. Anyone who sells tobacco products to underage youth already faces heavy penalties. The proposal to ban nicotine pouches from these locations neglects adult consumers who are seeking a less harmful nicotine product in comparison to combustible cigarettes

Review of Minutes: November 22, 2024

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Sawant-Basak, it was voted to approve the meeting minutes November 22, 2024, as amended. Motion passed unanimously.

PUBLIC HEARING – Article 8 – Proposed Dumpster Regulations

Dr. Epstein opened the public hearing at 8:47am.

The Board reviewed the proposed Dumpster Regulations.

Dr. Gandhi asked about enforcement. Ms. Gurge explained that these regulations would not take effect until February 1st and there will be time for public education prior to implementation. A \$50 annual permit fee is proposed at this time.

Dr. Epstein closed the public hearing at 8:53am.

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Gandhi, it was voted to approve the new Article 8: Dumpster Regulation, with a \$50 annual permit fee. Motion passed unanimously.

Article 1 - Regulation Affecting Smoking and the Sale and Distribution of Tobacco Products in Needham

Dr. Epstein opened the public hearing at 8:53am.

The Board reviewed the updated regulation language.

Dr. Epstein stated that the language in the regulation reading “January 1, 2005,” should be updated to read “2004.” Mr. McDonald explained that this language was a recommendation from Town Counsel. The Board discussed approval with the instruction for Staff to revise the date from 2005 to 2004.

Dr. Epstein asked about restriction of the nicotine pouches. Mr. McDonald explained that sale of these items is restricted to adult-only retail tobacco stores in Needham, of which there are not any. Ms. Gurge stated that they are sold in three of the six cigarette vendors that currently have a permit in Needham. If the restriction is put in place, these items would need to be eliminated from the three vendors. Dr. Epstein stated that he is unclear if this ban should be put in place on these items in these locations. Dr. Winickoff explained that Belchertown picked up the regulation and allowed for the pouches to only be sold only in adult-only retail stores. Dr.

Cosgrove stated that he believes these items should be able to be sold in the locations they currently are, while banning the sale from spreading further. Mr. McDonald explained that these items are not yet regulated federally and so are in a grey area. The recommendation by those who work in tobacco control is to include Section G of the regulations, to regulate these items only to adult-only stores. Dr. Epstein stated that this would remove an item, which is less harmful than combustible tobacco, from these vendors.

There was discussion regarding the other available FDA approved products.

The Board agreed to table this item until Dr. Partridge was available to join the meeting.

Article 22 “Regulation for Prohibiting the Manufacturing, Sale, and Distribution of Synthetically Derived Cannabinoids”

Dr. Epstein opened the public hearing at 9:11am.

The Board reviewed the revised language for Article 22. There was discussion regarding revising some of the language.

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Gandhi, it was voted to approve Article 22 “Regulation for Prohibiting the Manufacturing, Sale, and Distribution of Synthetically Derived Cannabinoids” as amended. Motion passed unanimously.

Off-Street Drainage – Belle Lane 5 Lots

Mr. Gurge explained that Environmental Health staff received a request from the Planning Board that the developer is looking to release five of the eight off-street drainage bonds at this time, specifically for the following lots/addresses at \$3,500/lot, for a total amount of \$17,500.00.

#27 Belle Lane
#45 Belle Lane
#65 Belle Lane
#87 Belle Lane
#119 Belle Lane

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Gandhi, it was voted to approve the release of the five Belle Lane off-street drainage bonds, for a total amount of \$17,500.00 or \$3,500/lot. Motion passed unanimously.

Staff Reports

- Public Health Preparedness – Taleb Abdelrahim

Mr. Abdelrahim explained that a new Memorandum of Agreement between the American Red Cross and the Medical Reserve Corps (MRC) has been signed to enhance collaboration in disaster assistance, training, and exercises. This opens new opportunities for NC-8 MRC

volunteers to engage in impactful activities. Also, the State is working to improve how Massachusetts MRCs track volunteer training by connecting MA Responds and MA Trains systems. This update aims to streamline training program development and management in the future.

- Epidemiology – Tiffany Benoit

As listed in the written report.

- Nursing – Ginnie Chacon-Lopez, Hanna Burnett & Tiffany Benoit

As listed in the written report.

- Environmental Health – Sai Palani & Tara Gurge

Mr. Palani stated that he and Ms. Gurge both attended conferences and conducted three in-person Needham Food Establishment Educational Food Safety Forum Trainings.

Ms. Gurge stated that there are a few establishments on watch.

Dr. Partridge joined the meeting.

Article 1 - Regulation Affecting Smoking and the Sale and Distribution of Tobacco Products in Needham – *With the arrival of Dr. Partridge, the Board resumed discussion of this item.*

The Board discussed the oral nicotine pouch item. These are currently being sold by three of the six tobacco licensees and the recommendation is to restrict the sale of nicotine pouches to adult-only tobacco stores, of which there are none currently in Needham. Dr. Partridge stated that he would be in favor of non-flavored pouches being available at the currently permitted sites. Mr. McDonald explained that the question is whether unflavored oral nicotine pouches have a place only in adult-only nicotine stores or in regular stores where youth may be exposed.

Dr. Epstein suggested removing Section G from the regulations in order to further discuss this item and enforcement.

Upon motion duly made by Dr. Epstein, and seconded by Dr. Cosgrove, it was voted to approve Article 1 - Regulation Affecting Smoking and the Sale and Distribution of Tobacco Products in Needham, with the amendments of changing the date to January 1, 2004, that warnings will be issued until April 1, 2025, and that Section G be removed. Motion passed unanimously.

- Accreditation – Lynn Schoeff & Alison Bodenheimer

Mr. McDonald explained that the application for accreditation has been submitted. It will likely take approximately two months to receive initial feedback on the application.

- Traveling Meals – Rebecca Hall

As listed in the written report.

- Substance Use Prevention: Regional – Carol Read & Lydia Cunningham

Ms. Read stated that Westwood has hired a consultant to restart a coalition and apply for Drug-Free Communities.

- Substance Use Prevention: Needham – Karen Shannon, Karen Mullen, Monica DeWinter, Angi MacDonnell, Vanessa Wronski

Ms. Shannon stated that planning has been ongoing for the winter series. The Train the Trainer session hosted eight people to be trained to become certified instructors of ServSafe Alcohol. The Peer Recovery Service coordinated with the Elliott House to launch a Dual Recovery Anonymous Meeting.

- Shared Public Health Services – Kerry Dunnell & Samantha Menard

Ms. Dunnell stated that Jenn Gangadharan has begun working on some MAVEN cases in Medfield with the guidance of the Needham nursing staff. Ms. Gangadharan assumed primary responsibility for monitoring MAVEN cases for the Town of Medfield on December 3rd while Medfield's public health nurse is on leave. Ms. Dunnell explained that Ms. Menard facilitated breakout groups at the in-person Tier 2 Housing training held November 12th in Springfield in advance of the MHOA conference. The first Tier 3 food trainee of the NCMW Hub has completed all requirements and will receive a Local Public Health Food Training Program certificate of completion from the MA Department of Public Health.

There was agreement to allow Mr. McDonald to sit in Dr. Cosgrove's place at the next Shared Public Health Services meeting.

Briefing on Public Health Division's Financial Status and FY2026 Budget

Mr. McDonald explained that the Public Health Division did well on its previous year budget and returned \$348 against a \$2.5M budget. For next year's budget there are no additional service requests from HHS. The proposed budget is mostly a maintenance budget with slight adjustments. One exception is that the capital budget includes three items for renovations to the Center at the Heights which were included in the Town's five year capital plan. There is a question as to what operational commitment the Town could make to help with Traveling Meals program. Mr. McDonald is working with a consultant determine these considerations.

Other Items

- Report – Understanding the Connections Between Children's Mental Health & Housing

Mr. McDonald explained that this is a report regarding understanding the connections between children's mental health and housing. Housing is currently a popular topic of discussion in Town.

- The Board discussed an article in Science Journal - Of the first five U.S. states with food waste bans, Massachusetts alone has reduced landfill waste
- Next Meeting Date and Time

The Board agreed to choose a January meeting date by poll and also to discuss a potential standing meeting date and time.

Adjournment

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Gandhi, it was voted to adjourn the meeting. Motion passed unanimously.

The meeting was adjourned at 10:23AM.

Attachment:

December 13, 2024, meeting packet



Needham Public Health Division

Prevent. Promote. Protect.



Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: January 24, 2025

Agenda Item	Proposed Citizen's Petition
Presenter(s)	David Rudolph, Green Needham
1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED Proposed Citizen's Petition to Ban Gas-Powered Leaf Blowers Green Needham is introducing a proposed Leaf Blower proposal and comparison. Will present stats from towns in the surrounded area.
2.	VOTE REQUIRED BY BOARD OF HEALTH Discussion Only
3.	BACK UP INFORMATION: Needham Leaf Blower Proposal and comparison.

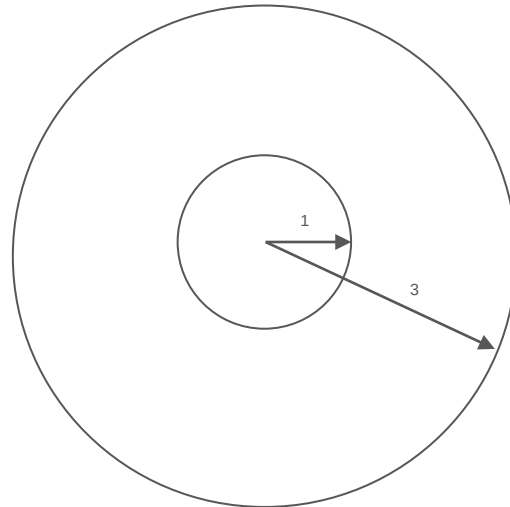
Needham Leaf Blower Regulations

Proposal and Comparison

David Rudolph
January 8, 2025

Scientific Support

- Lots of info available about noise pollution, air pollution - will include at town meeting
- Key point for board: 65 dB(A) electric motor $\neq$ 65 dB(A) gas engine - gas generates lower frequencies, which travel further and penetrate glass more



Type of Ban

Seasonal Ban on GLBs (“summer” only)

Arlington (2023)

Belmont (2023)

Brookline (2016)

Cambridge (2017)

Concord (2024)

Lexington (2023)

Lincoln (2020)

Marblehead (2024)

Newton (2017)

Swampscott (2023)

Additional GLB Bans

Arlington - complete GLB ban: commercial (2025), residential (2026)

Belmont - complete GLB ban (2026)

Cambridge - seasonal ban applies to all LBs

Lexington - complete GLB ban: commercial (2025), residential (2026)

Concord - complete GLB ban: commercial (2028), residential (2030)

Lot Size and Other Noise Restrictions

Arlington - no more than 1 LB per 6000 ft²; no LB more than 74 dB

Belmont - no more than 2 LBs if < 14,000 ft²; town shall not purchase GLBs

Brookline - no more than 2 LBs if < 7500 ft²; no LB more than 67 dB; town is exempt

Cambridge - no more than one LB on lots < 10,000 ft²; on lots > 10,000 ft², must be 10,000 ft² apart :-) ??? no LB more than 65 dB; many other restrictions

Concord - ban only applies on lots < 1.5 acres

Lexington - exemption for wheeled leaf blowers powered by four-stroke engines on lots > 1 acre; town is subject starting 2025

Newton - no LB more than 65 dB

Enforcement Target

Property Owner

Arlington
Belmont
Brookline
Cambridge
Lexington
Lincoln
Marblehead
Newton (if company not registered)

Operator or Company

Arlington
Brookline
Cambridge
Newton (if registered)
Swampscott

Enforcing Entity

Board of Health / Health Dept

Arlington

Belmont

Marblehead

Police

Brookline

Concord

Lexington (hired seasonal enforcement officer)

Lincoln

Marblehead

Swampscott

Building Dept. / Inspectional Services

Brookline

Lincoln

Newton (hired seasonal enforcement officer)

DPW

Brookline

Results

Failure

Concord - no support from police, no funding

Lexington - 107 complaints, 0 citations (police hesitant to enforce)

Lincoln - no support from select board, police

Success

Arlington - BoH reports not too much problem with enforcement, increasing compliance

Belmont - BoH reports no major problems, town deploys electric road signs

Newton - enforcement officer over last two years has more than covered costs. Most landscapers contacted who work in Newton reported needing to use ELBs or quiet GLBs to comply.

Lexington? - has hired enforcement officer starting 2025

Swampscott - “most residents and LS are complying”

Proposal

Keep it Simple

Ban GLBs from May 15 - September 30, starting 2026

When allowed, no more than 1 GLB on lots < $\frac{1}{3}$ acre (?)

Board of Health enforces, property owner is warned, then fined

DPW has authority to grant waiver for emergencies

What to do about town (DPW)?



Needham Public Health Division

Prevent. Promote. Protect.



Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: January 24, 2025

Agenda Item	Town of Needham – Community Crisis Intervention Team (CCIT) program
Presenter(s)	Carol Read, M.Ed., CPS Substance Use Prevention & Education Program Coordinator - Public Health Division. Emily Turnbull, LCSW, Jail Diversion Clinician, Victoria Denneno, Community Outreach Officer and Kelsey Cournoyer, Crime Analyst - Needham Police Department

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED CCIT program overview: Structure, goals and operating protocols among town service providers. Carol Read CCIT program data presentation: Needham Police Department 2024 call responses: cognitive health, substance use, domestic violence, Section 12 and support responses. Needham Fire Emergency Services incident data, BID Needham and Newton Wellesley Hospital, Emergency Department data.
2.	VOTE REQUIRED BY BOARD OF HEALTH No vote required
Discussion Only	
3.	BACK UP INFORMATION: 5 documents
a) One Mind Pledge IACP b) Needham Community Crisis Intervention Team data -December 2024 PPT c) Community Crisis Intervention Team (CCIT) CCIT Needham Model MHOA 2022 PPT d) NPD- HHS team protocol <i>CCIT protocol_ HHS-ALL-108_rev2-3-23_TZ 2023</i> e) Needham Community Crisis Intervention Team (CCIT) Core Team Confidentiality Agreement 2019	

ONE MIND CAMPAIGN

WHAT IS THE ONE MIND CAMPAIGN AND WHY IS IT IMPORTANT?

Police officers frequently encounter people with mental health conditions:



Approximately **5%**
of U.S. residents have a serious
mental health condition.



10% to 15%
of individuals in jail have a severe
mental health condition.



An estimated **7%** of police
contacts in jurisdictions with
100,000 or more
people involve individuals with
mental health conditions.¹

The One Mind Campaign promotes successful interactions between law enforcement and individuals with mental health conditions. The initiative focuses on uniting public safety professionals, mental health organizations, and community service providers so that the three become “of one mind” to improve the welfare of vulnerable individuals, enhance officer safety, and create sustainable relationships.

WHY TAKE THE ONE MIND PLEDGE?



By taking the Pledge, an agency and its officers are taking part in a unique opportunity to transition from reacting to crisis calls involving individuals with mental health conditions to becoming proactive leaders with improved responses, training, and resources to support best practices. With the One Mind Pledge, an agency will demonstrate a sustained commitment to implementing leading practices and strategies over a period of 12-36 months. Completion of the One Mind Pledge can enhance the agency’s professionalism and engagement with the community.

WHAT ARE THE REQUIREMENTS TO COMPLETE THE PLEDGE?

1. Establish a partnership with one or more community mental health organizations;
2. Develop and implement a [leading practice policy](#) addressing law enforcement response to individuals with mental health conditions;
3. Train and certify 100% of sworn officers in mental health response and awareness by:
 - Training a minimum of 20% of sworn officers in Crisis Intervention Training, [Crisis Response and Intervention Training](#), or an equivalent best practice crisis intervention training program; and
 - Providing the remaining 80% of sworn officers [Mental Health First Aid](#) training (or equivalent)

¹ Cordner, Gary. 2006. People with Mental Illness. Washington, DC: Office of Community Oriented Policing Services.
<https://cops.usdoj.gov/ric/Publications/cops-p103-pub.pdf>

WHAT HAPPENS WHEN AN AGENCY COMPLETES THE PLEDGE?

Law enforcement agencies that complete the Pledge requirements will join more than 600 agencies as **One Mind Certified**. The agency will receive a completion certificate and a letter of acknowledgment from the IACP President. Your agency's name will be listed on the [Pledged Agencies webpage](#) and highlighted in IACP's One Mind Campaign newsletter. An agency's completion of the Pledge clearly demonstrates its commitment to ensuring successful interactions between law enforcement and people with mental health conditions.

HOW IS THE IACP SUPPORTING LAW ENFORCEMENT WITH THE PLEDGE?

The One Mind Initiative is a customized training and technical assistance initiative designed to enhance cross-system responses between law enforcement agencies and mental health service delivery partners.

WHERE CAN I LEARN MORE?

One Mind Campaign - International Association Chiefs of Police (IACP)
<https://www.theiacp.org/projects/one-mind-campaign>

One Mind: National Training and Technical Assistance Initiative - IACP
<https://www.theiacp.org/projects/one-mind>

One Mind Library of Resources - IACP
<https://www.myiacp.org/apex/OneMindDirectory>

Crisis Response and Intervention Training (CRIT)
<https://www.informedpoliceresponses.com>

IACP's Responding to Persons Experiencing a Mental Health Crisis Policy
<https://www.theiacp.org/resources/policy-center-resource/mental-illness>

Mental Health First Aid Training
<https://www.mentalhealthfirstaid.org/>

MENTAL HEALTH RESPONSE RESOURCES

 **Online library** with training, webinars, podcasts, and resources for law enforcement responding to individuals with mental health conditions or intellectual and developmental disabilities

 **New and refreshed content and resources** for [BJA's Police Mental Health Collaboration Toolkit](#)

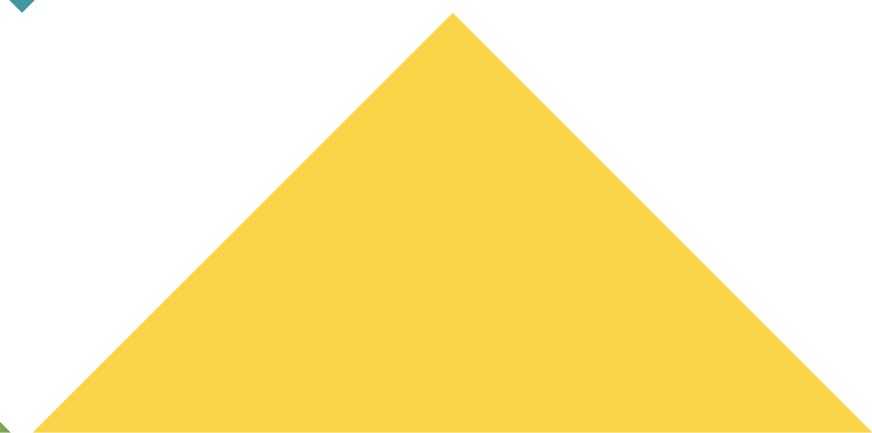
 **Peer-to-peer learning** through subject matter experts, providing guidance on best practices and tailored solutions. Agencies can also engage with BJA's [Law Enforcement Mental Health Learning Sites](#) to discuss strategies for improving the outcomes of encounters between law enforcement and people with mental health needs

 **Newsletters** highlighting tools, upcoming events, and notable achievements of the One Mind Campaign [pledge sites](#)

 **Web-based spotlight series** which highlights promising evidence-based programs, research, reports, tools, and resources

 **Customized technical assistance** aimed to enhance law enforcement engagement with individuals in crisis and persons with mental health conditions or intellectual or developmental disabilities

For more information on how the IACP can help agencies become of "One Mind", contact onemindcampaign@theiacp.org.



CCIT Quarterly Meeting

3rd Quarter 2024 (July-September)

Agenda

- Intros
- Information Sharing/ Updates
- Homelessness Update
- Community Events and Meetings



PD Overdose Data

- Only 1 suspected OD for 3rd Quarter 2024
 - Suicide attempt (19y/o M) took half a bottle of Tylenol, 7 marijuana edibles and 30 “pills”, COO and RC responded
- Total of 5 overdoses for the year through Q3

- 47 MH calls in Q3 this is down from Q2 which had 65 – This is typical for summer.
- **26 of 47 calls, resulted in a section 12.** 13 section 12s written by police and 13 by doctor/ therapists. 9 of the 13 written by a doctor/therapist were at Walker.
- 12 of the 47 calls were to the Walker School, this number has significantly decreased in Q4
- Ages of involved in MH calls ranged from 9 to 85 with average age being 31
- Continued increase of cognitive issues falling in the umbrella of community outreach team, those numbers are not included in this data.

47	Total Mental Health Calls in Q3
Call Outcome	
Resolved at Scene	13
Riverside Eval	2
Transported	32
Already at Hospital	0
Transport Type	
Section 12 Police	13
Section 12 Doctor/ Therapist	13
Voluntary	6
N/A	15
Warrant of Apprehension	0
Medical	0
Other	0
Transport By	
Needham Fire	26
Needham Police	1
Parent/ Guardian	1
No Transport	15
Other	3
Private Ambulance	1
Age	
Average Age	31.40425532
Range	9 to 85
Gender	
M	22
F	24
X	1

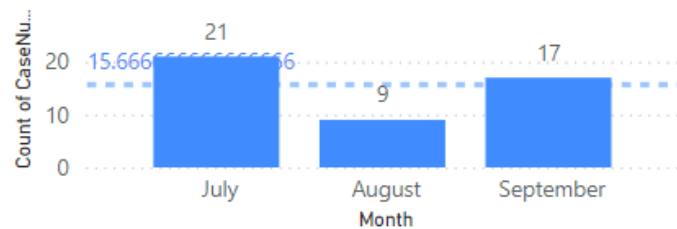
PD Mental Health Data

47

YTD Mental Health Related Calls

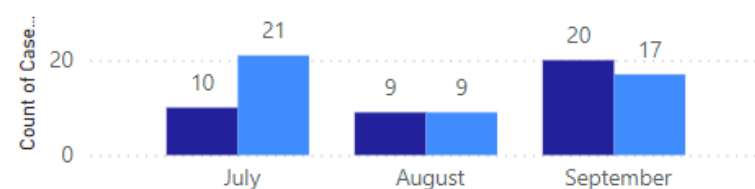
of Mental Health Incidents

Year ● 2024



Comparison to Last Year

Year ● 2023 ● 2024

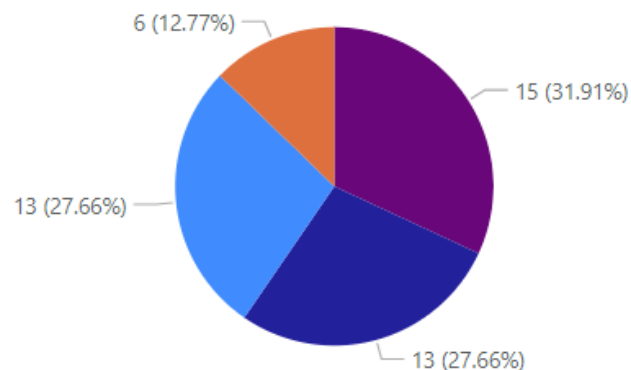


Year ▼

■ 2023

■ 2024

Transport Type



● N/A ● SECTION 12 (DOCTOR/THERAPIST) ● SECTION 12 (POLICE) ● VOLUNTARY

Transport Location # of Transports

BI NEEDHAM	19
N/A	15
NEWTON WELLESLEY	12
OTHER	1
Total	47

Call Outcome Count

NON EMERGENCY / RESOLVED AT SCENE	13
RIVERSIDE IN HOME EVAL	2
TRANSPORTED	32
Total	47

Question ×

MENTAL HEALTH TRA...

Answer ×

MENTAL HEALTH OUT...
47

MENTAL HEALTH RELA...
47

MENTAL HEALTH TRA...
47

MENTAL HEALTH TRA...
47

MENTAL HEALTH TR...
47

SUBJECT SEARCHED
47

N/A
15

SECTION 12 (DOCTOR...
13

SECTION 12 (POLICE)
13

VOLUNTARY
6

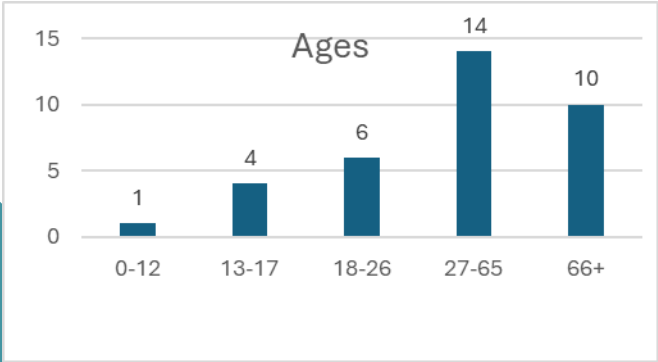
COO Interactions



Call Type	Number of Co-Response/Follow Ups
Mental Health	24
Domestic Violence	13
Substance Use	5
Cognitive Health Issues	11
	Total: 53

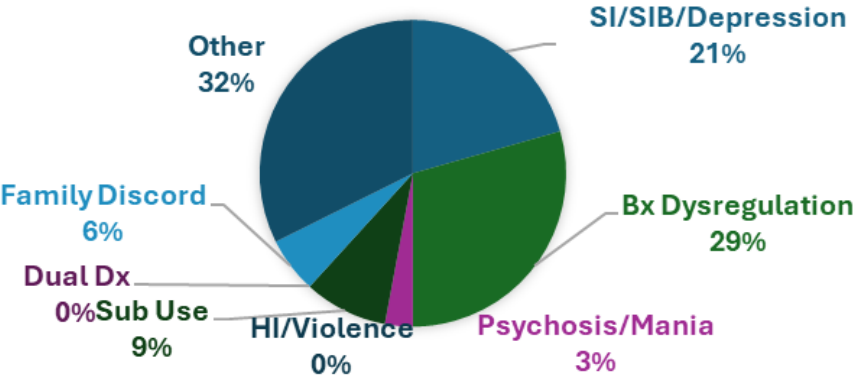
Riverside Clinician Data

Type of Response	Number
Initial Co-Response	15
Initial JDP	19
Follow Up w/ PD	29
Follow Up JDP	47
Total Outreach	110

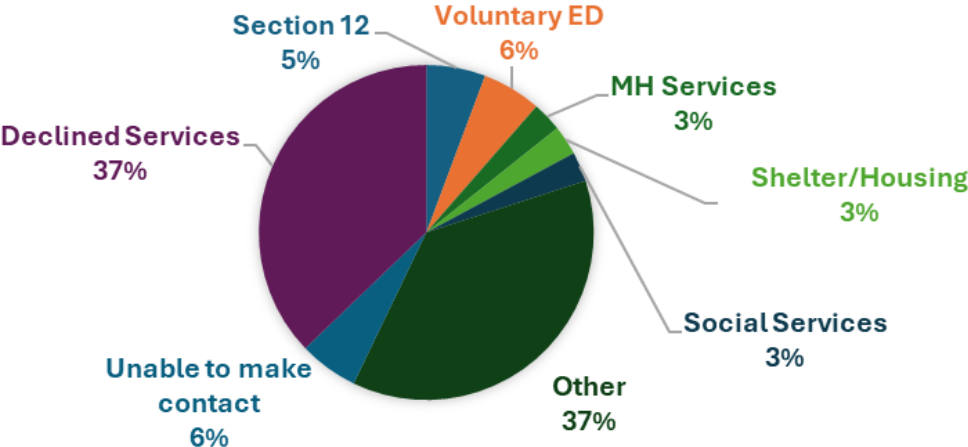


Gender	Number
Male	15
Female	19
Other	1
Total	35

PRESENTING PROBLEMS



OUTCOMES



NFD Data

Needham Fire Department - Q3 - 2024				
EMD Complaint	Jul-24	Aug-24	Sep-24	Total
Assault	1	1	2	4
Assist Invalid	0	0	1	1
Falls	41	43	34	118
Overdose/Poisoning/Ingestion	1	1	1	3
Psychiatric/Behavioral	13	5	5	23
Sick Person	74	63	74	211
Traumatic Injury	3	1	1	5
Unknown Problem/Person Down	4	4	1	9
Primary Impression	Jul-24	Aug-24	Sep-24	Total
Alcohol dependence with withdrawal	0	1	0	1
Alcohol Intoxication	4	2	3	9
Behavioral/Psychiatric episode	11	6	4	21
Orthopedic/Head Injuries	30	31	26	87
Poisoning/Drug Ingestion	2	0	0	2
Suicidal Ideation	1	0	1	2
Suicide attempt	1	0	0	1
Secondary Impression	Jul-24	Aug-24	Sep-24	Total
Alcohol dependence with withdrawal	1	0	0	1
Alcohol Intoxication	0	1	0	1
Alcohol use	0	0	1	1
Behavioral/Psychiatric episode	2	0	0	2
Confusion/Delirium	1	0	1	2
Orthopedic/Head Injuries/Lacerations	7	8	9	24
Overdose - Acetaminophen	1	0	0	1
Overdose-Unspecified	0	0	1	1
Substance abuse	1	0	0	1
Suicidal Ideation	2	0	0	2
2 - Narcan Administration - AMS:ETOH:Polymed OD, Unresponsive				

BI Data

TOP 5 TOWNS WITH HIGHEST ED VISITS	
MH/ SUD/ OD/ FALLS	
1)	Norwood
2)	Needham
3)	Dedham
4)	Walpole
5)	Westwood

Q3 Jul- Sept 2024

	MENTAL & BEHAVIORAL D/O'S, excluding SUD					Quarterly Totals
	< 18	18-24	25-44	45-64	65+	Jul- Sept 2024
Needham	8	4	16	25	131	184
Total	8	4	16	25	131	184

	SUBSTANCE USE					Quarterly Totals
	< 18	18-24	25-44	45-64	65+	Jul- Sept 2024
Alcohol	0	2	3	9	8	22
Cocaine	0	0	0	0	0	0
Rx Drug Abuse/ OD	0	0	1	4	2	7
Nicotene	0	0	0	1	0	1
Opioid	0	0	0	1	1	2
Total	0	2	4	15	11	32

	OPIOID OVERDOSE					Quarterly Totals
	0-17	18-24	25-44	45-64	65+	Jul- Sept 2024
Needham	0	0	0	0	0	0
Total	0	0	0	0	0	0

	FALLS					Quarterly Totals
	< 18	18-24	25-44	45-64	65+	Jul- Sept 2024
Needham	14	1	7	25	67	114
Total	14	1	7	25	67	114

NWH Data

Falls						
Community	# of Patients	0-17	18-24	25-44	45-64	65+
Auburndale	32	2			6	24
Natick	82	11	1	4	13	53
Needham	57	13	1		3	40
Needham Heights	5	1		1		3
Newton	135	23	4	4	13	91
Newton Center	19	3			1	15
Newton Highlands	4				3	1
Newton Lower Falls	6	1			2	3
Newton Upper Falls	4					4
Newtonville	20	2			4	14
Waban	22	6			1	15
Waltham	209	29	4	24	40	112
Watertown	22	8		1		13
Wellesley	66	10	3	2	4	47
Wellesley Hills	31	3		1		27
West Newton	25	3		3	3	16
Weston	38	3			6	29
Q4 Total	777	118	13	40	99	507
Q3 (Apr-Jul)	630	81	9	30	53	457
Q2 (Jan - Mar)	696	317	35	110	251	1471
Q1 (Oct - Dec)	605	69	8	29	68	429

Means of Arrival - Ambulance		Means of Arrival - Car	
Auburndale	1	Auburndale	191
Babson Park		Babson Park	2
Natick	262	Natick	732
Needham	158	Needham	391
Needham Heights	11	Needham Heights	56
Newton	448	Newton	1011
Newton Center	50	Newton Center	122
Newton Highlands	20	Newton Highlands	63
Newton Lower Falls	23	Newton Lower Falls	23
Newton Upper Falls	10	Newton Upper Falls	23
Newtonville	69	Newtonville	137
Nonantum		Nonantum	
Waban	40	Waban	144
Waltham	834	Waltham	1956
Wellesley	182	Wellesley	448
Wellesley Hills	71	Wellesley Hills	155
West Newton	83	West Newton	227
Weston	139	Weston	259
Q4 Total	2401	Q4 Total	5940
Q3 (Apr-Jul)	2474	Q3 (Apr-Jul)	6065
Q2 (Jan - Mar)	2775	Q2 (Jan - Mar)	5950
Q1 (Oct - Dec)	2515	Q1 (Oct - Dec)	5575

Overdose	
Needham	1
Newton	1
Waltham	3
Wellesley	1
Q4 Total	6
Q3 Total (Apr-Jul)	7
Q2 (Jan - Mar)	10
Q1 (Oct - Dec)	10

Mental Health	
Auburndale	1
Natick	18
Needham	7
Newton	33
Newton Ctr	2
Newtonville	4
Waban	2
Waltham	44
Wellesley	6
Wellesley Hills	2
West Newton	4
Weston	2
Q4 Total	125
Q3 Total (Apr- Jul)	120
Q2 (Jan - Mar)	122
Q1 (Oct - Dec)	104

Recovery Coach Services

Totals			
# alcohol	#male	Avg age	#Direct Contact
16	4	57.41666667	9
# cannabis	#female		#from CATH
0	20		3
# opioids			#from Police
0			2
# nicotine			#from Needham Housing
1			2
			#from BID Needham
			8

DUAL RECOVERY ANONYMOUS MEETING

Dual Recovery Anonymous (DRA) is a 12-Step self-help program for individuals who experience both an addiction and a psychiatric challenge. This mutual support community uses a harm reduction approach towards wellness. Adults recovering from any addiction and any mental health challenge are welcome to attend.

DRA meetings are open to the public, family and supporters.

Thursdays, 12:00PM – 1:00PM ET
Center at the Heights, Room 216
300 Hillside Ave, Needham, MA

*accessible from Needham Heights Commuter Rail Station



For more information: www.massclubs.org/dra-overview

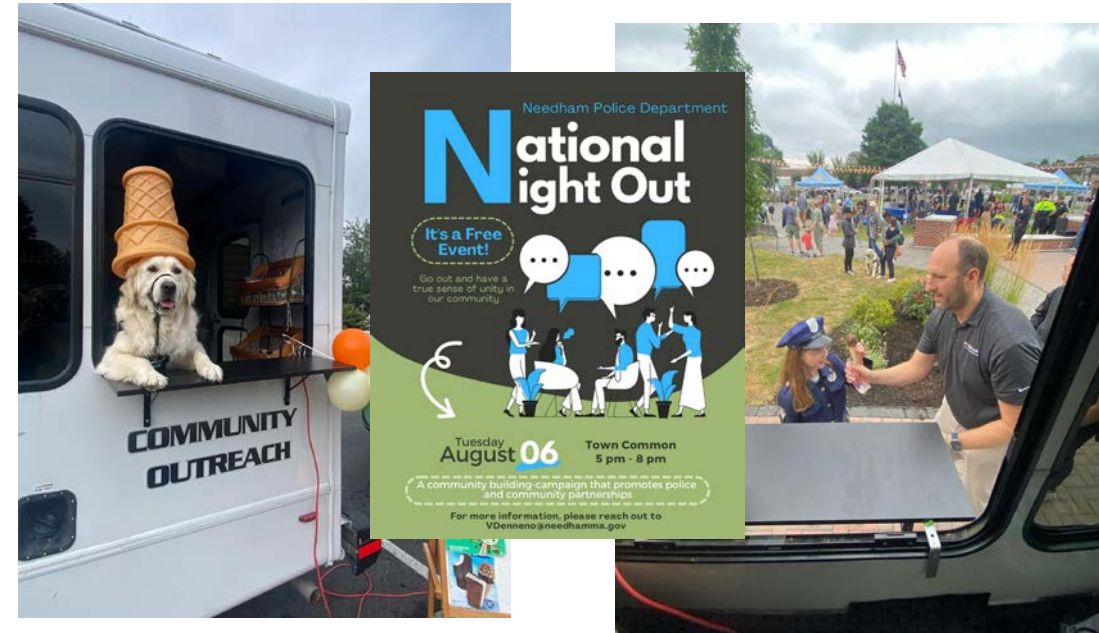


Homelessness Updates

- Increase in people leaving BI after discharge and coming over to the PD lobby for assistance
- Continuing to collect clothing donations for Generic Ministries through the end of December

3rd Quarter Community Outreach Events

- National Night Out
- Opioid Awareness Flags and Vigil
- Harvest Fair



Join us for Needham's 3rd Annual
OVERDOSE AWARENESS VIGIL

Thursday, August 29 at 6:30 pm
Memorial Park Gazebo
92 Rosemary Street, Needham

#TOGETHERWE CAN
REMEMBER, RECOGNIZE, RENEW.

- Remember those affected by the opioid epidemic
- Recognize that this epidemic can affect anyone
- Renew our sense of hope as we head into National Recovery Month

Hosted by:

NEEDHAM YOUTH & FAMILY SERVICES, Becca Schmill Foundation, Needham Public Health Division, Beth Israel Lahey Health, Beth Israel Deaconess Needham, LEARN to COPE, SPAN, NEEDHAM POLICE

Ted Wayman, Emmy award-winning journalist at **WCVB 5** will be joining us.

In 2022, WCVB profiled Ted for his time in recovery; he is incredibly passionate about helping others maintain their sobriety.

For more information on International Overdose Awareness Day, visit: www.overdoseday.com.





Upcoming Community Events

Upcoming Meetings

Homelessness Coalition Dec 11 2024, 1pm

2025 CCIT Meetings

- CORE: Feb, March, May, June, August, September, November, December
- Quarterly
 - 2024 Q4- Jan 2025
 - 2025 Q1- April 2025
 - 2025 Q2- July 2025
 - 2025 Q3- Oct 2025
 - 2025 Q4- Jan 2026

Questions/Suggestions

- Please let us know if you have any suggestions for this new format
- For future meetings please feel free to send event info or other programming you might want to share with the group



Community Crisis Intervention Team (CCIT) Needham Model

Carol Read, M.Ed, CAGS, CPS

Tiffany Zike, MPH, BSN, RN

10/27/2022

CCIT Program Overview

- Based off national Jail Diversion Model
- Established to improve Needham police, social worker and public health service provider responses.
 - acute and chronic mental health, substance use incidents, domestic violence and elder abuse incidents, homelessness, and others.
- Enables communication and collaboration among town service agencies.
- Lead by Needham Police
- Core team works to respond in crisis situations and in chronic resident situations
 - Provides resources related to assessment, counseling, treatment and family system restructuring to break the cycle of recurring incidents and enhance resident health and wellness



<https://www.youtube.com/watch?v=POCaXWJQtsM>

CCIT Goals

1. **Expand Knowledge:** police, fire, and first responder staff knowledge of substance abuse, domestic violence and mental health issues to provide an enhanced response to support resident needs.
2. **Diffuse/Mitigate:** situations to mitigate escalation to the level of assault, abuse or crime, steering people to treatment instead of hospitalization and/or jail.
3. **Intervene:** Intervention with a proactive response offering support and treatment options to residents, connecting residents with acute and chronic issues to local resources.
4. **Create Partnerships:** Partner with town social workers- Breaking down silos between community stakeholders by sharing work roles and responsibilities and behavioral health resources. To ultimately provide targeted resources to residents in need to mitigate the negative consequences of the presenting condition.
5. **Maintain Connections:** with DMH funded Riverside Emergency Services providers 24/7 social work phone support, in office and at home psychiatric evaluation, connection to state funded treatment for substance use disorders, mental health conditions and social services – including crisis stabilization treatment and in patient supports.
6. **Provide Resident Intervention:** in acute or chronic need, that has contact with police, public health or EMS with the objective to reduce the number of emergency calls

CCIT Structure



1

1. Needham Police Training/Co-Response: Police officers- 3-day CCIT adult and/or youth focused training.

- Elder at-risk education, domestic violence awareness, substance abuse and addiction, mental health first aid training and family conflict resolution. Needham Police has committed to the [One Mind Pledge](#)



2

2. Monthly Core Team Service Provider meetings: Presentation of acute chronic resident cases.

- Attendees include: Police, EMS/Fire, Public Health, Social Workers (Aging and Youth & Family) and a representative from Riverside Emergency Services.



3

3. Quarterly Community Partners meetings: Discuss trends seen in the hospitals and communities. Hospitals provide numbers seen for diagnosis within our area. Often presentation for new programs within the area.

- Hospitals, Needham Public Schools, Community Social Service Agencies, MA Department of Mental Health (resident programs) and Riverside Emergency Services (24/7 phone support, psychiatric evaluation-in home-in office, crisis stabilization and referral to treatment)

CCIT Outcomes

-
- **Resident support:** Increased communication and connection with residents and their families to provide extensive support resources
 - **Hospital connections:** Enhanced relationships with area hospital leaders for enhanced responsiveness in emergencies for consistency as a resource and support for Behavioral Health needs.
 - **Data collection:** analysis: Hospital ED data, school incident data, police and EMS incident data collection and review to evaluate the behavioral health and social service needs of all age Needham residents.

CCIT Example #1

- After multiple calls to Needham police and fire, a 76-year-old Needham resident who has an adult son with co-occurring mental illness and substance use disorder was referred to a social worker at CATH. His son currently lives with him and his wife, which is causing them a great deal of stress. The social worker is working with the father to navigate finding supportive housing for his son, while also emphasizing the importance of self-care and making sure his own needs are met. The father seeks counseling and support while the son is navigating the rehab process.

CCIT Example #2

- A Needham resident contacted the Needham Police Department for assistance with filing a Section 35 on behalf of her adult daughter. Her daughter had previously sought residential treatment. A Section 35 was filed, and the daughter was court mandated to residential treatment. The mother was connected with a social worker at CATH for support and information regarding the Section 35 process. The social worker collaborated with Carol Read to discuss ideas for local resources and support for the family. Through the support services of Needham Police, Fire, Health Department, and Social Workers this family was supported and guided through a very stressful time of their lives.

Confidentiality/Authorization



Needham Community Crisis Intervention Team (CCIT)

Working Together to Reduce Risk in Our Community

About the Needham CCIT:

The Community Crisis Intervention Team is made up of designated staff from community and government agencies in Needham. The team meets monthly to address specific situations regarding community members in urgent need of support. The CCIT will develop immediate, coordinated, and integrated responses, working collaboratively with community members to ensure members have access to the services and supports available.

Who is part of the Needham CCIT?

Members of the Needham CCIT include the following Town Departments: Public Health staff (Nursing and Substance Use Prevention), Aging Services Social Workers, Youth & Family Services, members of the Police Department, and members of the Fire Department. Other community partners within Needham (i.e. Riverside Community Care or Needham Public Schools) also may participate and assist in the team's intervention.

Consent Waiver

Through your collaboration with the Needham CCIT we can help connect you and your family with local resources and supports such as substance use services, mental health treatment, housing stabilization support, and home care services.

By signing below, you consent to have Needham CCIT discuss your situation and your needs in order to offer you the best support, the CCIT collaborates to identify the most beneficial and appropriate resources for you and your family. Please know that representatives from each of the above groups will be part of determining the best possible response for your individual or family needs. Any discussion within CCIT will remain confidential between the members of CCIT and the individual signing below.

Name: _____

Reason for referral to CCIT: _____

Home Phone: _____ Cell Phone: _____

Address: _____

Signature: _____ Date: _____

Emergency Contact: _____ Phone: _____

This release is valid until: _____

CCIT Member: _____ Date: _____

*A copy of this release is as valid as the original.



Needham Community Crisis Intervention Team (CCIT)

Working Together to Reduce Risk in Our Community

CONFIDENTIALITY AGREEMENT FOR THE NEEDHAM COMMUNITY CRISIS CORE TEAM

About the Needham CCIT:

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Who is part of the Needham CCIT?

Members of the Needham Community Crisis Core Team include the following Town Departments: Public Health staff (Nursing and Substance Use Prevention), Aging Services Social Workers, Youth & Family Services, members of the Police Department, and members of the Fire Department. Other community partners within Needham (i.e. Riverside Community Care or Needham Public Schools) also may participate and assist in the team's intervention.

Confidentiality Guidelines:

Every individual and family whose circumstances are presented at the Community Crisis Team Meetings has the right to expect that their concerns will only be discussed at the roundtable and that their information will not be shared with unauthorized individuals.

I, as a participating member of the Community Crisis Intervention Team, understand and agree that confidentiality of identifiable information for any individual or family presented at the Community Crisis Core Team Meetings shall be maintained. I understand and agree that the personal, identifying information presented at the Community Crisis Team Meetings will not be released to any other nonparticipating agencies/persons without signed a signed release of information from the individual or family being discussed.

I agree to report to any violations of this agreement by myself or any other person to the CCIT Chair, Lieutenant Chris Baker, cbaker@needhamma.gov, p. 781-455-7570.

Name (print): _____

Organization: _____

Signature: _____ Date: _____

Protocol Example



POLICY or PROCEDURE TITLE: **Community Crisis Intervention Team**
Number: **HHS-ALL-108**
Policy Type: **Administration**
Effective Date:
Date Reviewed or Revised: July 29, 2019

PURPOSE: To connect Needham residents who are experiencing mental health conditions, substance use disorders, potential elder and child abuse or neglect, domestic violence, and family dysfunction with local social work support and other resources.

PROCEDURE:
The Community Crisis Intervention Team (CCIT) meets monthly. Needham Public Health staff members, Aging Services Division Social Workers, and Needham Police and Fire are responsible for:

1. The following departments designate appropriate individuals to meet on the second Wednesday at 10am at the Needham Police Station: Police Department; Aging Services Division; Fire Department; Public Health Nursing; and Substance Use Prevention.
2. Members of the CCIT abide by standards of confidentiality and may exchange case information within the membership of the CCIT. Sharing of information with other service providers can occur only with the consent of the individual being served.
3. All members of the CCIT will sign the Community Crisis Intervention Confidentiality Agreement.
4. Needham Police present current cases and an appropriate referral is made for Needham residents with acute or chronic incidents related to: mental health status, extreme isolation, substance use disorder, domestic violence, threat of harm and harassment, elder abuse and neglect, child abuse and neglect, suicidal ideation and suicide attempts. Referrals may be made to Youth and Family Services, Public Health Division, Police, Fire Department, Aging Services Division, Riverside, or other appropriate service.
5. Prior to the meeting the staff member who is presenting a case decides if other members of the community (e.g. Needham Public Schools representative) are needed at the upcoming meeting. Anyone from outside the core team must review and comply with the CCIT policy and sign the Community Crisis Intervention Team Confidentiality Agreement.
6. The monthly team meeting consists of reviewing the case and discussing a plan of action for the resident, referral details, and plan for outreach to the resident and/or his or her family.
7. In addition to the monthly meetings, the CCIT holds quarterly meetings to which a larger group is invited. Additional attendees include representatives from Beth Israel Deaconess-Needham Hospital, Newton-Wellesley Hospital, Riverside, and Springwell.

8. After the team meeting, appropriate team members reach out and offer services to identified residents who appear to be in need.

A. A social worker, public health nurse, and/or police officer call the resident to introduce the available support services, inform the person about confidentiality, and identify the reason for concern. If indicated, the CCIT staff member may request an in-person meeting with the resident, at their home or the staff member's office, to offer further resources and ongoing support.

B. If the resident initially declines the service, the provider determines whether to reach out again. If the client is still not interested, the case will be closed. **All attempts to reach out to the client are in CCIT records documented.**

C. The designated social worker or public health nurse maintains a confidential record to track progress in each case.

D. With the client's consent, the designated social worker or public health nurse reports back to the CCIT about follow-up with the resident (i.e., if a referral has been successful, if the client is receiving care or assistance.)

E. If clinically indicated, the designated Needham social worker or a public health nurse, with the signed client consent, communicates with care providers working with CCIT-referred Needham residents to review plan of care and treatment progress.

9. If an emergent situation with a Needham resident comes to the attention of any of the members of the CCIT, an appropriate response is determined by Police and Health & Human Services and is reported to the team at the next scheduled CCIT meeting.

Attachments:

- Authorization to Discuss Care
- Community Crisis Intervention Team Confidentiality Agreement

Prepared by: Catherine Delano, Timothy McDonald, Chris Baker, Jessica Moss, Kerrie Cusack, and Lynn Schoeff

Approved by:

Director of Health and Human Services

Date

NWH FY21 through Q3 (Apr-Jun)- Primary Service Area Emergency Room Volume													
Town	Overdose					Totals		FY21Q3-FY20Q3		Transport			
	0-17	18-24	25-44	45-64	65+	FY21 Q3	FY20 Q3	#	%	Amb	Non-Amb	Total	
Natick	-	1	-	-	1	-	2	1	1	100.0%	-	2	2
Needham	-	-	2	-	-	-	-	2	2	0.0%	-	2	2
Newton	-	1	-	1	-	-	2	1	1	100.0%	-	2	2
Waltham	1	-	2	5	1	9	5	4	80.0%	6	3	9	
Watertown	-	-	-	-	-	-	-	-	0.0%	-	-	-	
Wellesley	-	1	-	1	-	2	1	1	100.0%	1	1	2	
Weston	1	-	1	-	-	2	-	2	0.0%	1	1	2	
Total	2	3	5	8	1	19	8	11	137.5%	12	7	19	

Zip code desc	Mental/Behavioral/Disorders					Totals		FY21Q3-FY20Q3		Transport		
	0-17	18-24	25-44	45-64	65+	FY21 Q3	FY20 Q3	#	%	Amb	Non-Amb	Total
Natick	5	6	5	1	-	17	5	12	240.0%	4	13	17
Needham	12	4	4	2	-	22	12	10	83.3%	4	18	22
Newton	18	13	16	11	14	72	59	13	22.0%	34	38	72
Waltham	11	9	37	14	6	77	76	1	1.3%	50	27	77
Watertown	3	3	2	2	-	10	5	5	100.0%	6	4	10
Wellesley	17	6	2	4	4	33	15	18	120.0%	10	23	33
Weston	1	3	2	3	2	11	7	4	57.1%	7	4	11
Total	67	44	68	37	26	242	179	63	35.2%	115	127	242

Town	Others					Totals		FY21Q3-FY20Q3		Transport		
	0-17	18-24	25-44	45-64	65+	FY21 Q3	FY20 Q3	#	%	Amb	Non-Amb	Total
Natick	101	46	143	152	217	659	365	294	80.5%	103	556	659
Needham	153	33	71	87	160	504	314	190	60.5%	102	402	504
Newton	375	175	414	547	961	2,472	1,725	747	43.3%	616	1,856	2,472
Waltham	420	231	684	613	630	2,578	2,021	566	28.1%	668	1,910	2,578
Watertown	86	15	87	67	72	327	238	89	37.4%	63	264	327
Wellesley	192	85	96	159	378	910	550	360	65.5%	253	657	910
Weston	75	25	30	74	178	382	242	140	57.9%	120	262	382
Total	1,402	610	1,525	1,699	2,596	7,832	5,446	2,386	43.8%	1,925	5,907	7,832

2021 Q2 Substance Related Offenses		2021 Q2 Mental Health Incidents		
Offense	Count			
ALCOHOL IN MV, POSSESS OPEN CONTAINER OF	2			
DRUG, POSSESS CLASS A	1			
DRUG, POSSESS CLASS B	4			
DRUG, POSSESS CLASS C	1			
DRUG, POSSESS CLASS E	2			
LIQUOR TO PERSON UNDER 21, SELL/DELIVER	3			
LIQUOR, PERSON UNDER 21 POSSESS	3			
OUI--DRUGS	1			
OUI-LIQUOR OR .08%	3			
Grand Total	20			
Suspected OD (Opiate)	4			
Suspected OD (Other)	5			
OD Death (Opiate)	1			
Narcan Administered (Police)	2			

Mental Health Related Incident	504		
Yes	76	15.1%	
No	428	84.9%	
Mental Health Related Type	36		
Voluntary	13	36.1%	
Section 12 (Police)	13	36.1%	
Section 12 (Clinician/MD)	10	27.8%	
Transport to	36		
BI Needham	26	72.2%	
NWH	11	30.6%	

	Falls					Totals	
Town	0-17	18-24	25-44	45-64	65+	2021 Q3	2020 Q3
Needham	4	1	3	7	51	66	56
Dedham		2		8	42	52	27
Westwood	2		1	3	14	20	12
Dover	1		2	1	2	6	5
Medfield	1	1	2	2	4	10	10
Wellesley		1		2	1	4	1
Walpole	1	1	4	4	14	24	6
Sharon	1		1		5	7	1
Foxboro					1	1	2
Norwood	4	2	3	10	26	45	5
Total	14	8	16	37	160	235	125
	Overdose					Totals	
	0-17	18-24	25-44	45-64	65+	2021 Q3	2020 Q3
Needham			2	2		4	2
Dedham		3	2		1	6	1
Westwood					1	1	1
Dover			1			1	1
Medfield		2	2		1	5	
Wellesley			1			1	
Walpole							
Sharon							3
Foxboro							
Norwood			2	2		4	
Total		5	10	4	3	22	8
	Mental Health					Totals	
	0-17	18-24	25-44	45-64	65+	2021 Q3	2020 Q3
Needham	6	4	14	12	22	58	51
Dedham	1	4	11	12	29	57	28
Westwood	1	1	4	2	32	40	9

Resources to get started

Education on CIT Programs

- CIT International <https://www.citinternational.org/What-is-CIT>
- Massachusetts Association for Mental Health & DMH
<https://www.mamh.org/science-innovation/tested-solutions/crisis-intervention-team-program>

DMH Funded Programs and Help

- **Technical Assistance – Metro Boston Crisis Intervention Team Training & Technical Assistance (DMH Funded)** <https://www.metrobostoncit.org/training-and-technical-assistance-center>
 - *The Training and Technical Assistance Center (TTAC) works collaboratively with Police Departments who are interested in implementing CIT and are in need of guidance or assistance. Our team is passionate about working with the existing records management system to establish and implement codes that can more accurately track incoming behavioral health and substance abuse calls. We also work closely with departments and aid in strengthening relationships between emergency service providers, mental health services, and community resources*
- **Advocates Framingham** <https://www.advocates.org/services/jail-diversion> CIT program (Metrowest Region) DMH Funded. Kallie Montagano kmontagano@advocates.org
- **Bristol County (Taunton) Community Counseling of Bristol County** One Washington St, Taunton <https://www.comcounseling.org/services/community-crisis-intervention-team.php> . Kathy Lalor klalor@counseling.org 508-977-8138

Department of Mental Health funded- CIT Training and Technical Assistance programs (7) regional listing:

- **Norfolk County CIT TTAC**
- Director: Deputy Superintendent Jennifer Paster
- Brookline Police Dpt.
- jpaster@brooklinema.gov (617) 264-6437
-
- Assistant Director: Sgt. Chris Malinn
- Brookline Police Dpt.
- cmalinn@brooklinema.gov (617) 730-2240
-
- <https://norfolkcountycit.wixsite.com/crisisintervention>
-
- **Advocates Framingham CR TTAC**
- Assistant Director: Danielle Larsen, LMHC
- Advocates
- dlarsen@advocates.org
-
- <https://www.advocates.org/services/jail-diversion>
-
- **Central MA CIT TTAC**
- Director: Taylor Lacroix
- Open Sky Community Services
- taylor.lacroix@openskycs.org (508) 868-4226
-
- Administrative Assistant: Julia Clark
-
- **Western MA CIT TTAC**
- Coordinator: Nicola Howe
- Behavioral Health Network
- nicola.howe@bhninc.org (413) 657-0359

- **South Shore CIT TTAC**
- Co-Coordinator: Jay St. Ives
- Braintree Police Department
- jstives@braintreema.gov; (781) 980-3016
-
- Co-Coordinator: Sgt. Jamie Mosesso
- Braintree Police Department
- jmosesso@braintreema.gov
-
- Clinical Coordinator: Megan Scott, LICSW
- Braintree Police Department
- mscott@braintreema.gov (781) 794-8948
-
- <https://www.southshorecit.org/>
-
- **Boston CIT TTAC**
- Deputy Director: Jenna Savage
- Boston Police Department
- jenna.savage@pd.boston.gov (617) 343-5987
-
- **Middlesex County CIT TTAC**
- Program Director: Wilson Paul
- The Front Line Initiative
- wpaul@tewksbury-ma.gov (978) 409-7349

Response Materials

~Interface Helpline:

617-332-3666 x1411—FREE consultation & referral service for therapy & psychiatric services

~Riverside Emergency Services:

781-769-8674— Crisis intervention & phone consultation for mental health & addiction related emergencies 24 hr/7 day

~MA DPH Helpline:

800-327-5050—FREE consultation & referral for alcohol & other drug detox, treatment & sober housing; www.helpline-online.com

~NAMI MA: 800-370-9085—

Individual & family mental health support line; local group meetings & resources; www.namimass.org

~St. Elizabeth's Hospital:

617-789-2574—Hospital detox & inpatient & outpatient treatment, including Suboxone

~DOVE Domestic Violence:

888-314-3683—24 hr/7 day phone support; www.dovema.org

~Suicide Prevention Helpline:

800-273-8255— 24 hr/7 www.suicidepreventionlifeline.org

~Samaritans: 877-870-4673

—24 hr/7 call line; confidential support for depressed, lonely or suicidal callers & their friends/ family who are concerned

We Can Help

~Needham Public Health Department: 781-455-7500 x511—ask for Substance Abuse Resources; www.needhamma.gov/substanceabuse

~Learn to Cope: 508-738-5148—Support group meetings for family & friends of person addicted to opioids/heroin; Narcan available; www.learn2cope.org

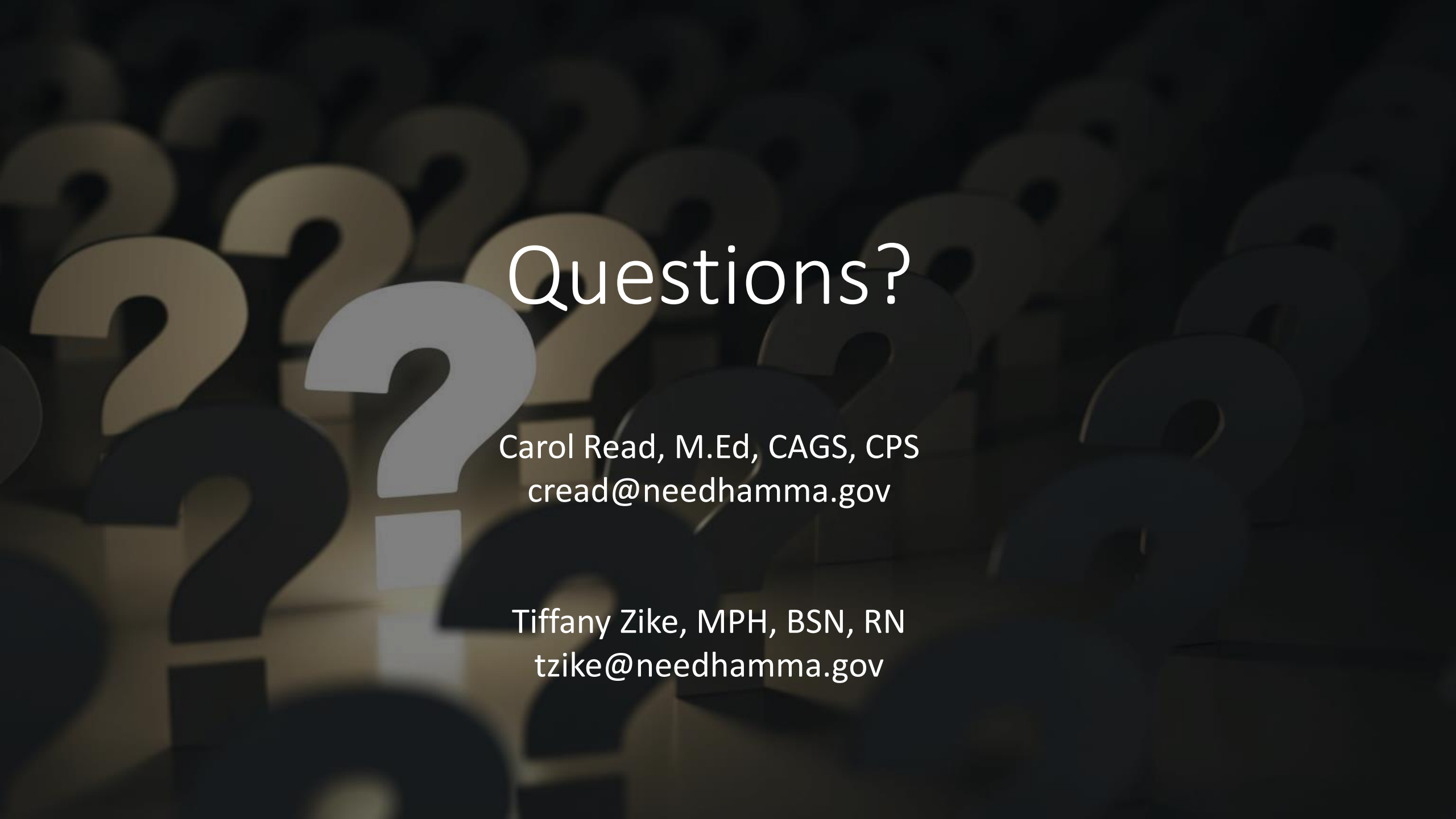
~Alanon: 508-306-0556—Resources & support group meetings for family & friends of addicted person

~Alcoholics Anonymous Meetings: 617-426-9444—Peer support for daily sobriety

~Substance Use Services: 617-243-6062—Newton-Wellesley Hospital provides consultation for inpatient & outpatient services, medication-assisted treatment, education, counseling, & support groups

~MOAR Recovery: 617-423-6627—MA recovery support services



The background of the slide is dark with a pattern of question marks in various shades of gray and gold. One question mark in the center-left is a lighter, more prominent gray.

Questions?

Carol Read, M.Ed, CAGS, CPS
cread@needhamma.gov

Tiffany Zike, MPH, BSN, RN
tzike@needhamma.gov



POLICY or PROCEDURE TITLE: **Community Crisis Intervention Team**

Number: **HHS-ALL-108**

Policy Type: **Administration**

Effective Date:

Date Reviewed or Revised: February 3, 2023

PURPOSE: To connect Needham residents who are experiencing mental health conditions, substance use disorders, potential elder and child abuse or neglect, domestic violence, and family dysfunction with local social work support and other resources.

PROCEDURE:

The Community Crisis Intervention Team (CCIT) meets monthly. Needham Public Health staff members, Aging Services Division Social Workers, and Needham Police and Fire are responsible for:

1. The following departments designate appropriate individuals to monthly Needham Police Station: Police Department; Aging Services Division; Fire Department; Public Health Nursing; and Substance Use Prevention.
2. Members of the CCIT abide by standards of confidentiality and may exchange case information within the membership of the CCIT. Sharing of information with other service providers can occur only with the consent of the individual being served.
3. All members of the CCIT will sign the Community Crisis Intervention Confidentiality Agreement.
4. CCIT members present current cases to the team and appropriate referrals are made for Needham residents with acute or chronic incidents related to **mental** health status, extreme isolation, substance use disorder, domestic violence, threat of harm and harassment, elder abuse and neglect, child abuse and neglect, suicidal ideation and suicide attempts. Referrals may be made to Youth and Family Services, Public Health Division, Police, Fire Department, Aging Services Division, Riverside, or other appropriate service.
5. Prior to the meeting, the staff member who is presenting a case decides if other members of the community (e.g. Needham Public Schools representative) are needed at the upcoming meeting. Anyone from outside the core team must review and comply with the CCIT policy and sign the Community Crisis Intervention Team Confidentiality Agreement.
6. The monthly team meeting consists of reviewing cases and discussing a culturally sensitive plan of action for the resident, referral details, and plan for outreach to the resident and/or his or her family.
7. In addition to the monthly meetings, the CCIT holds quarterly meetings to which a larger group is invited. Additional attendees may include representatives from Beth Israel Deaconess-Needham Hospital, Newton-Wellesley Hospital, Riverside, and Springwell, and others.

8. After the team meeting, appropriate team members reach out and offer services to identified residents who appear to be in need.
- A. A social worker, public health nurse, and/or police officer call the resident to introduce the available support services, inform the person about confidentiality, and identify the reason for concern. An interpreter is engaged if the resident is not fluent in English. If indicated, the CCIT staff member may request an in-person meeting with the resident, at their home or the staff member's office, to offer further resources and ongoing support.
 - B. If the resident initially declines the service, the provider determines whether to reach out again. If the client is still not interested, the case will be closed. All attempts to reach out to the client are documented.
 - C. The designated social worker or public health nurse maintains a confidential record to track progress in each case.
 - D. With the client's consent, the designated social worker or public health nurse reports back to the CCIT about follow-up with the resident (i.e., if a referral has been successful, if the client is receiving care or assistance.)
 - E. If clinically indicated, the designated Needham social worker or a public health nurse, with the signed client consent, communicates with care providers working with CCIT-referred Needham residents to review plan of care and treatment progress.
9. If an emergent situation with a Needham resident comes to the attention of any of the members of the CCIT, an appropriate response is determined by Police and Health & Human Services and is reported to the team at the next scheduled CCIT meeting.

Commented [TZ1]: If it is after hours and support is needed Riverside Emergency Services/Mobile Crisis Intervention Team can be contacted at 1-800-529-5077. Any follow-up can happen during the next business day with appropriate Needham CCIT members.

Attachments:

- Authorization to Discuss Care
- Community Crisis Intervention Team Confidentiality Agreement

Prepared by: Catherine Delano, Timothy McDonald, Chris Baker, Jessica Moss, Kerrie Cusack, and Lynn Schoeff

Reviewed and revised February 3, 2023: Tiffany Zike, Jessica Rice, LaTanya Steele, Sara Shine

Approved by:

Director of Health and Human Services

Date



Needham Community Crisis Intervention Team (CCIT)

Working Together to Reduce Risk in Our Community

CONFIDENTIALITY AGREEMENT FOR THE NEEDHAM COMMUNITY CRISIS CORE TEAM

About the Needham CCIT:

The Community Crisis Intervention Team is made up of designated staff from community and government agencies in Needham. The team meets monthly to address specific situations regarding community members in urgent need of support. The CCIT will develop immediate, coordinated, and integrated responses, working collaboratively with community members to ensure members have access to the services and supports available.

Who is part of the Needham CCIT?

Members of the Needham Community Crisis Core Team include the following Town Departments: Public Health staff (Nursing and Substance Use Prevention), Aging Services Social Workers, Youth & Family Services, members of the Police Department, and members of the Fire Department. Other community partners within Needham (i.e. Riverside Community Care or Needham Public Schools) also may participate and assist in the team's intervention.

Confidentiality Guidelines:

Every individual and family whose circumstances are presented at the Community Crisis Team Meetings has the right to expect that their concerns will only be discussed at the roundtable and that their information will not be shared with unauthorized individuals.

I, as a participating member of the Community Crisis Intervention Team, understand and agree that confidentiality of identifiable information for any individual or family presented at the Community Crisis Core Team Meetings shall be maintained. I understand and agree that the personal, identifying information presented at the Community Crisis Team Meetings will not be released to any other nonparticipating agencies/persons without signed a signed release of information from the individual or family being discussed.

I agree to report to any violations of this agreement by myself or any other person to the CCIT Chair, Lieutenant Chris Baker, cbaker@needhamma.gov, p. 781-455-7570.

Name (print): _____

Organization: _____

Signature: _____ Date: _____



Needham Public Health Division

Prevent. Promote. Protect.



Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: January 24, 2025

Agenda Item	2024 Fuss & O'Neill Synthetic Turf Testing Report
Presenter(s)	Tara Gurge, Assistant Public Health Director Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Enclosed is the latest 2024 synthetic turf testing report for the three turf fields in town, specifically for Memorial Field and for the two fields at DeFazio Park. See summary points from Fuss & O'Neill – • Semi-volatile organic compound (SVOC) and volatile organic compound (VOC) concentrations were either consistent or lower than in 2023. Metal concentrations were either consistent or higher than in 2023. • Zinc concentrations at Memorial field were above the MassDEP risk-based level. • Arsenic was non-detect but was above the MassDEP risk-based level. (After initial testing results were received, our contact asked the lab to re-issue a revised report to the method detection limit (MDL), which is the lowest concentration a compound can be measured, without compromising confidence.) The Needham Public Health division received an updated report for the Method Detection Limits (MDL), which is enclosed. MDL values are lower and still non-detect, but as you can see, some values are still above the risk-based levels. See MDL values in Table 1, and they also added the MDL lab report as an Appendix. BOH to discuss and decide whether we would want to re-test this spring due to these elevated levels.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
No vote requested.	
3.	BACK UP INFORMATION:
a) Crumb Rubber Monitoring Results Needham Report 2024	

Crumb Rubber Monitoring Results Memorial Park & DeFazio Park Needham, Massachusetts

Needham Health Department
Needham, Massachusetts

January 2025

January 14, 2025

Ms. Tara Gurge, R.S., C.E.H.T., M.S.
Assistant Public Health Director
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494

RE: **Crumb Rubber Monitoring Results – October 2024**
Memorial and DeFazio Parks
Needham, Massachusetts
Fuss & O'Neill Project No. 20081266.B50

Dear Ms. Gurge:

Enclosed is the summary report for crumb rubber testing performed at the artificial turf athletic fields located at Memorial Park and DeFazio Park in Needham, Massachusetts in October 2024.

If you should have any questions regarding the contents of this report, please do not hesitate to contact the undersigned below. Thank you for this opportunity to have served your environmental needs.

Sincerely,



Evan Koncewicz
Environmental Geologist
(617) 379-5895



Neal Kelly, LSP
Associate
(781) 987-4323

Enclosure

Table of Contents

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Memorial Park & DeFazio Park
Needham Health Department

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1 Site Plan – DeFazio Park

2 Site Plan – Memorial Park

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Appendix A – Laboratory Analytical Reports & Chain-of-Custody Forms

Appendix B – Sampling Equipment

Appendix C – Field Logs

Appendix D – Method Detection Limit Laboratory Analytical Report



1 Introduction and Background

Fuss & O'Neill, Inc. (Fuss & O'Neill) was retained by the Needham Health Department (the "Client") to perform periodic monitoring of the crumb rubber used at the artificial turf athletic fields in Needham, Massachusetts. The study involved the collection of field measurements and crumb rubber samples from Memorial Park (Needham High School Field, 92 Rosemary Street) and DeFazio Park (Brock Field and Founders Field, 380 Dedham Avenue) for laboratory analysis. The laboratory data were compared to toxicity reference data from the Massachusetts Department of Environmental Protection (MassDEP) and/or US Environmental Protection Agency (EPA) to evaluate potential health-related impacts.

On October 2, 2024, Mr. Christopher Juliano of Fuss & O'Neill performed the crumb rubber sampling in accordance with our proposal dated July 1, 2024.

2 Methodology and Scope of Testing

On October 2, 2024, Mr. Juliano of Fuss & O'Neill met Ms. Tara Gurge of the Needham Health Department to access the three athletic fields to perform the sampling and monitoring activities. A three-point composite sample of crumb rubber was collected from each artificial turf athletic field using laboratory provided dedicated glass jars. The composite samples were comprised of crumb rubber collected from three locations (each end and the middle) of each artificial turf athletic field. Approximate discrete locations from which the material was collected to make up the composite samples are indicated on *Figure 1* (Memorial Park) and *Figure 2* (DeFazio Park). Samples were collected from the Needham High School Field in Memorial Park (sample 16431002-04) and from Founders Field (sample 1643241002-01) and Brock Field in DeFazio Park (sample 1643241002-02).

The composite samples were submitted to EMSL Analytical Laboratory in Cinnaminson, New Jersey (EMSL). The crumb rubber was analyzed for trace metals by Environmental Protection Agency (EPA) Methods 6010C/7471B (inductively coupled plasma atomic emission spectrometry [ICP-AES] and mercury by manual cold-vapor technique, respectively); semi-volatile organic compounds (SVOCs) by EPA Method 8270E; and volatile organic compounds (VOCs) by EPA Method TO-15 (analyzed by gas chromatography/mass spectrometry (GC/MS)). The VOCs were collected from a "closed container" test, with an air headspace over a sample of the crumb rubber heated to 120°F for one hour. A VOC "tentatively identified compound" (TIC) analysis was also conducted. EMSL subcontracted the analysis of trace metals and SVOCs to ALS Laboratories of Middletown Pennsylvania.

The purpose of the closed container VOC test was to determine what concentrations and types of VOCs could be generated from the crumb rubber in a heated state, e.g. a field with full sun on summer day. Refer to *Appendix A* for the laboratory analytical reports and chain of custody forms. Refer to *Table 1* for a summary of the analytical results.

Real-time ambient conditions were monitored during crumb rubber sampling. TOVs (total organic vapors) were measured using an Ion Science Tiger Photoionization Detector (PID). A TSI Q-Trak Air Quality Monitor was used to record ambient temperature and relative humidity (RH). Refer to *Appendix B* for a list of sampling equipment, and *Table 2* for real-time measurements.

3 Results

Analytical data are summarized in *Table 1*. Multiple VOCs (including TICs) were identified in each sample. The following VOCs were detected in the gas stream samples:

- 2-Butanone (MEK)
- 4-Methyl-2-Pentanone (MIBK)
- Acetone
- Carbon disulfide
- Chloromethane
- Ethanol
- Isopropyl alcohol (2-Propanol)
- Propylene
- Tertiary butyl alcohol (TBA)
- Bromomethane (only identified in Founder's Field sample)

Furthermore, 2-butene, carbonyl sulfide and furan, 2-methyl were identified in all three samples as TICs in the analyses. No concentrations of undefined TIC(s) were identified in any samples.

Iron and zinc were each detected in all three samples. Arsenic, cadmium, chromium, lead, manganese, mercury, and selenium were not detected in any sample. The laboratory detection limits of arsenic were greater than the risk-based level used. Arsenic has historically not been detected above the previous risk based level of 2.2 milligrams per kilogram (mg/kg) during previous sampling events.

Eleven SVOCs were identified in each of the rubber samples. N-nitrosodiphenylamine was additionally identified in the Needham High School and Founder's Field samples. The majority of SVOCs identified were within the class of "polycyclic aromatic hydrocarbons" (PAHs), with the exception of acetophenone, hexachlorobutadiene, hexachloroethane and n-nitrosodiphenylamine.

TOVs were recorded at concentrations at an average or below 0.1 parts per million by volume (ppmv) in ambient air. Readings recorded as less than or equal to 1.0 ppmv likely were a result of moisture in ambient air effecting the PID detector lamp. The ambient relative humidity at the time of sampling was between 41.1 and 57.4 percent, within a 69.8- to 78.5 degree Fahrenheit environment (recorded within a few inches of the surface).

4 Data Evaluation

The Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) establishes soil standards for a variety of uses based on publicly-available toxicity data for a range of compounds, including VOCs, SVOCs, and metals. The numerical standards and their derivations are publicly-available¹. MassDEP generally establishes these standards based on four criteria:

¹ MassDEP, December 2017, "MCP Numerical Standards." <https://www.mass.gov/doc/mcp-numerical-standards-derivation/download>, accessed October 2024.

- Publicly-available toxicity data, including EPA and MassDEP Office of Research and Standards (ORS) data, and peer-reviewed industry sources.
- Typical background levels in New England soil.
- Ceiling concentrations (i.e. maximum concentrations set for compounds of limited toxicity).
- Practical quantification limits (PQLs), i.e. levels which analytical laboratories can reliably quantify.

In its toxicity calculations for Method 1 S-1 Soil Standards (applicable to sensitive land uses, including residences, schools and day-care facilities), MassDEP considers inhalation and skin-absorption risks over exposures from infancy to adulthood. Fuss & O'Neill evaluated the crumb rubber analytical results relative to MassDEP's published toxicity levels (i.e. the levels which would be used in the absence of ceiling, background or PQL considerations). For SVOCs and metals, concentrations were compared to MassDEP Residential Receptor Direct Contact Risk-Based Soil Concentration Levels. For VOCs, concentrations were compared to MassDEP Vapor Intrusion Guidance Risk Management Criteria Use to Develop the Threshold Values. These values are included in *Table 1*. Where MassDEP has not published toxicity values, Fuss & O'Neill consulted the EPA "regional screening levels," (RSLs) last updated in November 2024, which consist of similarly derived guidance values for a range of compounds used for screening contaminant concentrations on sites evaluated under the Superfund program². Where RSLs were incorporated into this evaluation, the "non-carcinogenic child screening levels" for resident soil and resident air were generally the most conservative values and were incorporated herein.

The RSL considers the potential for noncancer effects to develop in children and adults via the inhalation route, only. The Resident Air RSL considers that the receptor spends most, if not all, of the day at home and performing home chores as well as outdoor activities. The resident is assumed to be exposed to contaminants via inhalation of ambient air, with no assumption of how contaminants get into the air.

With the exceptions of 2 butene, furan 2-methyl, ethanol, and isopropyl alcohol, MassDEP and/or EPA RSL values were available for all detected compounds.

As noted on *Table 1*, zinc was detected in the sample from Memorial Park at a concentration of 15,200 mg/kg which is greater than the MassDEP threshold value (15,000 mg/kg) and greater than the historically reported range. The zinc concentrations in the other two samples were less than the respective risk-based value. While arsenic was not detected in any of the samples, the laboratory reporting limits were greater than the MassDEP threshold value of 2.5 mg/kg. Arsenic has historically not been detected above the Risk Based Level in our sampling events. The MassDEP exposure levels assume continuous high-contact exposure (five days per week, 30 weeks per year) over a multiple-year duration and are therefore conservative with regard to the actual exposures for users of the field. Except for zinc, all reported metal concentrations were less than the corresponding risk-based levels.

² EPA, May 2021. "Regional Screening Levels – Generic Tables." <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>, accessed October 2024.

Three VOC compounds (2-butene, carbonyl sulfide, and furan, 2-methyl) were reported by the laboratory as a TIC, all less than risk-based values. TICs are compounds that are not method target compounds (for which there are calibration standards). The identification of TICs is based on a review of the TIC's mass spectrum against a mass spectral library available in the instrument's software, as TICs are not contained in the calibration standards, the calculation of the concentration of TICs are estimates. As indicated in the laboratory narrative, TIC data is qualified as estimated values which have presumptive evidence of the compound based on the library match. Further, the EPA does not consider the identification as absolute or confirmed until a known standard for the suspect compound can be analyzed on the same instrument which made the tentative identification³.

All other reported VOC and all SVOC concentrations were less than the associated risk-based levels.

5 Conclusions

Fuss & O'Neill collected field and analytical data to characterize the crumb rubber at three athletic fields in Needham, Massachusetts in October 2024. The analytical results were compared to MassDEP and/or EPA risk-based guidance levels for soil and air, to evaluate potential health risks associated with the use of the crumb rubber media on these athletic fields. The follow conclusions were formed:

- The concentrations of zinc in one of the three samples were greater than the MassDEP threshold value, which is derived from an assumption of high-intensity exposure for a multi-year duration on a consistent basis.
- The laboratory reporting limit of arsenic was greater than the MassDEP threshold value for all three samples, however, arsenic has not been historically detected during crumb rubber sampling at the Site.
- All other reported concentrations of metals, VOCs, and SVOCs were less than the threshold values.

³ EPA, Feb 2006. "Tentatively Identified Compounds."
<https://19january2017snapshot.epa.gov/sites/production/files/2015-06/documents/tics.pdf>, accessed November 2024.

Tables

Table 1
Summary of Crumb Rubber Monitoring Results – October 2, 2024

Analyte	Analytical Results			Risk-Based Levels
	Memorial Park	DeFazio Park		
	Needham High School 16431002-04	Brock Field 1643241002-02	Founders Field 1643241002-01	
Semivolatile Organic Compounds** – dry weight (mg/kg) by method 3546/8270D				
Acenaphthylene	0.06	0.051	0.054	2,400
Acetophenone	0.152	0.181	0.112	NE [7,800]
Anthracene	0.082	0.08	0.078	24,000
Bis(2-Ethylhexyl)phthalate	5.1	5.17	4.41	110
Chrysene	2.45	1.86	2.11	190
Fluoranthene	3.76	2.68	3.05	3,200
Hexachlorobutadiene	0.426	0.486	0.524	29
Hexachloroethane	0.205	.169	0.221	57
Naphthalene	0.131	0.111	0.172	1,600
N-Nitrosodiphenylamine	0.168	ND < 0.096	0.115	NE [110]
Phenanthrene	0.541	0.453	0.426	2,400
Pyrene	8.32	6.89	7.07	2,400
Volatile organic compounds – vapor (mg/m³) Closed Container Test by method TO-15				
2-Butene*	0.018	0.019	0.110	NE
Carbonyl Sulfide*	0.0048	0.0055	0.069	NE [0.1]
Furan, 2-Methyl-*	0.044	0.027	0.028	NE
Bromomethane	ND < 0.00088	ND < 0.00078	0.00082	0.005
Carbon Disulfide	0.00078	0.00078	0.00096	NE [0.730]
Chloromethane	0.00054	0.00083	0.001	NE [0.0094]
Propylene	0.0019	0.0032	0.0037	NE [3.1]
Ethanol	0.064	0.099	0.087	NE
Isopropyl alcohol (2-Propanol)	0.019	0.019	0.029	NE
Acetone	0.026	0.093	0.110	0.8
Tertiary butyl alcohol (TBA)	0.0026	0.0029	0.0037	NE
2-Butanone (MEK)	0.013	0.018	0.027	5.00
4-Methyl-2-Pentanone (MIBK)	0.024	0.023	0.025	3.00

* Tentatively-identified compound

**For the SVOC full list, refer to the laboratory analytical report

ND: None Detected; NE: risk threshold not established by MassDEP or EPA.

NE [X]: not established by MassDEP, value is EPA "regional screening level" for risk screening at Superfund sites (Resident Soil/Air).

NR: Not reported

Chromium risk level conservatively assumes hexavalent (Cr-VI) form.

VOCs and TICs were only reported if detected in at least one sample.

Bold and underlined value indicates that the detected value exceeds the Risk Based Level.

Italicized value indicates that the laboratory reporting limit exceeds the Risk Based Level.

Analyte	Analytical Results			Risk-Based Levels
	Memorial Park	DeFazio Park		
	Needham High School 16431002-04	Brock Field 1643241002-02	Founders Field 1643241002-01	
Total Metals – dry weight (mg/kg) by method 6010C				
Arsenic	ND < 39.5 (13.2)	ND < 39.7 (13.2)	ND < 38.6 (12.9)	2.5
Cadmium	ND < 9.9	ND < 9.9	ND < 9.7	79
Chromium	ND < 19.8	ND < 19.8	ND < 19.3	150
Iron	640	889	762	NE [55,000]
Lead	ND < 39.5	ND < 39.7	ND < 38.6	130
Manganese	ND < 19.8	ND < 19.8	ND < 19.3	NE [1,800]
Mercury	ND < 0.049	ND < 0.047	ND < 0.047	21
Selenium	ND < 98.8	ND < 99.2	ND < 96.5	430
Zinc	15,200	13,200	12,600	15,000

* Tentatively-identified compound

**For the SVOC full list, refer to the laboratory analytical report

ND: None Detected;

NE: risk threshold not established by MassDEP or EPA.

NE [X]: not established by MassDEP, value is EPA “regional screening level” for risk screening at Superfund sites (Resident Soil).

ND < X (X): value in parenthesis is reported method detection limit (MDL), where the analytes were not detected above the MDL.

Chromium risk level conservatively assumes hexavalent (Cr-VI) form.

VOCs and TICs were only reported if detected in at least one sample.

Bold and underlined value indicates that the detected value exceeds the Risk Based Level.

Italicized value indicates that the laboratory reporting limit exceeds the Risk Based Level.

Table 2

Real-Time Measurements, Needham Crumb Rubber Sampling – October 2, 2024

Location	TOVs (ppm)	Temperature (°F)	RH (%)
Needham High School (HS)	0.0	78.5	41.1
Brock Field (D1)	0.1	77.4	45.1
Founders Field (D2)	0.1	69.8	57.4

The highest TOV value from the three sampling locations was recorded. Temperature and relative humidity were averaged amongst the three sampling locations.

°F: degrees Fahrenheit

RH: Relative Humidity

Figures

File: J:\DWG\2008\1266\B50\Environmental\Plan\20081266B50_STP01.dwg Layout: FIGURE 1 DEFAZIO PARK Plotted: 2024-12-11 2:46 PM Saved: 2024-12-11 2:45 PM User: susan.iron
PC3: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 STB/CTB: FO.STB
LAYER STATE:



REFERENCES:

1. AERIAL IMAGE WAS TAKEN FROM THE WEBSITE
[HTTP://WWW.NEARMAP.COM](http://www.nearmap.com), DATED 2024.
2. FIELD BOUNDRIES APPROXIMATE BASED ON SITE
OBSERVATIONS.

LEGEND

-  FOUNDERS FIELD BOUNDARY
-  BROCK FIELD BOUNDARY
-  SAMPLE LOCATIONS TO
FORM COMPOSITE

SCALE:	
HORZ.:	1" = 200'
VERT.:	-
DATUM:	
HORZ.:	-
VERT.:	-
0 150' 200'	
GRAPHIC SCALE	

**FUSS &
O'NEILL**

108 MYRTLE STREET, SUITE 502
QUINCY, MA 02171
617.282.4675
www.fando.com

NEEDHAM

NEEDHAM HEALTH DEPARTMENT

SITE PLAN

DEFAZIO PARK - 380 DEDHAM ROAD

MASSACHUSETTS

PROJ. No.: 20081266.B50
DATE: DECEMBER 2024

FIGURE 1



REFERENCES:

1. AERIAL IMAGE WAS TAKEN FROM THE WEBSITE
[HTTP://WWW.NEARMAP.COM](http://www.nearmap.com), DATED 2024.
2. FIELD BOUNDIES APPROXIMATE BASED ON SITE
OBSERVATIONS.

LEGEND

-  PARK BOUNDARY
-  SAMPLE LOCATIONS TO
FORM COMPOSITE

SCALE:	
HORZ.: 1" = 150'	
VERT.: -	
DATUM:	
HORZ.: -	
VERT.: -	
0 125' 150'	
GRAPHIC SCALE	

**FUSS &
O'NEILL**

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NEEDHAM

NEEDHAM HEALTH DEPARTMENT
SITE PLAN
MEMORIAL PARK - 92 ROSEMARY ROAD

MASSACHUSETTS

PROJ. No.: 20081266.B50
DATE: DECEMBER 2024

FIGURE 2

Appendix A

Laboratory Analytical Reports & Chain of Custody Forms

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Order ID: 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Samples in this Report**

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC33250-01	1-1643 241002-01	Bulk	10/02/2024	10/07/2024
AC33250-02	2-1643 241002-02	Bulk	10/02/2024	10/07/2024
AC33250-03	4-1643 241002-04	Bulk	10/02/2024	10/07/2024
AC33250-04	Lab Background	Bulk	10/02/2024	10/07/2024

Owen McKenna Laboratory Manager 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, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Order ID: 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Analysis Case Narrative****Method Reference**

USEPA: Compendium 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 x 0.25mm x 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 50cc for soil gas. Other volumes for sample dilutions are reflected on each result page.

Sampling Pressures:

N/A Bulk samples submitted for off gas analysis.

Holding Times:

All holding times were met.

Sample Dilutions:

Ethanol and Isopropanol are not diluted for and may be reported with an "E" qualifier on the final result.

Initial Calibration:

All acceptance criteria were met.

Initial Calibration Verification Standard (ICVS)- Second Source:

All acceptance criteria were met.

Laboratory Control Samples (LCS):

All acceptance criteria were met.

Continuing Calibration Verification Standard (CCVS):

All acceptance criteria were met.

Method Blanks (MB):

All acceptance criteria were met.

Reporting Limit Laboratory Control Samples (MRL):

All acceptance criteria were met.

Duplicates (DUP):

All acceptance criteria were met.

Sample Internal Standards:

All acceptance criteria were met.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Order ID: 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Ogg Gas Conditions:**

35g of each sample were off gassed for 24 hours at 49°C.

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 Laboratory Manager or other approved signatory

**EMSL Analytical, Inc.**

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Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-01**Customer Sample ID:** 1-1643 241002-01**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:21**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 14:42	BCJ2206	y16718.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	48	0.20	1	110	0.48	10/18/24 14:42	E
Acetonitrile	75-05-8	41.0	ND	0.20	1	ND	0.34	10/18/24 14:42	
Acrylonitrile	107-13-1	53.0	ND	0.20	1	ND	0.43	10/18/24 14:42	
Benzene	71-43-2	78.1	ND	0.20	1	ND	0.64	10/18/24 14:42	
Benzyl chloride	100-44-7	126.0	ND	0.20	1	ND	1.0	10/18/24 14:42	
Bromodichloromethane	75-27-4	163.8	ND	0.20	1	ND	1.3	10/18/24 14:42	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	0.20	1	ND	0.89	10/18/24 14:42	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.20	1	ND	0.88	10/18/24 14:42	
Bromoform	75-25-2	252.8	ND	0.20	1	ND	2.1	10/18/24 14:42	
Bromomethane	74-83-9	94.9	0.21	0.20	1	0.82	0.78	10/18/24 14:42	
1,3-Butadiene	106-99-0	54.1	ND	0.20	1	ND	0.44	10/18/24 14:42	
n-Butane	106-97-8	58.1	ND	0.20	1	ND	0.48	10/18/24 14:42	
2-Butanone(MEK)	78-93-3	72.1	9.2	0.20	1	27	0.59	10/18/24 14:42	
Carbon disulfide	75-15-0	76.1	0.31	0.20	1	0.96	0.62	10/18/24 14:42	
Carbon tetrachloride	56-23-5	153.8	ND	0.20	1	ND	1.3	10/18/24 14:42	
Chlorobenzene	108-90-7	112.6	ND	0.20	1	ND	0.92	10/18/24 14:42	
Chloroethane	75-00-3	64.5	ND	0.20	1	ND	0.53	10/18/24 14:42	
Chloroform	67-66-3	119.4	ND	0.20	1	ND	0.98	10/18/24 14:42	
Chloromethane	74-87-3	50.5	0.50	0.20	1	1.0	0.41	10/18/24 14:42	
3-Chloropropene(Allyl chloride)	107-05-1	76.5	ND	0.20	1	ND	0.63	10/18/24 14:42	
2-Chlorotoluene	95-49-8	126.6	ND	0.20	1	ND	1.0	10/18/24 14:42	
Cyclohexane	110-82-7	84.2	ND	0.20	1	ND	0.69	10/18/24 14:42	
Dibromochloromethane	124-48-1	208.3	ND	0.20	1	ND	1.7	10/18/24 14:42	
1,2-Dibromoethane	106-93-4	187.8	ND	0.20	1	ND	1.5	10/18/24 14:42	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.20	1	ND	1.2	10/18/24 14:42	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.20	1	ND	1.2	10/18/24 14:42	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.20	1	ND	1.2	10/18/24 14:42	
1,1-Dichloroethane	75-34-3	99.0	ND	0.20	1	ND	0.81	10/18/24 14:42	
1,2-Dichloroethane	107-06-2	99.0	ND	0.20	1	ND	0.81	10/18/24 14:42	
1,1-Dichloroethene	75-35-4	96.9	ND	0.20	1	ND	0.79	10/18/24 14:42	
cis-1,2-Dichloroethene	156-59-2	96.9	ND	0.20	1	ND	0.79	10/18/24 14:42	
trans-1,2-Dichloroethene	156-60-5	96.9	ND	0.20	1	ND	0.79	10/18/24 14:42	
1,2-Dichloropropane	78-87-5	113.0	ND	0.20	1	ND	0.92	10/18/24 14:42	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.20	1	ND	0.91	10/18/24 14:42	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.20	1	ND	0.91	10/18/24 14:42	
1,4-Dioxane	123-91-1	88.1	ND	0.20	1	ND	0.72	10/18/24 14:42	
Ethanol	64-17-5	46.1	46	1.0	1	87	1.9	10/18/24 14:42	E
Ethyl acetate	141-78-6	88.1	ND	0.20	1	ND	0.72	10/18/24 14:42	
Ethylbenzene	100-41-4	106.2	ND	0.20	1	ND	0.87	10/18/24 14:42	
4-Ethyltoluene	622-96-8	120.2	ND	0.20	1	ND	0.98	10/18/24 14:42	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.20	1	ND	0.99	10/18/24 14:42	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	0.20	1	ND	1.4	10/18/24 14:42	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.20	1	ND	1.1	10/18/24 14:42	

**EMSL Analytical, Inc.**

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EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-01**Customer Sample ID:** 1-1643 241002-01**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:21**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 14:42	BCJ2206	y16718.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	0.20	1	ND	1.5	10/18/24 14:42	
n-Heptane	142-82-5	100.2	ND	0.20	1	ND	0.82	10/18/24 14:42	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.20	1	ND	2.1	10/18/24 14:42	
n-Hexane	110-54-3	86.2	ND	0.20	1	ND	0.71	10/18/24 14:42	
2-Hexanone(MBK)	591-78-6	100.2	ND	0.20	1	ND	0.82	10/18/24 14:42	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	12	0.20	1	29	0.49	10/18/24 14:42	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	0.20	1	ND	0.98	10/18/24 14:42	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.2	ND	0.20	1	ND	0.72	10/18/24 14:42	
Methylene chloride	75-09-2	84.9	ND	0.20	1	ND	0.69	10/18/24 14:42	
Methyl Methacrylate	80-62-6	100.1	ND	0.20	1	ND	0.82	10/18/24 14:42	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	6.1	0.20	1	25	0.82	10/18/24 14:42	
Naphthalene	91-20-3	128.2	ND	0.20	1	ND	1.0	10/18/24 14:42	
Propylene	115-07-1	42.1	2.1	0.20	1	3.7	0.34	10/18/24 14:42	
Styrene	100-42-5	104.1	ND	0.20	1	ND	0.85	10/18/24 14:42	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	1.2	0.20	1	3.7	0.61	10/18/24 14:42	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.20	1	ND	1.4	10/18/24 14:42	
Tetrachloroethene	127-18-4	165.8	ND	0.20	1	ND	1.4	10/18/24 14:42	
Tetrahydrofuran	109-99-9	72.1	ND	0.20	1	ND	0.59	10/18/24 14:42	
Toluene	108-88-3	92.1	ND	0.20	1	ND	0.75	10/18/24 14:42	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.20	1	ND	1.5	10/18/24 14:42	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.20	1	ND	1.1	10/18/24 14:42	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.20	1	ND	1.1	10/18/24 14:42	
Trichloroethene	79-01-6	131.4	ND	0.20	1	ND	1.1	10/18/24 14:42	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.20	1	ND	0.98	10/18/24 14:42	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.20	1	ND	0.98	10/18/24 14:42	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.20	1	ND	0.93	10/18/24 14:42	
Vinyl acetate	108-05-4	86.0	ND	0.20	1	ND	0.70	10/18/24 14:42	
Vinyl chloride	75-01-4	62.5	ND	0.20	1	ND	0.51	10/18/24 14:42	
Xylene (Ortho)	95-47-6	106.2	ND	0.20	1	ND	0.87	10/18/24 14:42	
Xylene (p,m)	179601-23-1	106.2	ND	0.40	1	ND	1.7	10/18/24 14:42	
Xylenes, Total	1330-20-7	106.2	ND	0.20	1	ND	0.87	10/18/24 14:42	
Total Target Compound Concentrations:			140			340			

Surrogate

4-Bromofluorobenzene

Result

9.64

Spike

10.00

Recovery

96

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-01**Customer Sample ID:** 1-1643 241002-01**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:21**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 14:42	BCJ2206	y16718.D	JAR	250 cc	1	TP

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	8.8		1	20		10/18/24 14:42	N
Carbonyl Sulfide	463-58-1	60.1	2.8		1	6.9		10/18/24 14:42	N
Furan, 2-methyl-	000534-22-5	92.0	7.4		1	28		10/18/24 14:42	N
Total Target Compound Concentrations:			140			340			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J = Estimated value based on a 1:1 response to internal standard.

N = Presumptive evidence of compound based on library match.

**EMSL Analytical, Inc.**

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EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-01**Customer Sample ID:** 1-1643 241002-01**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:21**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 14:42	BCJ2206	y16718.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	48	0.20	1	110	0.48	10/18/24 14:42	E
Bromomethane	74-83-9	94.9	0.21	0.20	1	0.82	0.78	10/18/24 14:42	
2-Butanone(MEK)	78-93-3	72.1	9.2	0.20	1	27	0.59	10/18/24 14:42	
Carbon disulfide	75-15-0	76.1	0.31	0.20	1	0.96	0.62	10/18/24 14:42	
Chloromethane	74-87-3	50.5	0.50	0.20	1	1.0	0.41	10/18/24 14:42	
Ethanol	64-17-5	46.1	46	1.0	1	87	1.9	10/18/24 14:42	E
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	12	0.20	1	29	0.49	10/18/24 14:42	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	6.1	0.20	1	25	0.82	10/18/24 14:42	
Propylene	115-07-1	42.1	2.1	0.20	1	3.7	0.34	10/18/24 14:42	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	1.2	0.20	1	3.7	0.61	10/18/24 14:42	
Total Target Compound Concentrations:			140			340			

Surrogate

4-Bromofluorobenzene

Result

9.64

Spike

10.00

Recovery

96

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	8.8		1	20		10/18/24 14:42	N
Carbonyl Sulfide	463-58-1	60.1	2.8		1	6.9		10/18/24 14:42	N
Furan, 2-methyl-	000534-22-5	92.0	7.4		1	28		10/18/24 14:42	N
Total Target Compound Concentrations:			140			340			
Total Volatile Organic Compounds (TVOCs):			140.00			340.00			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J = Estimated value based on a 1:1 response to internal standard.

N = Presumptive evidence of compound based on library match.

**EMSL Analytical, Inc.**

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EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-02**Customer Sample ID:** 2-1643 241002-02**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:47**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 15:38	BCJ2206	y16719.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	39	0.20	1	93	0.48	10/18/24 15:38	
Acetonitrile	75-05-8	41.0	ND	0.20	1	ND	0.34	10/18/24 15:38	
Acrylonitrile	107-13-1	53.0	ND	0.20	1	ND	0.43	10/18/24 15:38	
Benzene	71-43-2	78.1	ND	0.20	1	ND	0.64	10/18/24 15:38	
Benzyl chloride	100-44-7	126.0	ND	0.20	1	ND	1.0	10/18/24 15:38	
Bromodichloromethane	75-27-4	163.8	ND	0.20	1	ND	1.3	10/18/24 15:38	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	0.20	1	ND	0.89	10/18/24 15:38	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.20	1	ND	0.88	10/18/24 15:38	
Bromoform	75-25-2	252.8	ND	0.20	1	ND	2.1	10/18/24 15:38	
Bromomethane	74-83-9	94.9	ND	0.20	1	ND	0.78	10/18/24 15:38	
1,3-Butadiene	106-99-0	54.1	ND	0.20	1	ND	0.44	10/18/24 15:38	
n-Butane	106-97-8	58.1	ND	0.20	1	ND	0.48	10/18/24 15:38	
2-Butanone(MEK)	78-93-3	72.1	6.0	0.20	1	18	0.59	10/18/24 15:38	
Carbon disulfide	75-15-0	76.1	0.25	0.20	1	0.78	0.62	10/18/24 15:38	
Carbon tetrachloride	56-23-5	153.8	ND	0.20	1	ND	1.3	10/18/24 15:38	
Chlorobenzene	108-90-7	112.6	ND	0.20	1	ND	0.92	10/18/24 15:38	
Chloroethane	75-00-3	64.5	ND	0.20	1	ND	0.53	10/18/24 15:38	
Chloroform	67-66-3	119.4	ND	0.20	1	ND	0.98	10/18/24 15:38	
Chloromethane	74-87-3	50.5	0.40	0.20	1	0.83	0.41	10/18/24 15:38	
3-Chloropropene(Allyl chloride)	107-05-1	76.5	ND	0.20	1	ND	0.63	10/18/24 15:38	
2-Chlorotoluene	95-49-8	126.6	ND	0.20	1	ND	1.0	10/18/24 15:38	
Cyclohexane	110-82-7	84.2	ND	0.20	1	ND	0.69	10/18/24 15:38	
Dibromochloromethane	124-48-1	208.3	ND	0.20	1	ND	1.7	10/18/24 15:38	
1,2-Dibromoethane	106-93-4	187.8	ND	0.20	1	ND	1.5	10/18/24 15:38	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.20	1	ND	1.2	10/18/24 15:38	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.20	1	ND	1.2	10/18/24 15:38	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.20	1	ND	1.2	10/18/24 15:38	
1,1-Dichloroethane	75-34-3	99.0	ND	0.20	1	ND	0.81	10/18/24 15:38	
1,2-Dichloroethane	107-06-2	99.0	ND	0.20	1	ND	0.81	10/18/24 15:38	
1,1-Dichloroethene	75-35-4	96.9	ND	0.20	1	ND	0.79	10/18/24 15:38	
cis-1,2-Dichloroethene	156-59-2	96.9	ND	0.20	1	ND	0.79	10/18/24 15:38	
trans-1,2-Dichloroethene	156-60-5	96.9	ND	0.20	1	ND	0.79	10/18/24 15:38	
1,2-Dichloropropane	78-87-5	113.0	ND	0.20	1	ND	0.92	10/18/24 15:38	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.20	1	ND	0.91	10/18/24 15:38	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.20	1	ND	0.91	10/18/24 15:38	
1,4-Dioxane	123-91-1	88.1	ND	0.20	1	ND	0.72	10/18/24 15:38	
Ethanol	64-17-5	46.1	53	1.0	1	99	1.9	10/18/24 15:38	E
Ethyl acetate	141-78-6	88.1	ND	0.20	1	ND	0.72	10/18/24 15:38	
Ethylbenzene	100-41-4	106.2	ND	0.20	1	ND	0.87	10/18/24 15:38	
4-Ethyltoluene	622-96-8	120.2	ND	0.20	1	ND	0.98	10/18/24 15:38	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.20	1	ND	0.99	10/18/24 15:38	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	0.20	1	ND	1.4	10/18/24 15:38	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.20	1	ND	1.1	10/18/24 15:38	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-02**Customer Sample ID:** 2-1643 241002-02**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:47**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 15:38	BCJ2206	y16719.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	0.20	1	ND	1.5	10/18/24 15:38	
n-Heptane	142-82-5	100.2	ND	0.20	1	ND	0.82	10/18/24 15:38	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.20	1	ND	2.1	10/18/24 15:38	
n-Hexane	110-54-3	86.2	ND	0.20	1	ND	0.71	10/18/24 15:38	
2-Hexanone(MBK)	591-78-6	100.2	ND	0.20	1	ND	0.82	10/18/24 15:38	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	7.6	0.20	1	19	0.49	10/18/24 15:38	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	0.20	1	ND	0.98	10/18/24 15:38	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.2	ND	0.20	1	ND	0.72	10/18/24 15:38	
Methylene chloride	75-09-2	84.9	ND	0.20	1	ND	0.69	10/18/24 15:38	
Methyl Methacrylate	80-62-6	100.1	ND	0.20	1	ND	0.82	10/18/24 15:38	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	5.7	0.20	1	23	0.82	10/18/24 15:38	
Naphthalene	91-20-3	128.2	ND	0.20	1	ND	1.0	10/18/24 15:38	
Propylene	115-07-1	42.1	1.9	0.20	1	3.2	0.34	10/18/24 15:38	
Styrene	100-42-5	104.1	ND	0.20	1	ND	0.85	10/18/24 15:38	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	0.96	0.20	1	2.9	0.61	10/18/24 15:38	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.20	1	ND	1.4	10/18/24 15:38	
Tetrachloroethene	127-18-4	165.8	ND	0.20	1	ND	1.4	10/18/24 15:38	
Tetrahydrofuran	109-99-9	72.1	ND	0.20	1	ND	0.59	10/18/24 15:38	
Toluene	108-88-3	92.1	ND	0.20	1	ND	0.75	10/18/24 15:38	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.20	1	ND	1.5	10/18/24 15:38	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.20	1	ND	1.1	10/18/24 15:38	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.20	1	ND	1.1	10/18/24 15:38	
Trichloroethene	79-01-6	131.4	ND	0.20	1	ND	1.1	10/18/24 15:38	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.20	1	ND	0.98	10/18/24 15:38	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.20	1	ND	0.98	10/18/24 15:38	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.20	1	ND	0.93	10/18/24 15:38	
Vinyl acetate	108-05-4	86.0	ND	0.20	1	ND	0.70	10/18/24 15:38	
Vinyl chloride	75-01-4	62.5	ND	0.20	1	ND	0.51	10/18/24 15:38	
Xylene (Ortho)	95-47-6	106.2	ND	0.20	1	ND	0.87	10/18/24 15:38	
Xylene (p,m)	179601-23-1	106.2	ND	0.40	1	ND	1.7	10/18/24 15:38	
Xylenes, Total	1330-20-7	106.2	ND	0.20	1	ND	0.87	10/18/24 15:38	
Total Target Compound Concentrations:			130			310			

Surrogate

4-Bromofluorobenzene

Result

9.66

Spike

10.00

Recovery

97

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-02**Customer Sample ID:** 2-1643 241002-02**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:47**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 15:38	BCJ2206	y16719.D	JAR	250 cc	1	TP

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	8.1		1	19		10/18/24 15:38	N
Carbonyl Sulfide	463-58-1	60.1	2.2		1	5.5		10/18/24 15:38	N
Furan, 2-methyl-	000534-22-5	92.0	7.1		1	27		10/18/24 15:38	N
Total Target Compound Concentrations:			130			310			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J = Estimated value based on a 1:1 response to internal standard.

N = Presumptive evidence of compound based on library match.

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EMSL Sample ID: AC33250-02**Customer Sample ID:** 2-1643 241002-02**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 11:47**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 15:38	BCJ2206	y16719.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	39	0.20	1	93	0.48	10/18/24 15:38	
2-Butanone(MEK)	78-93-3	72.1	6.0	0.20	1	18	0.59	10/18/24 15:38	
Carbon disulfide	75-15-0	76.1	0.25	0.20	1	0.78	0.62	10/18/24 15:38	
Chloromethane	74-87-3	50.5	0.40	0.20	1	0.83	0.41	10/18/24 15:38	
Ethanol	64-17-5	46.1	53	1.0	1	99	1.9	10/18/24 15:38	E
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	7.6	0.20	1	19	0.49	10/18/24 15:38	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	5.7	0.20	1	23	0.82	10/18/24 15:38	
Propylene	115-07-1	42.1	1.9	0.20	1	3.2	0.34	10/18/24 15:38	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	0.96	0.20	1	2.9	0.61	10/18/24 15:38	
Total Target Compound Concentrations:			130			310			

Surrogate

4-Bromofluorobenzene

Result

9.66

Spike

10.00

Recovery

97

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	8.1		1	19		10/18/24 15:38	N
Carbonyl Sulfide	463-58-1	60.1	2.2		1	5.5		10/18/24 15:38	N
Furan, 2-methyl-	000534-22-5	92.0	7.1		1	27		10/18/24 15:38	N
Total Target Compound Concentrations:			130			310			
Total Volatile Organic Compounds (TVOCs):			130.00			310.00			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

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EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
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EMSL Sample ID: AC33250-03**Customer Sample ID:** 4-1643 241002-04**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 12:20**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 16:34	BCJ2206	y16720.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	33	0.20	1	78	0.48	10/18/24 16:34	
Acetonitrile	75-05-8	41.0	ND	0.20	1	ND	0.34	10/18/24 16:34	
Acrylonitrile	107-13-1	53.0	ND	0.20	1	ND	0.43	10/18/24 16:34	
Benzene	71-43-2	78.1	ND	0.20	1	ND	0.64	10/18/24 16:34	
Benzyl chloride	100-44-7	126.0	ND	0.20	1	ND	1.0	10/18/24 16:34	
Bromodichloromethane	75-27-4	163.8	ND	0.20	1	ND	1.3	10/18/24 16:34	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	0.20	1	ND	0.89	10/18/24 16:34	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.20	1	ND	0.88	10/18/24 16:34	
Bromoform	75-25-2	252.8	ND	0.20	1	ND	2.1	10/18/24 16:34	
Bromomethane	74-83-9	94.9	ND	0.20	1	ND	0.78	10/18/24 16:34	
1,3-Butadiene	106-99-0	54.1	ND	0.20	1	ND	0.44	10/18/24 16:34	
n-Butane	106-97-8	58.1	ND	0.20	1	ND	0.48	10/18/24 16:34	
2-Butanone(MEK)	78-93-3	72.1	4.5	0.20	1	13	0.59	10/18/24 16:34	
Carbon disulfide	75-15-0	76.1	0.25	0.20	1	0.78	0.62	10/18/24 16:34	
Carbon tetrachloride	56-23-5	153.8	ND	0.20	1	ND	1.3	10/18/24 16:34	
Chlorobenzene	108-90-7	112.6	ND	0.20	1	ND	0.92	10/18/24 16:34	
Chloroethane	75-00-3	64.5	ND	0.20	1	ND	0.53	10/18/24 16:34	
Chloroform	67-66-3	119.4	ND	0.20	1	ND	0.98	10/18/24 16:34	
Chloromethane	74-87-3	50.5	0.26	0.20	1	0.54	0.41	10/18/24 16:34	
3-Chloropropene(Allyl chloride)	107-05-1	76.5	ND	0.20	1	ND	0.63	10/18/24 16:34	
2-Chlorotoluene	95-49-8	126.6	ND	0.20	1	ND	1.0	10/18/24 16:34	
Cyclohexane	110-82-7	84.2	ND	0.20	1	ND	0.69	10/18/24 16:34	
Dibromochloromethane	124-48-1	208.3	ND	0.20	1	ND	1.7	10/18/24 16:34	
1,2-Dibromoethane	106-93-4	187.8	ND	0.20	1	ND	1.5	10/18/24 16:34	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.20	1	ND	1.2	10/18/24 16:34	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.20	1	ND	1.2	10/18/24 16:34	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.20	1	ND	1.2	10/18/24 16:34	
1,1-Dichloroethane	75-34-3	99.0	ND	0.20	1	ND	0.81	10/18/24 16:34	
1,2-Dichloroethane	107-06-2	99.0	ND	0.20	1	ND	0.81	10/18/24 16:34	
1,1-Dichloroethene	75-35-4	96.9	ND	0.20	1	ND	0.79	10/18/24 16:34	
cis-1,2-Dichloroethene	156-59-2	96.9	ND	0.20	1	ND	0.79	10/18/24 16:34	
trans-1,2-Dichloroethene	156-60-5	96.9	ND	0.20	1	ND	0.79	10/18/24 16:34	
1,2-Dichloropropane	78-87-5	113.0	ND	0.20	1	ND	0.92	10/18/24 16:34	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.20	1	ND	0.91	10/18/24 16:34	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.20	1	ND	0.91	10/18/24 16:34	
1,4-Dioxane	123-91-1	88.1	ND	0.20	1	ND	0.72	10/18/24 16:34	
Ethanol	64-17-5	46.1	34	1.0	1	64	1.9	10/18/24 16:34	
Ethyl acetate	141-78-6	88.1	ND	0.20	1	ND	0.72	10/18/24 16:34	
Ethylbenzene	100-41-4	106.2	ND	0.20	1	ND	0.87	10/18/24 16:34	
4-Ethyltoluene	622-96-8	120.2	ND	0.20	1	ND	0.98	10/18/24 16:34	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.20	1	ND	0.99	10/18/24 16:34	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	0.20	1	ND	1.4	10/18/24 16:34	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.20	1	ND	1.1	10/18/24 16:34	

**EMSL Analytical, Inc.**

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EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-03**Customer Sample ID:** 4-1643 241002-04**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 12:20**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 16:34	BCJ2206	y16720.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	0.20	1	ND	1.5	10/18/24 16:34	
n-Heptane	142-82-5	100.2	ND	0.20	1	ND	0.82	10/18/24 16:34	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.20	1	ND	2.1	10/18/24 16:34	
n-Hexane	110-54-3	86.2	ND	0.20	1	ND	0.71	10/18/24 16:34	
2-Hexanone(MBK)	591-78-6	100.2	ND	0.20	1	ND	0.82	10/18/24 16:34	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	7.6	0.20	1	19	0.49	10/18/24 16:34	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	0.20	1	ND	0.98	10/18/24 16:34	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.2	ND	0.20	1	ND	0.72	10/18/24 16:34	
Methylene chloride	75-09-2	84.9	ND	0.20	1	ND	0.69	10/18/24 16:34	
Methyl Methacrylate	80-62-6	100.1	ND	0.20	1	ND	0.82	10/18/24 16:34	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	5.8	0.20	1	24	0.82	10/18/24 16:34	
Naphthalene	91-20-3	128.2	ND	0.20	1	ND	1.0	10/18/24 16:34	
Propylene	115-07-1	42.1	1.1	0.20	1	1.9	0.34	10/18/24 16:34	
Styrene	100-42-5	104.1	ND	0.20	1	ND	0.85	10/18/24 16:34	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	0.87	0.20	1	2.6	0.61	10/18/24 16:34	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.20	1	ND	1.4	10/18/24 16:34	
Tetrachloroethene	127-18-4	165.8	ND	0.20	1	ND	1.4	10/18/24 16:34	
Tetrahydrofuran	109-99-9	72.1	ND	0.20	1	ND	0.59	10/18/24 16:34	
Toluene	108-88-3	92.1	ND	0.20	1	ND	0.75	10/18/24 16:34	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.20	1	ND	1.5	10/18/24 16:34	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.20	1	ND	1.1	10/18/24 16:34	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.20	1	ND	1.1	10/18/24 16:34	
Trichloroethene	79-01-6	131.4	ND	0.20	1	ND	1.1	10/18/24 16:34	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.20	1	ND	0.98	10/18/24 16:34	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.20	1	ND	0.98	10/18/24 16:34	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.20	1	ND	0.93	10/18/24 16:34	
Vinyl acetate	108-05-4	86.0	ND	0.20	1	ND	0.70	10/18/24 16:34	
Vinyl chloride	75-01-4	62.5	ND	0.20	1	ND	0.51	10/18/24 16:34	
Xylene (Ortho)	95-47-6	106.2	ND	0.20	1	ND	0.87	10/18/24 16:34	
Xylene (p,m)	179601-23-1	106.2	ND	0.40	1	ND	1.7	10/18/24 16:34	
Xylenes, Total	1330-20-7	106.2	ND	0.20	1	ND	0.87	10/18/24 16:34	
Total Target Compound Concentrations:			100			240			

Surrogate

4-Bromofluorobenzene

Result

9.61

Spike

10.00

Recovery

96

**EMSL Analytical, Inc.**

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Attention: Results

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EMSL Sample ID: AC33250-03**Customer Sample ID:** 4-1643 241002-04**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 12:20**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 16:34	BCJ2206	y16720.D	JAR	250 cc	1	TP

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	7.7		1	18		10/18/24 16:34	N
Carbonyl Sulfide	463-58-1	60.1	2.0		1	4.8		10/18/24 16:34	N
Furan, 2-methyl-	000534-22-5	92.0	4.4		1	16		10/18/24 16:34	N
Total Target Compound Concentrations:			100			240			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J = Estimated value based on a 1:1 response to internal standard.

N = Presumptive evidence of compound based on library match.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-03**Customer Sample ID:** 4-1643 241002-04**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 12:20**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 16:34	BCJ2206	y16720.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	33	0.20	1	78	0.48	10/18/24 16:34	
2-Butanone(MEK)	78-93-3	72.1	4.5	0.20	1	13	0.59	10/18/24 16:34	
Carbon disulfide	75-15-0	76.1	0.25	0.20	1	0.78	0.62	10/18/24 16:34	
Chloromethane	74-87-3	50.5	0.26	0.20	1	0.54	0.41	10/18/24 16:34	
Ethanol	64-17-5	46.1	34	1.0	1	64	1.9	10/18/24 16:34	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	7.6	0.20	1	19	0.49	10/18/24 16:34	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	5.8	0.20	1	24	0.82	10/18/24 16:34	
Propylene	115-07-1	42.1	1.1	0.20	1	1.9	0.34	10/18/24 16:34	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	0.87	0.20	1	2.6	0.61	10/18/24 16:34	
Total Target Compound Concentrations:			100			240			

Surrogate

4-Bromofluorobenzene

Result

9.61

Spike

10.00

Recovery

96

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
2-Butene	000107-01-7	56.0	7.7		1	18		10/18/24 16:34	N
Carbonyl Sulfide	463-58-1	60.1	2.0		1	4.8		10/18/24 16:34	N
Furan, 2-methyl-	000534-22-5	92.0	4.4		1	16		10/18/24 16:34	N
Total Target Compound Concentrations:			100			240			
Total Volatile Organic Compounds (TVOCs):			100.00			240.00			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

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One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
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EMSL Sample ID: AC33250-04**Customer Sample ID:** Lab Background**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 00:00**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 17:30	BCJ2206	y16721.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	2.8	0.20	1	6.7	0.48	10/18/24 17:30	
Acetonitrile	75-05-8	41.0	ND	0.20	1	ND	0.34	10/18/24 17:30	
Acrylonitrile	107-13-1	53.0	ND	0.20	1	ND	0.43	10/18/24 17:30	
Benzene	71-43-2	78.1	ND	0.20	1	ND	0.64	10/18/24 17:30	
Benzyl chloride	100-44-7	126.0	ND	0.20	1	ND	1.0	10/18/24 17:30	
Bromodichloromethane	75-27-4	163.8	ND	0.20	1	ND	1.3	10/18/24 17:30	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	0.20	1	ND	0.89	10/18/24 17:30	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.20	1	ND	0.88	10/18/24 17:30	
Bromoform	75-25-2	252.8	ND	0.20	1	ND	2.1	10/18/24 17:30	
Bromomethane	74-83-9	94.9	ND	0.20	1	ND	0.78	10/18/24 17:30	
1,3-Butadiene	106-99-0	54.1	ND	0.20	1	ND	0.44	10/18/24 17:30	
n-Butane	106-97-8	58.1	ND	0.20	1	ND	0.48	10/18/24 17:30	
2-Butanone(MEK)	78-93-3	72.1	ND	0.20	1	ND	0.59	10/18/24 17:30	
Carbon disulfide	75-15-0	76.1	ND	0.20	1	ND	0.62	10/18/24 17:30	
Carbon tetrachloride	56-23-5	153.8	ND	0.20	1	ND	1.3	10/18/24 17:30	
Chlorobenzene	108-90-7	112.6	ND	0.20	1	ND	0.92	10/18/24 17:30	
Chloroethane	75-00-3	64.5	ND	0.20	1	ND	0.53	10/18/24 17:30	
Chloroform	67-66-3	119.4	ND	0.20	1	ND	0.98	10/18/24 17:30	
Chloromethane	74-87-3	50.5	ND	0.20	1	ND	0.41	10/18/24 17:30	
3-Chloropropene(Allyl chloride)	107-05-1	76.5	ND	0.20	1	ND	0.63	10/18/24 17:30	
2-Chlorotoluene	95-49-8	126.6	ND	0.20	1	ND	1.0	10/18/24 17:30	
Cyclohexane	110-82-7	84.2	ND	0.20	1	ND	0.69	10/18/24 17:30	
Dibromochloromethane	124-48-1	208.3	ND	0.20	1	ND	1.7	10/18/24 17:30	
1,2-Dibromoethane	106-93-4	187.8	ND	0.20	1	ND	1.5	10/18/24 17:30	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.20	1	ND	1.2	10/18/24 17:30	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.20	1	ND	1.2	10/18/24 17:30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.20	1	ND	1.2	10/18/24 17:30	
1,1-Dichloroethane	75-34-3	99.0	ND	0.20	1	ND	0.81	10/18/24 17:30	
1,2-Dichloroethane	107-06-2	99.0	ND	0.20	1	ND	0.81	10/18/24 17:30	
1,1-Dichloroethene	75-35-4	96.9	ND	0.20	1	ND	0.79	10/18/24 17:30	
cis-1,2-Dichloroethene	156-59-2	96.9	ND	0.20	1	ND	0.79	10/18/24 17:30	
trans-1,2-Dichloroethene	156-60-5	96.9	ND	0.20	1	ND	0.79	10/18/24 17:30	
1,2-Dichloropropane	78-87-5	113.0	ND	0.20	1	ND	0.92	10/18/24 17:30	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.20	1	ND	0.91	10/18/24 17:30	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.20	1	ND	0.91	10/18/24 17:30	
1,4-Dioxane	123-91-1	88.1	ND	0.20	1	ND	0.72	10/18/24 17:30	
Ethanol	64-17-5	46.1	27	1.0	1	51	1.9	10/18/24 17:30	
Ethyl acetate	141-78-6	88.1	ND	0.20	1	ND	0.72	10/18/24 17:30	
Ethylbenzene	100-41-4	106.2	ND	0.20	1	ND	0.87	10/18/24 17:30	
4-Ethyltoluene	622-96-8	120.2	ND	0.20	1	ND	0.98	10/18/24 17:30	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.20	1	ND	0.99	10/18/24 17:30	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	0.20	1	ND	1.4	10/18/24 17:30	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.20	1	ND	1.1	10/18/24 17:30	

**EMSL Analytical, Inc.**

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-04**Customer Sample ID:** Lab Background**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 00:00**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 17:30	BCJ2206	y16721.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	0.20	1	ND	1.5	10/18/24 17:30	
n-Heptane	142-82-5	100.2	ND	0.20	1	ND	0.82	10/18/24 17:30	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.20	1	ND	2.1	10/18/24 17:30	
n-Hexane	110-54-3	86.2	ND	0.20	1	ND	0.71	10/18/24 17:30	
2-Hexanone(MBK)	591-78-6	100.2	ND	0.20	1	ND	0.82	10/18/24 17:30	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	2.3	0.20	1	5.8	0.49	10/18/24 17:30	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	0.20	1	ND	0.98	10/18/24 17:30	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.2	ND	0.20	1	ND	0.72	10/18/24 17:30	
Methylene chloride	75-09-2	84.9	0.21	0.20	1	0.73	0.69	10/18/24 17:30	
Methyl Methacrylate	80-62-6	100.1	ND	0.20	1	ND	0.82	10/18/24 17:30	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.20	1	ND	0.82	10/18/24 17:30	
Naphthalene	91-20-3	128.2	ND	0.20	1	ND	1.0	10/18/24 17:30	
Propylene	115-07-1	42.1	ND	0.20	1	ND	0.34	10/18/24 17:30	
Styrene	100-42-5	104.1	ND	0.20	1	ND	0.85	10/18/24 17:30	
Tertiary butyl alcohol(TBA)	75-65-0	74.1	ND	0.20	1	ND	0.61	10/18/24 17:30	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.20	1	ND	1.4	10/18/24 17:30	
Tetrachloroethene	127-18-4	165.8	ND	0.20	1	ND	1.4	10/18/24 17:30	
Tetrahydrofuran	109-99-9	72.1	ND	0.20	1	ND	0.59	10/18/24 17:30	
Toluene	108-88-3	92.1	ND	0.20	1	ND	0.75	10/18/24 17:30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.20	1	ND	1.5	10/18/24 17:30	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.20	1	ND	1.1	10/18/24 17:30	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.20	1	ND	1.1	10/18/24 17:30	
Trichloroethene	79-01-6	131.4	ND	0.20	1	ND	1.1	10/18/24 17:30	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.20	1	ND	0.98	10/18/24 17:30	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.20	1	ND	0.98	10/18/24 17:30	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.20	1	ND	0.93	10/18/24 17:30	
Vinyl acetate	108-05-4	86.0	ND	0.20	1	ND	0.70	10/18/24 17:30	
Vinyl chloride	75-01-4	62.5	ND	0.20	1	ND	0.51	10/18/24 17:30	
Xylene (Ortho)	95-47-6	106.2	ND	0.20	1	ND	0.87	10/18/24 17:30	
Xylene (p,m)	179601-23-1	106.2	ND	0.40	1	ND	1.7	10/18/24 17:30	
Xylenes, Total	1330-20-7	106.2	ND	0.20	1	ND	0.87	10/18/24 17:30	
Total Target Compound Concentrations:			32			64			

Surrogate

4-Bromofluorobenzene

Result

9.68

Spike

10.00

Recovery

97

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

Attention: Results

Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Sample ID: AC33250-04**Customer Sample ID:** Lab Background**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 00:00**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 17:30	BCJ2206	y16721.D	JAR	250 cc	1	TP

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Tentatively Identified Compounds		92.0	0.0		1	0		10/18/24 17:30	
Total Target Compound Concentrations:			32			64			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

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Attention: Results

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EMSL Sample ID: AC33250-04**Customer Sample ID:** Lab Background**EMSL Order ID:** 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54**Project Name:** 0000-5465.10E**Customer PO:****EMSL Sales Rep:** Jeromy Bish**Received:** 10/07/2024 11:40**Reported:** 10/21/2024 14:48**Collected:** 10/02/2024 00:00**Received:** 10/07/2024 11:40

Analysis	Prep Batch	Lab File ID	Canister ID	Sample Vol.	Dil. Factor	Analyst Init.
10/18/24 17:30	BCJ2206	y16721.D	JAR	250 cc	1	TP

Target Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Acetone	67-64-1	58.1	2.8	0.20	1	6.7	0.48	10/18/24 17:30	
Ethanol	64-17-5	46.1	27	1.0	1	51	1.9	10/18/24 17:30	
Isopropyl alcohol(2-Propanol)	67-63-0	60.1	2.3	0.20	1	5.8	0.49	10/18/24 17:30	
Methylene chloride	75-09-2	84.9	0.21	0.20	1	0.73	0.69	10/18/24 17:30	
Total Target Compound Concentrations:			32			64			

Surrogate

4-Bromofluorobenzene

Result

9.68

Spike

10.00

Recovery

97

TICS Compound Results Summary

Target Compounds	Cas#	MW	Result ppbv	RL ppbv	DF	Result ug/m3	RL ug/m3	Analyzed	Q
Tentatively Identified Compounds		92.0	0.0		1	0		10/18/24 17:30	
Total Target Compound Concentrations:			32			64			
Total Volatile Organic Compounds (TVOCs):			32.00			64.00			

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for mg/m3 conversion purposes.

B = Compound also found in method blank.

J= Estimated value based on a 1:1 response to internal standard.

N= Presumptive evidence of compound based on library match.

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200 Route 130, Cinnaminson, NJ, 08077
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Attention: Results

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One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
LabResults@fando.com

EMSL Order ID: 012433250**LIMS Reference ID:** AC33250**EMSL Customer ID:** ENVI54

Project Name: 0000-5465.10E
Customer PO:
EMSL Sales Rep: Jeromy Bish
Received: 10/07/2024 11:40
Reported: 10/21/2024 14:48

Notes and Definitions

Item	Definition
E	Result is beyond calibration range. This value is estimated.
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.



Disciplines to Deliver

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- ☐ 1419 Richland Street, Columbia, SC 29201
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- ☒ 108 Myrtle Street, #502, North Quincy, MA 02174.
☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908
☐ 80 Washington Street, Suite 301, Poughkeepsie, NY 12601

CHAIN-OF-CUSTODY RECORD

4517

Tupatouni

- ☐ 1 Day* ☐ 3 Days* ☐ Other _____ (days)
☐ 2 Days* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME

PROJECT LOCATION

PROJECT NUMBER

LABORATORY

Neelkam Comb Rubber

Needham MA

Doc # 1266. B5.

EMSL (NJ)

REPORT TO: Neal Kelly neal.kelly@fgato.com

INVOICE TO:

P.O. No.: _____

Sampler's Signature:

Date: 10/2/24

Source Codes:

MW=Monitoring Well:

PW=Potable Water

S=Soil

W=Waste

SW=Surface Water

T=Treatment Facility

B=Sediment

$$A = A_{\text{air}}$$

X=Other $A_q = A_{\text{Others}}$

CR = Crumb Rubber

Analysis Request

Containers

Full Vol list and TICs
by TO-15
Full Vol list by 8270
Metals (arsenic, cadmium, chromium, lead, iron, manganese, mercury, zinc) by 606/7490
Soil VOA Vial [] method
Soil VOA Vial [] method
Glass Soil [] method

Soil VOA Vial	☐ methanol	☐ Na_2SO_4
Soil VOA Vial	☐ water	☐ oz
Glass Soil Container	☐ oz	☐ oz
Other:		
Water VOA Vial	☒ As is	☒ As is
Glass Amber	☐ ml	☒ As is
Plastic As is	☐ 250 ml	☐ As is
Plastic H_2SO_4	☐ 250 ml	☐ H_2SO_4
Plastic HNO_3	☐ 250 ml	☐ 1000 ml
Plastic NaOH	☐ 250 ml	☐ 500 ml
	☐ Filtered	☐ Unfiltered

Comments

Founders
~~Book~~
Brook
~~Memorandum~~
Memorial

only	only
only	only

[illegible]

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements: MCP Cam Cent.
1	Chao In Chris Turner	John EX	10/7/24	11:40	Additional Comments: Split TO15 / Chem
2		Johnnelly	10/07/24	11:40am	
3					
4					

Page 21 of



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101

LIMS Reference ID: AC33101

EMSL Customer ID: ENVI54

October 25, 2024

Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 10/10/2024. The results are tabulated on the attached pages for the following client designated project:

Needham Crumb Rubber

The reference number for these samples is EMSL Order #: AC33101 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101

LIMS Reference ID: AC33101

EMSL Customer ID: ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 10/25/2024 15:39

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

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108 Myrtle St

North Quincy, Massachusetts 02171

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Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC33101-03	1643241002-03	Waste Water	10/2/24 12:00 pm	10/10/2024



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101

LIMS Reference ID: AC33101

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Positive Hits Summary

Lab ID	Client ID				Sampled
AC33101-03	1643241002-03				10/02/24 12:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 624.1	No TICs found	0.0		µg/L	10/14/2024 18:26

**EMSL Analytical, Inc.**

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Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Sample Results**Sample:** 1643241002-03**AC33101-03 (Waste Water)**

Analyte	Result	Q	DF	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GCMS-VOA											
No TICs found	0.0		1			µg/L	10/14/24 18:26	10/14/24 18:26	OPM/WRF	EPA 624.1	EPA 624.1
Acetone	ND		1	15		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Acrolein	ND	C	1	10		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Benzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromodichloromethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromoform	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromomethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Butanone	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
tert-Butyl Alcohol	ND		1	10		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Sec-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Tert-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
N-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Carbon Disulfide	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Carbon Tetrachloride	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloroethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Chloroethyl Vinyl Ether	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloroform	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloromethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Chlorotoluene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Chlorotoluene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dibromo-3-chloropropane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dibromochloromethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dibromoethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dibromomethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,4-dichloro-2-butene	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,4-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dichlorodifluoromethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloroethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichloroethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,2-dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Cis-1,2-dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2,2-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Cis-1,3-dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,3-dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Ethylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Hexachlorobutadiene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Hexanone	ND		1	4.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1

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.**

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Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 10/25/2024 15:39

Sample Results**(Continued)****Sample: 1643241002-03 (Continued)****AC33101-03 (Waste Water)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GCMS-VOA (Continued)										
Isopropylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Isopropyltoluene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Methylene Chloride	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Methyl-2-pentanone	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Methyl-tert butyl ether	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Naphthalene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
N-propylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Styrene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2,2-Tetrachloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,1,2-Tetrachloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Tetrachloroethene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Toluene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,3-Trichlorobenzene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,4-Trichlorobenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2-Trichloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,1-Trichloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trichloroethene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trichlorofluoromethane	ND		1	5.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,3-Trichloropropane	ND		1	4.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,4-Trimethylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3,5-Trimethylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Vinyl Acetate	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Vinyl Chloride	ND		1	5.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
o-xylene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
m&p-xylenes	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Xylenes, Total	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Surrogate(s)										
	Recovery	Q		Limits						
Surrogate: 4-Bromofluorobenzene	102%			70-130		10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Surrogate: Dibromofluoromethane	115%			70-130		10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Surrogate: 1,2-Dichloroethane-d4	104%			70-130		10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Surrogate: Toluene-d8	101%			70-130		10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1

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Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Quality Control**GCMS-VOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1**Blank (BCJ1488-BLK1)**

Prepared & Analyzed: 10/14/2024

Acetone	ND	15	µg/L
Acrolein	ND	10	µg/L
Benzene	ND	1.0	µg/L
Bromobenzene	ND	1.0	µg/L
Bromodichloromethane	ND	1.0	µg/L
Bromoform	ND	1.0	µg/L
Bromomethane	ND	5.0	µg/L
2-Butanone	ND	2.0	µg/L
tert-Butyl Alcohol	ND	10	µg/L
Sec-butylbenzene	ND	1.0	µg/L
Tert-butylbenzene	ND	1.0	µg/L
N-butylbenzene	ND	1.0	µg/L
Carbon Disulfide	ND	1.0	µg/L
Carbon Tetrachloride	ND	1.0	µg/L
Chlorobenzene	ND	1.0	µg/L
Chloroethane	ND	5.0	µg/L
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L
Chloroform	ND	1.0	µg/L
Chloromethane	ND	5.0	µg/L
2-Chlorotoluene	ND	1.0	µg/L
4-Chlorotoluene	ND	1.0	µg/L
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L
Dibromochloromethane	ND	1.0	µg/L
1,2-Dibromoethane	ND	1.0	µg/L
Dibromomethane	ND	1.0	µg/L
Trans-1,4-dichloro-2-butene	ND	2.0	µg/L
1,3-Dichlorobenzene	ND	1.0	µg/L
1,4-Dichlorobenzene	ND	1.0	µg/L
1,2-Dichlorobenzene	ND	1.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	1.0	µg/L
1,2-Dichloroethane	ND	1.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
Trans-1,2-dichloroethene	ND	1.0	µg/L
Cis-1,2-dichloroethene	ND	1.0	µg/L
1,2-Dichloropropane	ND	1.0	µg/L
2,2-Dichloropropane	ND	1.0	µg/L
1,3-Dichloropropane	ND	1.0	µg/L
Cis-1,3-dichloropropene	ND	1.0	µg/L
Trans-1,3-dichloropropene	ND	1.0	µg/L
1,1-Dichloropropene	ND	1.0	µg/L
Ethylbenzene	ND	1.0	µg/L

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Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Blank (BCJ1488-BLK1)**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	ND	1.0	µg/L
2-Hexanone	ND	4.0	µg/L
Isopropylbenzene	ND	1.0	µg/L
4-Isopropyltoluene	ND	1.0	µg/L
Methylene Chloride	ND	1.0	µg/L
4-Methyl-2-pentanone	ND	2.0	µg/L
Methyl-tert butyl ether	ND	1.0	µg/L
Naphthalene	ND	2.0	µg/L
N-propylbenzene	ND	1.0	µg/L
Styrene	ND	1.0	µg/L
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L
Tetrachloroethene	ND	2.0	µg/L
Toluene	ND	1.0	µg/L
1,2,3-Trichlorobenzene	ND	2.0	µg/L
1,2,4-Trichlorobenzene	ND	1.0	µg/L
1,1,2-Trichloroethane	ND	1.0	µg/L
1,1,1-Trichloroethane	ND	1.0	µg/L
Trichloroethene	ND	1.0	µg/L
Trichlorofluoromethane	ND	5.0	µg/L
1,2,3-Trichloropropane	ND	4.0	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	µg/L
1,2,4-Trimethylbenzene	ND	1.0	µg/L
1,3,5-Trimethylbenzene	ND	1.0	µg/L
Vinyl Acetate	ND	2.0	µg/L
Vinyl Chloride	ND	5.0	µg/L
o-xylene	ND	1.0	µg/L
m&p-xylenes	ND	2.0	µg/L
Xylenes, Total	ND	1.0	µg/L

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	103	70-130
Surrogate: Dibromofluoromethane	50.00	115	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	104	70-130
Surrogate: Toluene-d8	50.00	100	70-130

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EMSL-CIN-01

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Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Quality Control

(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**LCS (BCJ1488-BS1)**

Prepared & Analyzed: 10/14/2024

Acetone	69.4	15	µg/L	100.0		69	67-134		
Acrolein	181	10	µg/L	200.0		91	60-140		
Benzene	50.3	1.0	µg/L	50.00		101	65-135		
Bromobenzene	46.5	1.0	µg/L	50.00		93	87-121		
Bromodichloromethane	50.8	1.0	µg/L	50.00		102	65-135		
Bromoform	48.0	1.0	µg/L	50.00		96	70-130		
Bromomethane	51.4	5.0	µg/L	50.00		103	15-185		
2-Butanone	90.5	2.0	µg/L	100.0		91	72-129		
tert-Butyl Alcohol	139	10	µg/L	200.0		69	67-143		
Sec-butylbenzene	50.1	1.0	µg/L	50.00		100	86-121		
Tert-butylbenzene	50.0	1.0	µg/L	50.00		100	89-119		
N-butylbenzene	47.9	1.0	µg/L	50.00		96	76-130		
Carbon Disulfide	62.5	1.0	µg/L	50.00		125	82-228		
Carbon Tetrachloride	56.1	1.0	µg/L	50.00		112	70-130		
Chlorobenzene	45.9	1.0	µg/L	50.00		92	65-135		
Chloroethane	51.1	5.0	µg/L	50.00		102	40-160		
2-Chloroethyl Vinyl Ether	93.0	2.0	µg/L	100.0		93	0-225		
Chloroform	50.2	1.0	µg/L	50.00		100	70-135		
Chloromethane	53.1	5.0	µg/L	50.00		106	0-205		
2-Chlorotoluene	47.3	1.0	µg/L	50.00		95	89-116		
4-Chlorotoluene	45.8	1.0	µg/L	50.00		92	78-131		
1,2-Dibromo-3-chloropropane	43.2	5.0	µg/L	50.00		86	56-142		
Dibromochloromethane	52.8	1.0	µg/L	50.00		106	70-135		
1,2-Dibromoethane	48.4	1.0	µg/L	50.00		97	88-121		
Dibromomethane	46.7	1.0	µg/L	50.00		93	85-125		
Trans-1,4-dichloro-2-butene	91.2	2.0	µg/L	100.0		91	10-161		
1,3-Dichlorobenzene	47.8	1.0	µg/L	50.00		96	70-130		
1,4-Dichlorobenzene	46.1	1.0	µg/L	50.00		92	65-135		
1,2-Dichlorobenzene	43.8	1.0	µg/L	50.00		88	65-135		
Dichlorodifluoromethane	65.2 R4	5.0	µg/L	50.00		130	37-119		
1,1-Dichloroethane	50.6	1.0	µg/L	50.00		101	70-130		
1,2-Dichloroethane	46.6	1.0	µg/L	50.00		93	70-130		
1,1-Dichloroethene	54.8	1.0	µg/L	50.00		110	50-150		
Trans-1,2-dichloroethene	52.4	1.0	µg/L	50.00		105	70-130		
Cis-1,2-dichloroethene	50.9	1.0	µg/L	50.00		102	88-142		
1,2-Dichloropropane	49.9	1.0	µg/L	50.00		100	35-165		
2,2-Dichloropropane	60.8	1.0	µg/L	50.00		122	75-134		
1,3-Dichloropropane	48.4	1.0	µg/L	50.00		97	85-116		
Cis-1,3-dichloropropene	55.7	1.0	µg/L	50.00		111	25-175		
Trans-1,3-dichloropropene	56.3	1.0	µg/L	50.00		113	50-150		
1,1-Dichloropropene	52.0	1.0	µg/L	50.00		104	88-116		
Ethylbenzene	47.7	1.0	µg/L	50.00		95	60-140		

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 10/25/2024 15:39

Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**LCS (BCJ1488-BS1)**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	48.0	1.0	µg/L	50.00		96	76-114		
2-Hexanone	96.8	4.0	µg/L	100.0		97	72-131		
Isopropylbenzene	49.6	1.0	µg/L	50.00		99	89-136		
4-Isopropyltoluene	51.0	1.0	µg/L	50.00		102	85-125		
Methylene Chloride	49.3	1.0	µg/L	50.00		99	60-140		
4-Methyl-2-pentanone	97.5	2.0	µg/L	100.0		98	72-126		
Methyl-tert butyl ether	51.9	1.0	µg/L				79-120		
Naphthalene	48.6	2.0	µg/L	50.00		97	73-133		
N-propylbenzene	48.8	1.0	µg/L	50.00		98	77-131		
Styrene	48.3	1.0	µg/L	50.00		97	90-122		
1,1,2,2-Tetrachloroethane	43.0	1.0	µg/L	50.00		86	60-140		
1,1,1,2-Tetrachloroethane	49.7	1.0	µg/L	50.00		99	89-118		
Tetrachloroethene	50.8	2.0	µg/L	50.00		102	70-130		
Toluene	49.7	1.0	µg/L	50.00		99	70-130		
1,2,3-Trichlorobenzene	47.8	2.0	µg/L	50.00		96	79-128		
1,2,4-Trichlorobenzene	49.7	1.0	µg/L	50.00		99	70-130		
1,1,2-Trichloroethane	46.7	1.0	µg/L	50.00		93	70-130		
1,1,1-Trichloroethane	54.3	1.0	µg/L	50.00		109	70-130		
Trichloroethene	49.7	1.0	µg/L	50.00		99	65-135		
Trichlorofluoromethane	55.0	5.0	µg/L	50.00		110	50-150		
1,2,3-Trichloropropane	42.9	4.0	µg/L	50.00		86	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	54.0	2.0	µg/L	50.00		108	70-130		
1,2,4-Trimethylbenzene	48.8	1.0	µg/L	50.00		98	86-122		
1,3,5-Trimethylbenzene	49.2	1.0	µg/L	50.00		98	88-121		
Vinyl Acetate	49.4	2.0	µg/L	50.00		99	70-130		
Vinyl Chloride	56.5	5.0	µg/L	50.00		113	5-195		
o-xylene	48.3	1.0	µg/L	50.00		97	89-118		
m&p-xylenes	95.6	2.0	µg/L	100.0		96	70-130		
Xylenes, Total	144	1.0	µg/L	150.0		96	70-130		

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	105	70-130
Surrogate: Dibromofluoromethane	50.00	114	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	103	70-130
Surrogate: Toluene-d8	50.00	102	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Quality Control

(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike (BCJ1488-MS1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Acetone	128	15	µg/L	100.0	54.5	73	56-168
Acrolein	230	10	µg/L	200.0	ND	115	40-160
Benzene	50.7	1.0	µg/L	50.00	ND	101	37-151
Bromobenzene	46.2	1.0	µg/L	50.00	ND	92	85-114
Bromodichloromethane	50.9	1.0	µg/L	50.00	ND	102	35-155
Bromoform	46.8	1.0	µg/L	50.00	ND	94	45-169
Bromomethane	51.1	5.0	µg/L	50.00	ND	102	10-242
2-Butanone	93.9	2.0	µg/L	100.0	ND	94	60-155
tert-Butyl Alcohol	166	10	µg/L	200.0	ND	83	57-181
Sec-butylbenzene	49.7	1.0	µg/L	50.00	ND	99	84-113
Tert-butylbenzene	49.6	1.0	µg/L	50.00	ND	99	85-114
N-butylbenzene	46.8	1.0	µg/L	50.00	ND	94	79-117
Carbon Disulfide	61.9 R4	1.0	µg/L	50.00	ND	124	72-122
Carbon Tetrachloride	56.0	1.0	µg/L	50.00	ND	112	70-140
Chlorobenzene	45.4	1.0	µg/L	50.00	ND	91	37-160
Chloroethane	52.9	5.0	µg/L	50.00	ND	106	14-230
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L	100.0	ND		0-305
Chloroform	49.3	1.0	µg/L	50.00	ND	99	51-138
Chloromethane	55.9	5.0	µg/L	50.00	ND	112	0-273
2-Chlorotoluene	47.5	1.0	µg/L	50.00	ND	95	82-112
4-Chlorotoluene	46.2	1.0	µg/L	50.00	ND	92	78-114
1,2-Dibromo-3-chloropropane	43.8	5.0	µg/L	50.00	ND	88	57-166
Dibromochloromethane	52.8	1.0	µg/L	50.00	ND	106	53-149
1,2-Dibromoethane	48.3	1.0	µg/L	50.00	ND	97	86-125
Dibromomethane	47.7	1.0	µg/L	50.00	ND	95	76-136
Trans-1,4-dichloro-2-butene	89.7	2.0	µg/L	100.0	ND	90	74-136
1,3-Dichlorobenzene	47.3	1.0	µg/L	50.00	ND	95	59-156
1,4-Dichlorobenzene	46.1	1.0	µg/L	50.00	ND	92	18-190
1,2-Dichlorobenzene	43.4	1.0	µg/L	50.00	ND	87	18-190
Dichlorodifluoromethane	68.1	5.0	µg/L	50.00	ND	136	65-145
1,1-Dichloroethane	51.2	1.0	µg/L	50.00	ND	102	59-155
1,2-Dichloroethane	48.1	1.0	µg/L	50.00	ND	96	49-155
1,1-Dichloroethene	54.5	1.0	µg/L	50.00	ND	109	0-234
Trans-1,2-dichloroethene	52.1	1.0	µg/L	50.00	ND	104	54-156
Cis-1,2-dichloroethene	50.8	1.0	µg/L	50.00	ND	102	91-116
1,2-Dichloropropane	49.6	1.0	µg/L	50.00	ND	99	0-210
2,2-Dichloropropane	54.2	1.0	µg/L	50.00	ND	108	73-126
1,3-Dichloropropane	48.6	1.0	µg/L	50.00	ND	97	85-121
Cis-1,3-dichloropropene	52.9	1.0	µg/L	50.00	ND	106	0-227
Trans-1,3-dichloropropene	53.8	1.0	µg/L	50.00	ND	108	17-183
1,1-Dichloropropene	53.2	1.0	µg/L	50.00	ND	106	85-112
Ethylbenzene	47.6	1.0	µg/L	50.00	ND	95	37-162

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 10/25/2024 15:39

Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike (BCJ1488-MS1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	43.8	1.0	µg/L	50.00	ND	88	78-118
2-Hexanone	102	4.0	µg/L	100.0	ND	102	31-155
Isopropylbenzene	49.2	1.0	µg/L	50.00	ND	98	78-114
4-Isopropyltoluene	50.5	1.0	µg/L	50.00	ND	101	81-112
Methylene Chloride	49.6	1.0	µg/L	50.00	ND	99	10-221
4-Methyl-2-pentanone	104	2.0	µg/L	100.0	ND	104	78-138
Methyl-tert butyl ether	50.3	1.0	µg/L		ND		84-127
Naphthalene	51.1	2.0	µg/L	50.00	ND	102	40-140
N-propylbenzene	49.0	1.0	µg/L	50.00	ND	98	74-123
Styrene	47.4	1.0	µg/L	50.00	ND	95	87-112
1,1,2,2-Tetrachloroethane	43.7	1.0	µg/L	50.00	ND	87	46-157
1,1,1,2-Tetrachloroethane	49.0	1.0	µg/L	50.00	ND	98	81-125
Tetrachloroethene	50.9	2.0	µg/L	50.00	ND	102	64-148
Toluene	50.6	1.0	µg/L	50.00	ND	101	47-150
1,2,3-Trichlorobenzene	49.5	2.0	µg/L	50.00	ND	99	80-118
1,2,4-Trichlorobenzene	49.0	1.0	µg/L	50.00	ND	98	70-130
1,1,2-Trichloroethane	47.2	1.0	µg/L	50.00	ND	94	52-150
1,1,1-Trichloroethane	54.6	1.0	µg/L	50.00	ND	109	52-162
Trichloroethene	49.8	1.0	µg/L	50.00	ND	100	70-157
Trichlorofluoromethane	58.0	5.0	µg/L	50.00	ND	116	17-181
1,2,3-Trichloropropane	43.7	4.0	µg/L	50.00	ND	87	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	55.6	2.0	µg/L	50.00	ND	111	70-130
1,2,4-Trimethylbenzene	53.5	1.0	µg/L	50.00	4.03	99	67-129
1,3,5-Trimethylbenzene	50.2	1.0	µg/L	50.00	1.20	98	79-115
Vinyl Acetate	48.5	2.0	µg/L	50.00	ND	97	70-130
Vinyl Chloride	58.0	5.0	µg/L	50.00	ND	116	0-251
o-xylene	49.3	1.0	µg/L	50.00	1.13	96	85-112
m&p-xylenes	94.4	2.0	µg/L	100.0	ND	94	70-130
Xylenes, Total	144	1.0	µg/L		1.13		70-130

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	104	70-130
Surrogate: Dibromofluoromethane	50.00	114	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	105	70-130
Surrogate: Toluene-d8	50.00	106	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 10/25/2024 15:39

Quality Control
(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike Dup (BCJ1488-MSD1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Acetone	152	15	µg/L	100.0	54.5	98	56-168	18	24
Acrolein	267	10	µg/L	200.0	ND	134	40-160	15	60
Benzene	53.1	1.0	µg/L	50.00	ND	106	37-151	5	61
Bromobenzene	47.9	1.0	µg/L	50.00	ND	96	85-114	4	7
Bromodichloromethane	52.2	1.0	µg/L	50.00	ND	104	35-155	3	56
Bromoform	50.6	1.0	µg/L	50.00	ND	101	45-169	8	42
Bromomethane	54.4	5.0	µg/L	50.00	ND	109	10-242	6	61
2-Butanone	109	2.0	µg/L	100.0	ND	109	60-155	15	20
tert-Butyl Alcohol	248 R4	10	µg/L	200.0	ND	124	57-181	40	21
Sec-butylbenzene	52.4	1.0	µg/L	50.00	ND	105	84-113	5	11
Tert-butylbenzene	51.9	1.0	µg/L	50.00	ND	104	85-114	4	10
N-butylbenzene	51.0	1.0	µg/L	50.00	ND	102	79-117	9	12
Carbon Disulfide	67.2 R4	1.0	µg/L	50.00	ND	134	72-122	8	17
Carbon Tetrachloride	59.3	1.0	µg/L	50.00	ND	119	70-140	6	41
Chlorobenzene	47.7	1.0	µg/L	50.00	ND	95	37-160	5	53
Chloroethane	54.8	5.0	µg/L	50.00	ND	110	14-230	3	78
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L	100.0	ND		0-305		71
Chloroform	50.8	1.0	µg/L	50.00	ND	102	51-138	3	54
Chloromethane	60.1	5.0	µg/L	50.00	ND	120	0-273	7	60
2-Chlorotoluene	49.4	1.0	µg/L	50.00	ND	99	82-112	4	10
4-Chlorotoluene	48.5	1.0	µg/L	50.00	ND	97	78-114	5	11
1,2-Dibromo-3-chloropropane	52.0	5.0	µg/L	50.00	ND	104	57-166	17	19
Dibromochloromethane	55.9	1.0	µg/L	50.00	ND	112	53-149	6	50
1,2-Dibromoethane	51.5	1.0	µg/L	50.00	ND	103	86-125	6	13
Dibromomethane	50.1	1.0	µg/L	50.00	ND	100	76-136	5	15
Trans-1,4-dichloro-2-butene	100	2.0	µg/L	100.0	ND	100	74-136	11	15
1,3-Dichlorobenzene	49.7	1.0	µg/L	50.00	ND	99	59-156	5	43
1,4-Dichlorobenzene	48.5	1.0	µg/L	50.00	ND	97	18-190	5	57
1,2-Dichlorobenzene	47.3	1.0	µg/L	50.00	ND	95	18-190	9	57
Dichlorodifluoromethane	72.5	5.0	µg/L	50.00	ND	145	65-145	6	15
1,1-Dichloroethane	53.2	1.0	µg/L	50.00	ND	106	59-155	4	40
1,2-Dichloroethane	49.3	1.0	µg/L	50.00	ND	99	49-155	2	49
1,1-Dichloroethene	58.6	1.0	µg/L	50.00	ND	117	0-234	7	32
Trans-1,2-dichloroethene	55.5	1.0	µg/L	50.00	ND	111	54-156	6	45
Cis-1,2-dichloroethene	52.9	1.0	µg/L	50.00	ND	106	91-116	4	9
1,2-Dichloropropane	52.5	1.0	µg/L	50.00	ND	105	0-210	6	55
2,2-Dichloropropane	59.4	1.0	µg/L	50.00	ND	119	73-126	9	12
1,3-Dichloropropane	51.5	1.0	µg/L	50.00	ND	103	85-121	6	13
Cis-1,3-dichloropropene	56.1	1.0	µg/L	50.00	ND	112	0-227	6	58
Trans-1,3-dichloropropene	58.1	1.0	µg/L	50.00	ND	116	17-183	8	86
1,1-Dichloropropene	55.8	1.0	µg/L	50.00	ND	112	85-112	5	8
Ethylbenzene	50.2	1.0	µg/L	50.00	ND	100	37-162	5	63

**EMSL Analytical, Inc.**

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EMSL-CIN-01

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Project Name:

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Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

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10/25/2024 15:39

Quality Control**(Continued)****GCMS-VOA (Continued)**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike Dup (BCJ1488-MSD1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	50.9	1.0	µg/L	50.00	ND	102	78-118	15	17
2-Hexanone	115	4.0	µg/L	100.0	ND	115	31-155	12	19
Isopropylbenzene	51.8	1.0	µg/L	50.00	ND	104	78-114	5	10
4-Isopropyltoluene	52.6	1.0	µg/L	50.00	ND	105	81-112	4	12
Methylene Chloride	51.6	1.0	µg/L	50.00	ND	103	10-221	4	28
4-Methyl-2-pentanone	116	2.0	µg/L	100.0	ND	116	78-138	10	16
Methyl-tert butyl ether	55.1	1.0	µg/L		ND		84-127	9	13
Naphthalene	63.3	2.0	µg/L	50.00	ND	127	40-140	21	25
N-propylbenzene	51.4	1.0	µg/L	50.00	ND	103	74-123	5	11
Styrene	49.4	1.0	µg/L	50.00	ND	99	87-112	4	9
1,1,2,2-Tetrachloroethane	47.4	1.0	µg/L	50.00	ND	95	46-157	8	61
1,1,1,2-Tetrachloroethane	51.2	1.0	µg/L	50.00	ND	102	81-125	4	11
Tetrachloroethene	54.5	2.0	µg/L	50.00	ND	109	64-148	7	39
Toluene	53.4	1.0	µg/L	50.00	ND	107	47-150	5	41
1,2,3-Trichlorobenzene	60.5 R4	2.0	µg/L	50.00	ND	121	80-118	20	11
1,2,4-Trichlorobenzene	56.3	1.0	µg/L	50.00	ND	113	70-130	14	25
1,1,2-Trichloroethane	49.8	1.0	µg/L	50.00	ND	100	52-150	5	45
1,1,1-Trichloroethane	57.2	1.0	µg/L	50.00	ND	114	52-162	5	36
Trichloroethene	52.4	1.0	µg/L	50.00	ND	105	70-157	5	48
Trichlorofluoromethane	59.7	5.0	µg/L	50.00	ND	119	17-181	3	84
1,2,3-Trichloropropane	47.6	4.0	µg/L	50.00	ND	95	70-130	9	11
1,1,2-Trichloro-1,2,2-trifluoroethane	58.4	2.0	µg/L	50.00	ND	117	70-130	5	25
1,2,4-Trimethylbenzene	55.6	1.0	µg/L	50.00	4.03	103	67-129	4	13
1,3,5-Trimethylbenzene	52.6	1.0	µg/L	50.00	1.20	103	79-115	5	10
Vinyl Acetate	54.5	2.0	µg/L	50.00	ND	109	70-130	12	25
Vinyl Chloride	62.7	5.0	µg/L	50.00	ND	125	0-251	8	66
o-xylene	51.6	1.0	µg/L	50.00	1.13	101	85-112	4	7
m&p-xylenes	99.7	2.0	µg/L	100.0	ND	100	70-130	5	25
Xylenes, Total	151	1.0	µg/L		1.13		70-130	5	25

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	100	70-130
Surrogate: Dibromofluoromethane	50.00	111	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	99	70-130
Surrogate: Toluene-d8	50.00	106	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

10/25/2024 15:39

Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA 624.1 in Waste Water</i>		
Acetone	67-64-1	NJDEP,PADEP
Acrolein	107-02-8	NJDEP,PADEP
Benzene	71-43-2	NJDEP,PADEP
Bromobenzene	108-86-1	NJDEP,PADEP
Bromodichloromethane	75-27-4	NJDEP,PADEP
Bromoform	75-25-2	NJDEP,PADEP
Bromomethane	74-83-9	NJDEP,PADEP
2-Butanone	78-93-3	NJDEP,PADEP
tert-Butyl Alcohol	75-65-0	NJDEP,PADEP
Sec-butylbenzene	135-98-8	NJDEP,PADEP
Tert-butylbenzene	98-06-6	NJDEP,PADEP
N-butylbenzene	104-51-8	NJDEP,PADEP
Carbon Disulfide	75-15-0	NJDEP,PADEP
Carbon Tetrachloride	56-23-5	NJDEP,PADEP
Chlorobenzene	108-90-7	NJDEP,PADEP
Chloroethane	75-00-3	NJDEP,PADEP
2-Chloroethyl Vinyl Ether	110-75-8	NJDEP,PADEP
Chloroform	67-66-3	NJDEP,PADEP
Chloromethane	74-87-3	NJDEP,PADEP
2-Chlorotoluene	95-49-8	NJDEP,PADEP
4-Chlorotoluene	106-43-4	NJDEP,PADEP
1,2-Dibromo-3-chloropropane	96-12-8	NJDEP,PADEP
Dibromochloromethane	124-48-1	NJDEP,PADEP
1,2-Dibromoethane	106-93-4	NJDEP,PADEP
Dibromomethane	74-95-3	NJDEP,PADEP
Trans-1,4-dichloro-2-butene	110-57-6	NJDEP,PADEP
1,3-Dichlorobenzene	541-73-1	NJDEP,PADEP
1,4-Dichlorobenzene	106-46-7	NJDEP,PADEP
1,2-Dichlorobenzene	95-50-1	NJDEP,PADEP
Dichlorodifluoromethane	75-71-8	NJDEP,PADEP
1,1-Dichloroethane	75-34-3	NJDEP,PADEP
1,2-Dichloroethane	107-06-2	NJDEP,PADEP
1,1-Dichloroethene	75-35-4	NJDEP,PADEP
Trans-1,2-dichloroethene	156-60-5	NJDEP,PADEP
Cis-1,2-dichloroethene	156-59-2	NJDEP,PADEP
1,2-Dichloropropane	78-87-5	NJDEP,PADEP
2,2-Dichloropropane	594-20-7	NJDEP,PADEP
1,3-Dichloropropane	142-28-9	NJDEP,PADEP
Cis-1,3-dichloropropene	10061-01-5	NJDEP,PADEP

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.

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Certified Analyses included in this Report
(Continued)

Analyte	CAS #	Certifications
<i>EPA 624.1 in Waste Water (Continued)</i>		
Trans-1,3-dichloropropene	10061-02-6	NJDEP,PADEP
1,1-Dichloropropene	563-58-6	NJDEP,PADEP
Ethylbenzene	100-41-4	NJDEP,PADEP
Hexachlorobutadiene	87-68-3	NJDEP,PADEP
2-Hexanone	591-78-6	NJDEP,PADEP
Isopropylbenzene	98-82-8	NJDEP,PADEP
4-Isopropyltoluene	99-87-6	NJDEP,PADEP
Methylene Chloride	75-09-2	NJDEP,PADEP
4-Methyl-2-pentanone	108-10-1	NJDEP,PADEP
Methyl-tert butyl ether	1634-04-4	NJDEP,PADEP
Naphthalene	91-20-3	NJDEP,PADEP
N-propylbenzene	103-65-1	NJDEP,PADEP
Styrene	100-42-5	NJDEP,PADEP
1,1,2,2-Tetrachloroethane	79-34-5	NJDEP,PADEP
1,1,1,2-Tetrachloroethane	630-20-6	NJDEP,PADEP
Tetrachloroethene	127-18-4	NJDEP,PADEP
Toluene	108-88-3	NJDEP,PADEP
1,2,3-Trichlorobenzene	87-61-6	NJDEP,PADEP
1,2,4-Trichlorobenzene	120-82-1	NJDEP,PADEP
1,1,2-Trichloroethane	79-00-5	NJDEP,PADEP
1,1,1-Trichloroethane	71-55-6	NJDEP,PADEP
Trichloroethene	79-01-6	NJDEP,PADEP
Trichlorofluoromethane	75-69-4	NJDEP,PADEP
1,2,3-Trichloropropane	96-18-4	NJDEP,PADEP
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NJDEP,PADEP
1,2,4-Trimethylbenzene	95-63-6	NJDEP,PADEP
1,3,5-Trimethylbenzene	108-67-8	NJDEP,PADEP
Vinyl Acetate	108-05-4	NJDEP,PADEP
Vinyl Chloride	75-01-4	NJDEP,PADEP
o-xylene	95-47-6	NJDEP,PADEP
m&p-xylenes	179601-23-1	NJDEP,PADEP
Xylenes, Total	1330-20-7	NJDEP,PADEP

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Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

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EMSL Sales Rep:

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10/25/2024 15:39

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
NYSDOH	New York State Department of Health	10872	04/01/2025
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2025
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2025
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2026
California ELAP	California Water Boards	1877	06/30/2025
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

**EMSL Analytical, Inc.**

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Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
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Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 10/25/2024 15:39

Notes and Definitions

Item	Definition
C	The sample was preserved to a PH of less than 2. Acrolein requires an unpreserved aliquot. Results for Acrolein may be biased.
R4	High percent recovery and no associated postive found in the batch.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RL	Reporting Limit
Wet	Sample is not dry weight corrected.
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements: MCP CAM Cert.
1	Chris Julian	Chris Julian	10/7/24	11:40	Additional Comments:
2		Stannely	10/07/24	11:40am	
3					
4					



Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

EMSL Inc.

Project AC33101
Workorder 3382844
Report ID 362618 on 10/24/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 11, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Kaleb Brown (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Reports - EMSL Inc.
Travis Albert - EMSL Analytical Inc.

Kaleb Brown

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Kaleb Brown
Project Coordinator

(ALS Digital Signature)



Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3382844001	AC33101-01	Oil/Other	10/02/2024 11:21	10/11/2024 09:24	CBC	Collected By Client
3382844002	AC33101-02	Oil/Other	10/02/2024 11:47	10/11/2024 09:24	CBC	Collected By Client
3382844003	AC33101-04	Oil/Other	10/02/2024 00:20	10/11/2024 09:24	CBC	Collected By Client



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
EPA 300.1 Rev. 1.0-1997
EPA 300.0 Rev. 2.1-1993
EPA 353.2 Rev. 2.0-1993
EPA 410.4 Rev. 1.0-1993
EPA 420.4 Rev. 1.0-1993
EPA 365.1 Rev. 2.0-1993
EPA 200.7 Rev. 4.4-1994
EPA 200.8 Rev. 5.4-1994
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

P1 Project was received at a temperature greater than six degrees Celsius.

Sample Notations

Lab ID	Sample ID		
3382844001	AC33101-01	S1	Sample was re-extracted past the holding time for EPA method 8270E.
3382844002	AC33101-02	S2	Sample was re-extracted past the holding time for EPA method 8270E.
3382844003	AC33101-04	S3	Sample was re-extracted past the holding time for EPA method 8270E.

Result Notations

Notation Ref.



Detected Results Summary

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

Compound	Result	Units	RDL	Method	Flag
METALS					
Iron, Total	762	mg/kg	193	SW846 6010C	#
Zinc, Total	12600	mg/kg	38.6	SW846 6010C	#
SEMIVOLATILES					
Acenaphthylene	54.5	ug/kg	44.6	SW846 8270E	#
Acetophenone	112	ug/kg	89.3	SW846 8270E	#
Anthracene	78.4	ug/kg	44.6	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	4410	ug/kg	89.3	SW846 8270E	#
Chrysene	2110	ug/kg	44.6	SW846 8270E	#
Fluoranthene	3050	ug/kg	44.6	SW846 8270E	#
Hexachlorobutadiene	524	ug/kg	89.3	SW846 8270E	#
Hexachloroethane	221	ug/kg	89.3	SW846 8270E	#
Naphthalene	172	ug/kg	44.6	SW846 8270E	#
N-Nitrosodiphenylamine	115	ug/kg	89.3	SW846 8270E	#
Phenanthrene	426	ug/kg	44.6	SW846 8270E	#
Pyrene	7070	ug/kg	223	SW846 8270E	#



Detected Results Summary

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

Compound	Result	Units	RDL	Method	Flag
METALS					
Iron, Total	889	mg/kg	198	SW846 6010C	#
Zinc, Total	13200	mg/kg	39.7	SW846 6010C	#
SEMIVOLATILES					
Acenaphthylene	50.8	ug/kg	48.1	SW846 8270E	#
Acetophenone	181	ug/kg	96.2	SW846 8270E	#
Anthracene	79.6	ug/kg	48.1	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	5170	ug/kg	96.2	SW846 8270E	#
Chrysene	1860	ug/kg	48.1	SW846 8270E	#
Fluoranthene	2680	ug/kg	48.1	SW846 8270E	#
Hexachlorobutadiene	486	ug/kg	96.2	SW846 8270E	#
Hexachloroethane	169	ug/kg	96.2	SW846 8270E	#
Naphthalene	111	ug/kg	48.1	SW846 8270E	#
Phenanthrene	453	ug/kg	48.1	SW846 8270E	#
Pyrene	6890	ug/kg	48.1	SW846 8270E	#

Detected Results Summary

Client Sample ID

AC33101-04

Collected

10/02/2024 00:20

Lab Sample ID

3382844003

Lab Receipt

10/11/2024 09:24

Compound	Result	Units	RDL	Method	Flag
METALS					
Iron, Total	640	mg/kg	198	SW846 6010C	#
Zinc, Total	15200	mg/kg	39.5	SW846 6010C	#
SEMIVOLATILES					
Acenaphthylene	59.8	ug/kg	44.6	SW846 8270E	#
Acetophenone	152	ug/kg	89.3	SW846 8270E	#
Anthracene	82.3	ug/kg	44.6	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	5100	ug/kg	89.3	SW846 8270E	#
Chrysene	2450	ug/kg	44.6	SW846 8270E	#
Fluoranthene	3760	ug/kg	44.6	SW846 8270E	#
Hexachlorobutadiene	426	ug/kg	89.3	SW846 8270E	#
Hexachloroethane	205	ug/kg	89.3	SW846 8270E	#
Naphthalene	131	ug/kg	44.6	SW846 8270E	#
N-Nitrosodiphenylamine	168	ug/kg	89.3	SW846 8270E	#
Phenanthrene	541	ug/kg	44.6	SW846 8270E	#
Pyrene	8320	ug/kg	223	SW846 8270E	#



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	ND	ND,P1,S1	mg/kg	38.6	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Cadmium, Total	ND	ND,P1,S1	mg/kg	9.7	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Chromium, Total	ND	ND,P1,S1	mg/kg	19.3	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Iron, Total	762	P1,S1	mg/kg	193	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Lead, Total	ND	ND,P1,S1	mg/kg	38.6	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Manganese, Total	ND	ND,P1,S1	mg/kg	19.3	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Mercury, Total	ND	ND,P1,S1	mg/kg	0.047	SW846 7471B	1	10/24/2024 11:12	JMS	A
Selenium, Total	ND	ND,P1,S1	mg/kg	96.5	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Zinc, Total	12600	P1,S1	mg/kg	38.6	SW846 6010C	10	10/18/2024 10:21	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
1,4-Dioxane	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,3,4,6-Tetrachlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4,5-Trichlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4,6-Trichlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dichlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dimethylphenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dinitrophenol	ND	ND,P1,S1	ug/kg	357	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dinitrotoluene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,6-Dinitrotoluene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Chloronaphthalene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Chlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Methyl-4,6-dinitrophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Methylnaphthalene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Nitroaniline	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Nitrophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
3,3-Dichlorobenzidine	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
3-Nitroaniline	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Bromophenyl-phenylether	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chloro-3-methylphenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chloroaniline	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chlorophenyl-phenylether	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Nitroaniline	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Nitrophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Acenaphthylene	54.5	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Acetophenone	112	P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Anthracene	78.4	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Atrazine	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzaldehyde	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(a)anthracene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(a)pyrene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(b)fluoranthene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(g,h,i)perylene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(k)fluoranthene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Biphenyl	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroethoxy)methane	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroethyl)ether	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroisopropyl)ether	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Ethylhexyl)phthalate	4410	P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Butylbenzylphthalate	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Caprolactam	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Carbazole	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Chrysene	2110	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dibenzo(a,h)anthracene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dibenzofuran	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Diethylphthalate	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dimethylphthalate	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Di-n-Butylphthalate	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Di-n-Octylphthalate	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Fluoranthene	3050	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Fluorene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorobenzene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorobutadiene	524	P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorocyclopentadiene	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachloroethane	221	P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Indeno(1,2,3-cd)pyrene	ND	ND,P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Isophorone	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
mp-Cresol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Naphthalene	172	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Nitrobenzene	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
N-Nitroso-di-n-propylamine	ND	ND,P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
N-Nitrosodiphenylamine	115	P1,S1	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
o-Cresol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Pentachlorophenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Phenanthrene	426	P1,S1	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Phenol	ND	ND,P1,S1	ug/kg	179	SW846 8270E	1	10/21/2024 19:49	S7M	A
Pyrene	7070	P1,S1	ug/kg	223	SW846 8270E	5	10/22/2024 20:36	CGS	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	60.5%	19 – 132	10/21/2024 19:49	
2-Fluorobiphenyl	321-60-8	67.8%	40 – 110	10/21/2024 19:49	
2-Fluorophenol	367-12-4	40.3%	26 – 116	10/21/2024 19:49	
Nitrobenzene-d5	4165-60-0	66%	38 – 112	10/21/2024 19:49	
Phenol-d5	4165-62-2	55.6%	35 – 111	10/21/2024 19:49	
Terphenyl-d14	98904-43-9	93.3%	45 – 126	10/21/2024 19:49	



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	ND	ND,P1,S2	mg/kg	39.7	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Cadmium, Total	ND	ND,P1,S2	mg/kg	9.9	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Chromium, Total	ND	ND,P1,S2	mg/kg	19.8	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Iron, Total	889	P1,S2	mg/kg	198	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Lead, Total	ND	ND,P1,S2	mg/kg	39.7	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Manganese, Total	ND	ND,P1,S2	mg/kg	19.8	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Mercury, Total	ND	ND,P1,S2	mg/kg	0.047	SW846 7471B	1	10/24/2024 11:13	JMS	A
Selenium, Total	ND	ND,P1,S2	mg/kg	99.2	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Zinc, Total	13200	P1,S2	mg/kg	39.7	SW846 6010C	10	10/18/2024 10:22	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
1,4-Dioxane	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,3,4,6-Tetrachlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4,5-Trichlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4,6-Trichlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dichlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dimethylphenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dinitrophenol	ND	ND,P1,S2	ug/kg	385	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dinitrotoluene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,6-Dinitrotoluene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Chloronaphthalene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Chlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Methyl-4,6-dinitrophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Methylnaphthalene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Nitroaniline	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Nitrophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
3,3-Dichlorobenzidine	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
3-Nitroaniline	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Bromophenyl-phenylether	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chloro-3-methylphenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chloroaniline	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chlorophenyl-phenylether	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Nitroaniline	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Nitrophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Acenaphthylene	50.8	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Acetophenone	181	P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Anthracene	79.6	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Atrazine	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzaldehyde	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(a)anthracene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(a)pyrene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(b)fluoranthene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(g,h,i)perylene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(k)fluoranthene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Biphenyl	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroethoxy)methane	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroethyl)ether	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroisopropyl)ether	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Ethylhexyl)phthalate	5170	P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Butylbenzylphthalate	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Caprolactam	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Carbazole	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Chrysene	1860	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dibenzo(a,h)anthracene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dibenzofuran	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Diethylphthalate	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dimethylphthalate	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Di-n-Butylphthalate	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Di-n-Octylphthalate	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Fluoranthene	2680	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Fluorene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorobenzene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorobutadiene	486	P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorocyclopentadiene	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachloroethane	169	P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Indeno(1,2,3-cd)pyrene	ND	ND,P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Isophorone	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
mp-Cresol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Naphthalene	111	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Nitrobenzene	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
N-Nitroso-di-n-propylamine	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
N-Nitrosodiphenylamine	ND	ND,P1,S2	ug/kg	96.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
o-Cresol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Pentachlorophenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Phenanthrene	453	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Phenol	ND	ND,P1,S2	ug/kg	192	SW846 8270E	1	10/21/2024 20:14	S7M	A
Pyrene	6890	P1,S2	ug/kg	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	59%	19 – 132	10/21/2024 20:14	
2-Fluorobiphenyl	321-60-8	65%	40 – 110	10/21/2024 20:14	
2-Fluorophenol	367-12-4	46.6%	26 – 116	10/21/2024 20:14	
Nitrobenzene-d5	4165-60-0	66.3%	38 – 112	10/21/2024 20:14	
Phenol-d5	4165-62-2	60.9%	35 – 111	10/21/2024 20:14	
Terphenyl-d14	98904-43-9	88.4%	45 – 126	10/21/2024 20:14	



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	ND	ND,P1,S3	mg/kg	39.5	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Cadmium, Total	ND	ND,P1,S3	mg/kg	9.9	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Chromium, Total	ND	ND,P1,S3	mg/kg	19.8	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Iron, Total	640	P1,S3	mg/kg	198	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Lead, Total	ND	ND,P1,S3	mg/kg	39.5	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Manganese, Total	ND	ND,P1,S3	mg/kg	19.8	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Mercury, Total	ND	ND,P1,S3	mg/kg	0.049	SW846 7471B	1	10/24/2024 11:08	JMS	A
Selenium, Total	ND	ND,P1,S3	mg/kg	98.8	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Zinc, Total	15200	P1,S3	mg/kg	39.5	SW846 6010C	10	10/18/2024 10:23	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
1,4-Dioxane	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,3,4,6-Tetrachlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4,5-Trichlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4,6-Trichlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dichlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dimethylphenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dinitrophenol	ND	ND,P1,S3	ug/kg	357	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dinitrotoluene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,6-Dinitrotoluene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Chloronaphthalene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Chlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Methyl-4,6-dinitrophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Methylnaphthalene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Nitroaniline	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Nitrophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
3,3-Dichlorobenzidine	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
3-Nitroaniline	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Bromophenyl-phenylether	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chloro-3-methylphenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chloroaniline	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chlorophenyl-phenylether	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Nitroaniline	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Nitrophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Acenaphthylene	59.8	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Acetophenone	152	P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Anthracene	82.3	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Atrazine	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzaldehyde	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(a)anthracene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(a)pyrene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(b)fluoranthene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(g,h,i)perylene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(k)fluoranthene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Biphenyl	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroethoxy)methane	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroethyl)ether	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroisopropyl)ether	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Ethylhexyl)phthalate	5100	P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Butylbenzylphthalate	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Caprolactam	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Carbazole	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Chrysene	2450	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dibenzo(a,h)anthracene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dibenzofuran	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Diethylphthalate	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dimethylphthalate	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Di-n-Butylphthalate	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Di-n-Octylphthalate	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Fluoranthene	3760	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Fluorene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorobenzene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorobutadiene	426	P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorocyclopentadiene	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachloroethane	205	P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Indeno(1,2,3-cd)pyrene	ND	ND,P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Isophorone	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
mp-Cresol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Naphthalene	131	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Nitrobenzene	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
N-Nitroso-di-n-propylamine	ND	ND,P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
N-Nitrosodiphenylamine	168	P1,S3	ug/kg	89.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
o-Cresol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Pentachlorophenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Phenanthrene	541	P1,S3	ug/kg	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Phenol	ND	ND,P1,S3	ug/kg	179	SW846 8270E	1	10/21/2024 19:25	S7M	A
Pyrene	8320	P1,S3	ug/kg	223	SW846 8270E	5	10/22/2024 20:12	CGS	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	62.9%	19 – 132	10/21/2024 19:25	
2-Fluorobiphenyl	321-60-8	70.7%	40 – 110	10/21/2024 19:25	
2-Fluorophenol	367-12-4	42.5%	26 – 116	10/21/2024 19:25	
Nitrobenzene-d5	4165-60-0	60.3%	38 – 112	10/21/2024 19:25	
Phenol-d5	4165-62-2	58.2%	35 – 111	10/21/2024 19:25	
Terphenyl-d14	98904-43-9	80.7%	45 – 126	10/21/2024 19:25	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3382844001	AC33101-01	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	
3382844002	AC33101-02	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	
3382844003	AC33101-04	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	



QUALITY CONTROL SAMPLES

METALS

QC Batch

QC Batch1317128

Prep MethodSW846 3051A

Date10/17/2024 10:05

Analysis MethodSW846 6010C

TechMEM

Associated Samples		
3382844001	3382844002	3382844003

Matrix Spike3893223 (MS1)3383018001 (non-Project Sample)For QC Batch 1317128

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate3893224 (MSD1)3383018001 (non-Project Sample)For QC Batch 1317128

Method Blank3893221 (MB)Created on 10/17/2024 09:37For QC Batch 1317128

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Arsenic, Total	7440-38-2	BLK	ND	mg/kg	2.0	ND
Cadmium, Total	7440-43-9	BLK	ND	mg/kg	0.50	ND
Chromium, Total	7440-47-3	BLK	ND	mg/kg	1.0	ND
Iron, Total	7439-89-6	BLK	ND	mg/kg	10.0	ND
Lead, Total	7439-92-1	BLK	ND	mg/kg	2.0	ND
Manganese, Total	7439-96-5	BLK	ND	mg/kg	1.0	ND
Selenium, Total	7782-49-2	BLK	ND	mg/kg	5.0	ND
Zinc, Total	7440-66-6	BLK	ND	mg/kg	2.0	ND

Lab Control Standard3893222 (LCS1)Created on 10/17/2024 09:37For QC Batch 1317128

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Arsenic, Total	7440-38-2	LCS	40.60		40	102	80 - 120		
Cadmium, Total	7440-43-9	LCS	21		20	105	80 - 120		
Chromium, Total	7440-47-3	LCS	21.10		20	106	80 - 120		
Iron, Total	7439-89-6	LCS	1080		1000	108	80 - 120		
Lead, Total	7439-92-1	LCS	108		100	108	80 - 120		
Manganese, Total	7439-96-5	LCS	22.40		20	112	80 - 120		
Selenium, Total	7782-49-2	LCS	103		100	103	80 - 120		
Zinc, Total	7440-66-6	LCS	106		100	106	80 - 120		

QC Batch

QC Batch1320490

Prep MethodSW846 7471B

Date10/24/2024 08:01

Analysis MethodSW846 7471B

TechJMS

Associated Samples		
3382844001	3382844002	3382844003



QUALITY CONTROL SAMPLES

METALS (cont.)

Matrix Spike 3895659 (MS) 3383382001 (non-Project Sample) For QC Batch 1320490

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3895660 (MSD) 3383382001 (non-Project Sample) For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	0.92	0.0037	0.95	96.4	80 - 120		
Mercury, Total	7439-97-6	MSD	0.80	0.0037	0.84	95.6	80 - 120	RPD 13.10 (Max-20)	

Matrix Spike 3895661 (MS) 3383385001 (non-Project Sample) For QC Batch 1320490

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3895662 (MSD) 3383385001 (non-Project Sample) For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	1.10	0.0011	0.95	121*	80 - 120		
Mercury, Total	7439-97-6	MSD	0.83	0.0011	0.89	92.7	80 - 120	RPD 32.30* (Max-20)	

Method Blank 3895657 (MB) Created on 10/23/2024 09:48 For QC Batch 1320490

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Mercury, Total	7439-97-6	BLK	ND	mg/kg	0.050	ND

Lab Control Standard 3895658 (LCS) Created on 10/23/2024 09:48 For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	LCS	0.39		0.40	98.5	80 - 120		

QUALITY CONTROL SAMPLES

SEMIVOLATILES

QC Batch

Associated Samples

QC Batch	1318932	Prep Method	SW846 3546
Date	10/20/2024 13:30	Analysis Method	SW846 8270E
Tech.	GED		

3382844001	3382844002	3382844003
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Matrix Spike

3894048 (MS)

3382843001 (non-Project Sample)

For QC Batch 1318932

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate

3894049 (MSD)

3382843001 (non-Project Sample)

For QC Batch 1318932

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2-Methylnaphthalene	91-57-6	MS	1600	0	2160	74.1	59 - 108		
2-Methylnaphthalene	91-57-6	MSD	1830	0	2360	77.8	59 - 108	RPD 13.80 (Max-21)	
Acenaphthene	83-32-9	MS	1690	0	2160	78.4	61 - 105		
Acenaphthene	83-32-9	MSD	1900	0	2360	80.5	61 - 105	RPD 11.70 (Max-17)	
Acenaphthylene	208-96-8	MS	1440	0	2160	66.6	63 - 106		
Acenaphthylene	208-96-8	MSD	1650	0	2360	70.1	63 - 106	RPD 14.20 (Max-17)	
Anthracene	120-12-7	MS	1790	0	2160	83.3	60 - 107		
Anthracene	120-12-7	MSD	1870	0	2360	79.3	60 - 107	RPD 4.12 (Max-20)	
Benzo(a)anthracene	56-55-3	MS	1870	0	2160	86.8	61 - 113		
Benzo(a)anthracene	56-55-3	MSD	2060	0	2360	87.5	61 - 113	RPD 9.89 (Max-22)	
Benzo(a)pyrene	50-32-8	MS	1880	0	2160	87.2	68 - 121		
Benzo(a)pyrene	50-32-8	MSD	2060	0	2360	87.2	68 - 121	RPD 9.08 (Max-24)	
Benzo(b)fluoranthene	205-99-2	MS	1840	0	2160	85.3	64 - 115		
Benzo(b)fluoranthene	205-99-2	MSD	2080	0	2360	88	64 - 115	RPD 12.20 (Max-28)	
Benzo(g,h,i)perylene	191-24-2	MS	1980	0	2160	91.7	57 - 119		
Benzo(g,h,i)perylene	191-24-2	MSD	2230	0	2360	94.4	57 - 119	RPD 12 (Max-30)	
Benzo(k)fluoranthene	207-08-9	MS	1890	0	2160	87.8	63 - 116		
Benzo(k)fluoranthene	207-08-9	MSD	2020	0	2360	85.7	63 - 116	RPD 6.53 (Max-22)	
Chrysene	218-01-9	MS	1930	0	2160	89.7	65 - 113		
Chrysene	218-01-9	MSD	2100	0	2360	88.9	65 - 113	RPD 8.17 (Max-20)	
Dibenzo(a,h)anthracene	53-70-3	MS	1980	0	2160	91.7	59 - 116		
Dibenzo(a,h)anthracene	53-70-3	MSD	2190	0	2360	93	59 - 116	RPD 10.40 (Max-28)	
Fluoranthene	206-44-0	MS	2000	0	2160	92.7	61 - 114		
Fluoranthene	206-44-0	MSD	1990	0	2360	84.5	61 - 114	RPD 0.19 (Max-21)	
Fluorene	86-73-7	MS	1670	0	2160	77.6	62 - 107		
Fluorene	86-73-7	MSD	1890	0	2360	80	62 - 107	RPD 12 (Max-16)	
Indeno(1,2,3-cd)pyrene	193-39-5	MS	1900	0	2160	88	53 - 118		
Indeno(1,2,3-cd)pyrene	193-39-5	MSD	2140	0	2360	90.8	53 - 118	RPD 12.10 (Max-30)	
Naphthalene	91-20-3	MS	1650	0	2160	76.6	60 - 102		
Naphthalene	91-20-3	MSD	1900	0	2360	80.6	60 - 102	RPD 14.10 (Max-21)	
Phenanthrene	85-01-8	MS	1780	0	2160	82.7	61 - 106		
Phenanthrene	85-01-8	MSD	1770	0	2360	74.9	61 - 106	RPD 0.90 (Max-20)	
Pyrene	129-00-0	MS	1810	0	2160	83.8	62 - 117		
Pyrene	129-00-0	MSD	1940	0	2360	82.3	62 - 117	RPD 7.12 (Max-20)	



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Fluorobiphenyl	321-60-8	MS	1920	2160	89.1	40 - 110	
2-Fluorobiphenyl	321-60-8	MSD	2140	2360	90.9	40 - 110	
Nitrobenzene-d5	4165-60-0	MS	2060	2160	95.4	38 - 112	
Nitrobenzene-d5	4165-60-0	MSD	2170	2360	91.8	38 - 112	
Terphenyl-d14	98904-43-9	MS	2340	2160	109	45 - 126	
Terphenyl-d14	98904-43-9	MSD	2520	2360	107	45 - 126	

Method Blank 3894046 (MB) Created on 10/19/2024 08:06 For QC Batch 1318932

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,2,4,5-Tetrachlorobenzene	95-94-3	BLK	ND	ug/kg	100	ND
1,4-Dioxane	123-91-1	BLK	ND	ug/kg	100	ND
2,3,4,6-Tetrachlorophenol	58-90-2	BLK	ND	ug/kg	200	ND
2,4,5-Trichlorophenol	95-95-4	BLK	ND	ug/kg	200	ND
2,4,6-Trichlorophenol	88-06-2	BLK	ND	ug/kg	200	ND
2,4-Dichlorophenol	120-83-2	BLK	ND	ug/kg	200	ND
2,4-Dimethylphenol	105-67-9	BLK	ND	ug/kg	200	ND
2,4-Dinitrophenol	51-28-5	BLK	ND	ug/kg	400	ND
2,4-Dinitrotoluene	121-14-2	BLK	ND	ug/kg	100	ND
2,6-Dinitrotoluene	606-20-2	BLK	ND	ug/kg	100	ND
2-Chloronaphthalene	91-58-7	BLK	ND	ug/kg	100	ND
2-Chlorophenol	95-57-8	BLK	ND	ug/kg	200	ND
2-Methyl-4,6-dinitrophenol	534-52-1	BLK	ND	ug/kg	200	ND
2-Methylnaphthalene	91-57-6	BLK	ND	ug/kg	100	ND
2-Nitroaniline	88-74-4	BLK	ND	ug/kg	200	ND
2-Nitrophenol	88-75-5	BLK	ND	ug/kg	200	ND
3,3-Dichlorobenzidine	91-94-1	BLK	ND	ug/kg	200	ND
3-Nitroaniline	99-09-2	BLK	ND	ug/kg	200	ND
4-Bromophenyl-phenylether	101-55-3	BLK	ND	ug/kg	100	ND
4-Chloro-3-methylphenol	59-50-7	BLK	ND	ug/kg	200	ND
4-Chloroaniline	106-47-8	BLK	ND	ug/kg	200	ND
4-Chlorophenyl-phenylether	7005-72-3	BLK	ND	ug/kg	100	ND
4-Nitroaniline	100-01-6	BLK	ND	ug/kg	200	ND
4-Nitrophenol	100-02-7	BLK	ND	ug/kg	200	ND
Acenaphthene	83-32-9	BLK	ND	ug/kg	50.0	ND
Acenaphthylene	208-96-8	BLK	ND	ug/kg	50.0	ND
Acetophenone	98-86-2	BLK	ND	ug/kg	100	ND
Anthracene	120-12-7	BLK	ND	ug/kg	50.0	ND
Atrazine	1912-24-9	BLK	ND	ug/kg	100	ND
Benzaldehyde	100-52-7	BLK	ND	ug/kg	200	ND
Benzo(a)anthracene	56-55-3	BLK	ND	ug/kg	50.0	ND
Benzo(a)pyrene	50-32-8	BLK	ND	ug/kg	50.0	ND
Benzo(b)fluoranthene	205-99-2	BLK	ND	ug/kg	50.0	ND
Benzo(g,h,i)perylene	191-24-2	BLK	ND	ug/kg	50.0	ND



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Benzo(k)fluoranthene	207-08-9	BLK	ND	ug/kg	50.0	ND
Biphenyl	92-52-4	BLK	ND	ug/kg	100	ND
bis(2-Chloroethoxy)methane	111-91-1	BLK	ND	ug/kg	100	ND
bis(2-Chloroethyl)ether	111-44-4	BLK	ND	ug/kg	100	ND
bis(2-Chloroisopropyl)ether	108-60-1	BLK	ND	ug/kg	100	ND
bis(2-Ethylhexyl)phthalate	117-81-7	BLK	ND	ug/kg	100	ND
Butylbenzylphthalate	85-68-7	BLK	ND	ug/kg	100	ND
Caprolactam	105-60-2	BLK	ND	ug/kg	200	ND
Carbazole	86-74-8	BLK	ND	ug/kg	100	ND
Chrysene	218-01-9	BLK	ND	ug/kg	50.0	ND
Dibenzo(a,h)anthracene	53-70-3	BLK	ND	ug/kg	50.0	ND
Dibenzofuran	132-64-9	BLK	ND	ug/kg	100	ND
Diethylphthalate	84-66-2	BLK	ND	ug/kg	100	ND
Dimethylphthalate	131-11-3	BLK	ND	ug/kg	100	ND
Di-n-Butylphthalate	84-74-2	BLK	ND	ug/kg	100	ND
Di-n-Octylphthalate	117-84-0	BLK	ND	ug/kg	100	ND
Fluoranthene	206-44-0	BLK	ND	ug/kg	50.0	ND
Fluorene	86-73-7	BLK	ND	ug/kg	50.0	ND
Hexachlorobenzene	118-74-1	BLK	ND	ug/kg	100	ND
Hexachlorobutadiene	87-68-3	BLK	ND	ug/kg	100	ND
Hexachlorocyclopentadiene	77-47-4	BLK	ND	ug/kg	200	ND
Hexachloroethane	67-72-1	BLK	ND	ug/kg	100	ND
Indeno(1,2,3-cd)pyrene	193-39-5	BLK	ND	ug/kg	50.0	ND
Isophorone	78-59-1	BLK	ND	ug/kg	100	ND
mp-Cresol	108394/106445	BLK	ND	ug/kg	200	ND
Naphthalene	91-20-3	BLK	ND	ug/kg	50.0	ND
Nitrobenzene	98-95-3	BLK	ND	ug/kg	100	ND
N-Nitroso-di-n-propylamine	621-64-7	BLK	ND	ug/kg	100	ND
N-Nitrosodiphenylamine	86-30-6	BLK	ND	ug/kg	100	ND
o-Cresol	95-48-7	BLK	ND	ug/kg	200	ND
Pentachlorophenol	87-86-5	BLK	ND	ug/kg	200	ND
Phenanthrene	85-01-8	BLK	ND	ug/kg	50.0	ND
Phenol	108-95-2	BLK	ND	ug/kg	200	ND
Pyrene	129-00-0	BLK	ND	ug/kg	50.0	ND

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4,6-Tribromophenol	118-79-6	BLK	4460	5000	89.2	19 - 132	
2-Fluorobiphenyl	321-60-8	BLK	2230	2500	89.1	40 - 110	
2-Fluorophenol	367-12-4	BLK	4470	5000	89.3	26 - 116	
Nitrobenzene-d5	4165-60-0	BLK	2310	2500	92.2	38 - 112	
Phenol-d5	4165-62-2	BLK	5190	5000	104	35 - 111	
Terphenyl-d14	98904-43-9	BLK	3060	2500	122	45 - 126	



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

Lab Control Standard			3894047 (LCS)		Created on 10/19/2024 08:06		For QC Batch 1318932		
RESULTS									
Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2,4,5-Tetrachlorobenzene	95-94-3	LCS	1930		2500	77.1	51 - 102		
1,4-Dioxane	123-91-1	LCS	1610		2500	64.6	24 - 104		
2,3,4,6-Tetrachlorophenol	58-90-2	LCS	4430		5000	88.5	55 - 111		
2,4,5-Trichlorophenol	95-95-4	LCS	4760		5000	95.2	60 - 108		
2,4,6-Trichlorophenol	88-06-2	LCS	4540		5000	90.8	59 - 111		
2,4-Dichlorophenol	120-83-2	LCS	4860		5000	97.1	61 - 109		
2,4-Dimethylphenol	105-67-9	LCS	5270		5000	105	59 - 133		
2,4-Dinitrophenol	51-28-5	LCS	5060		5000	101	28 - 135		
2,4-Dinitrotoluene	121-14-2	LCS	1870		2500	74.7	62 - 115		
2,6-Dinitrotoluene	606-20-2	LCS	1910		2500	76.3	61 - 114		
2-Chloronaphthalene	91-58-7	LCS	1810		2500	72.5	59 - 104		
2-Chlorophenol	95-57-8	LCS	5070		5000	101	61 - 106		
2-Methyl-4,6-dinitrophenol	534-52-1	LCS	5530		5000	111	39 - 113		
2-Methylnaphthalene	91-57-6	LCS	1930		2500	77.2	59 - 108		
2-Nitroaniline	88-74-4	LCS	1900		2500	76.2	60 - 115		
2-Nitrophenol	88-75-5	LCS	4820		5000	96.5	60 - 114		
3,3-Dichlorobenzidine	91-94-1	LCS	2960		5000	59.3	25 - 104		
3-Nitroaniline	99-09-2	LCS	2010		2500	80.5	52 - 119		
4-Bromophenyl-phenylether	101-55-3	LCS	1860		2500	74.5	60 - 110		
4-Chloro-3-methylphenol	59-50-7	LCS	5090		5000	102	59 - 115		
4-Chloroaniline	106-47-8	LCS	1910		2500	76.4	42 - 111		
4-Chlorophenyl-phenylether	7005-72-3	LCS	2010		2500	80.4	59 - 107		
4-Nitroaniline	100-01-6	LCS	1820		2500	72.9	49 - 121		
4-Nitrophenol	100-02-7	LCS	5120		5000	102	53 - 124		
Acenaphthene	83-32-9	LCS	1940		2500	77.7	61 - 105		
Acenaphthylene	208-96-8	LCS	1610		2500	64.6	63 - 106		
Acetophenone	98-86-2	LCS	1890		2500	75.5	33 - 98		
Anthracene	120-12-7	LCS	1960		2500	78.5	60 - 107		
Atrazine	1912-24-9	LCS	1920		2500	76.7	62 - 116		
Benzaldehyde	100-52-7	LCS	2140		2500	85.4	46 - 115		
Benzo(a)anthracene	56-55-3	LCS	1970		2500	78.7	61 - 113		
Benzo(a)pyrene	50-32-8	LCS	1950		2500	77.9	68 - 121		
Benzo(b)fluoranthene	205-99-2	LCS	2010		2500	80.2	64 - 115		
Benzo(g,h,i)perylene	191-24-2	LCS	2000		2500	80.1	57 - 119		
Benzo(k)fluoranthene	207-08-9	LCS	2100		2500	83.8	63 - 116		
Biphenyl	92-52-4	LCS	1940		2500	77.5	56 - 100		
bis(2-Chloroethoxy)methane	111-91-1	LCS	2250		2500	89.9	56 - 112		
bis(2-Chloroethyl)ether	111-44-4	LCS	2030		2500	81.3	51 - 109		
bis(2-Chloroisopropyl)ether	108-60-1	LCS	2150		2500	86	38 - 120		
bis(2-Ethylhexyl)phthalate	117-81-7	LCS	2140		2500	85.4	51 - 130		
Butylbenzylphthalate	85-68-7	LCS	2180		2500	87.2	58 - 125		
Caprolactam	105-60-2	LCS	2070		2500	82.7	51 - 119		
Carbazole	86-74-8	LCS	1850		2500	73.9	66 - 117		
Chrysene	218-01-9	LCS	2060		2500	82.3	65 - 113		



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Dibenzo(a,h)anthracene	53-70-3	LCS	1900		2500	75.9	59 - 116		
Dibenzofuran	132-64-9	LCS	1820		2500	72.9	62 - 106		
Diethylphthalate	84-66-2	LCS	2010		2500	80.4	59 - 112		
Dimethylphthalate	131-11-3	LCS	1990		2500	79.5	60 - 111		
Di-n-Butylphthalate	84-74-2	LCS	2100		2500	83.9	62 - 125		
Di-n-Octylphthalate	117-84-0	LCS	2210		2500	88.3	47 - 134		
Fluoranthene	206-44-0	LCS	1890		2500	75.7	61 - 114		
Fluorene	86-73-7	LCS	1900		2500	76.2	62 - 107		
Hexachlorobenzene	118-74-1	LCS	1860		2500	74.2	56 - 111		
Hexachlorobutadiene	87-68-3	LCS	2210		2500	88.2	56 - 127		
Hexachlorocyclopentadiene	77-47-4	LCS	1480		2500	59	20 - 124		
Hexachloroethane	67-72-1	LCS	2010		2500	80.3	57 - 101		
Indeno(1,2,3-cd)pyrene	193-39-5	LCS	1810		2500	72.2	53 - 118		
Isophorone	78-59-1	LCS	2070		2500	83	41 - 101		
mp-Cresol	108394/106445	LCS	5460		5000	109	60 - 109		
Naphthalene	91-20-3	LCS	1920		2500	76.6	60 - 102		
Nitrobenzene	98-95-3	LCS	2040		2500	81.4	52 - 113		
N-Nitroso-di-n-propylamine	621-64-7	LCS	2210		2500	88.3	50 - 121		
N-Nitrosodiphenylamine	86-30-6	LCS	2380		2500	95.1	73 - 129		
o-Cresol	95-48-7	LCS	5030		5000	101	61 - 108		
Pentachlorophenol	87-86-5	LCS	5770		5000	115	46 - 138		
Phenanthrene	85-01-8	LCS	1920		2500	76.9	61 - 106		
Phenol	108-95-2	LCS	5010		5000	100	57 - 110		
Pyrene	129-00-0	LCS	2100		2500	83.8	62 - 117		

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4,6-Tribromophenol	118-79-6	LCS	4260	5000	85.2	19 - 132	
2-Fluorobiphenyl	321-60-8	LCS	2110	2500	84.2	40 - 110	
2-Fluorophenol	367-12-4	LCS	4190	5000	83.8	26 - 116	
Nitrobenzene-d5	4165-60-0	LCS	2210	2500	88.3	38 - 112	
Phenol-d5	4165-62-2	LCS	4730	5000	94.7	35 - 111	
Terphenyl-d14	98904-43-9	LCS	2760	2500	110	45 - 126	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3382844001	AC33101-01	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1320102
3382844002	AC33101-02	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
3382844003	AC33101-04	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1320102

Environmental Chemistry Lab Service
200 Route 130 North, Cinnaminson, NJ 08077
TEL: (856) 858-4800 FAX: (856) 786-5974

REPORT RESULTS TO:

Name: Travis Albert PO#:

Company

EMSL Analytical, Inc.

Address: 200 Route 130 North

City: Cinnaminson

State: NJ Zip: 08077

Tel: 856-303-2548 ext. 2548 Fax: 856-854-2362

Email: sublab@emsl.com

Sampled by: (Signature)

Chain of Custody / Analysis Request Form Print ALL Information. Incomplete chain of custody could result in the delay of analysis.

SEND INVOICE TO:

Name: PO#:

Company

EMSL Analytical, Inc.

Address: 200 Route 130 North

City: Cinnaminson

State: NJ

Zip: 08077

Tel: 800-220-3675 Fax: 856-854-2362

of Samples in Shipment: 3

EMSL Project # AC33101

Account Rep: ENVI54

Indicate State where samples were collected:
MA



3382844

Logged By: CKW
PM: KSB



Turnaround Time

Due 1

Analytical Laboratory
301 Fulling Mill Rd
Middletown, PA 17057
717-944-5541

PROJECT NAME:

Date of Sample Shipment: 10/10/24

Lab Sample Number	Client Sample ID	Comp	Grab	Matrix						Preservative			Sampling		List Method and Test Needed					
				Waste WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO3	Na2S2O3	ICE	DATE	TIME	SVOC	Metals 6010/7470				
1. AC33101-01								X					10/02	11:21am	2X	X				
2. AC33101-02								X					10/02	11:47am	2X	X				
3. AC33101-04								X					10/02	12:20m	2X	X				
1.																				
.																				

MJE
10/11/24

Temp By: MJE
WO Temp (°C) 17°
Therm ID 569

Receipt Info Completed By:
Cooler Custody Seal Intact
Sample Custody Seal Intact
Received on Ice
Cooler & Samples Intact
Correct Containers Provided
Sample Label/COC Agree
Adequate Sample Volumes
CR6 Samples Filtered
OP Samples Filtered
VOA Trip Blank
NIs 4 Days?
Rad Screen (uCi)
Courier/Tracking#:

MJE
Y N
Y N
Y N
Y N
Y N
Y N
Y N
Y N
Y N
Y N
Y N

leased By nature
Date & Time Released 10/10/24
Delivery Method FedEx
Received By Signature
Agency
Date & Time Received
Please indicate reporting requirements: ☐ 1. Results Only ☒ 2. Results and QC ☐ 3. Reduced Deliverables ☐ 4. Disk Deliverable ☐ 5. Other

ments: Please analyze for metals (As, Cd, Cr, Pb, Fe, Mn, Hg, Se, Zn) and SVOC 8270

17° 280508572397

Appendix B

Sampling Equipment

Sampling Equipment

Analyte	Description	Calibration
Volatile Organic Compounds (VOCs)	Ion Science Tiger Photoionization Detector	Calibrated by Rental Company Verified Prior to Use
Surface Temperature & Relative Humidity	TSI Q-Trak Air Quality Monitor	Verified Prior to Use

Appendix C

Field Logs

edham Rubber Crows Sampling

12/24

008/266 B50

CJuliano

005 Overcut

Description

CJuliano ~~meets~~ meets Tam from the Town of Needham at Needham Memorial Field & Needham High School.

Address Class is on the Field

So CJuliano/Tam go to Defazio Park. Collects Samples from Fountains and Brook Field.

CJuliano and Tam return to Memorial Field. Samples are collected.

CJuliano offsite.

Samples collected by scraping Jars against turf. FB Collects in center of Brook's Field. ~~Turf extractor to be completed by lab.~~

10/3/2024- CJuliano composites jars by their field (not separate sections of each field within each jar). Samples delivered to FedEx for shipment to ESML NJ

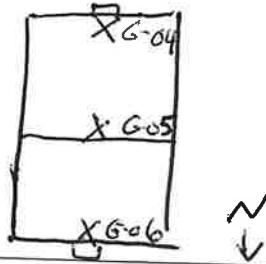
Sample ID	Time	Location	Location ID
1643241002-01	1121	Fountains Field	G-04
↓	↓	↓	G-05
↓	↓	↓	G-06
1643241002-02	1147	Brook Field	G-01
↓	↓	↓	G-02
↓	↓	↓	G-03
1643241002-03	1200	Field blank	G-02
1643241002-04	1220	Memorial Field	G-07
↓	↓	↓	G-08
↓	↓	↓	G-09

CAS

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
Sample #: 1643241002- 01	Sample Location ID G-044 G-025 G-046 Foundry / field /	

Sample Location Description (include sketch map with location of sample)



Sample Data

Date: 10/02/2024 Time: 1121 Sampler: CJ Weather: Ambient Temperature: 69.8 Relative Humidity: 57.4 Barometric Pressure: NA Sampling Device: Auger / Core Sampler / Shovel / Trowel / Other: <u>Dedicated glass jars</u> Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other: PID Reading (ppm): 0.1	<table border="1"> <thead> <tr> <th>Container</th> <th>Quantity</th> <th>Preservative</th> </tr> </thead> <tbody> <tr> <td>4oz Amber</td> <td>3</td> <td>---</td> </tr> </tbody> </table>	Container	Quantity	Preservative	4oz Amber	3	---
Container	Quantity	Preservative					
4oz Amber	3	---					

Description Data

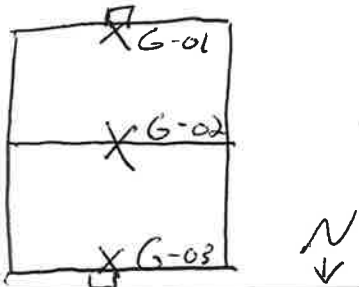
Generic Sample Description: Crumb rubber

Comments:

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
Sample#: 1643241002-02	<u>Sample Location ID</u> Brook Field G-01, G-02, G-03	

Sample Location Description (include sketch map with location of sample)



Sample Data

Sample Data	Container	Quantity	Preservative
Date: 10/02/2024 Time: 1147 Sampler: CJ Weather: Ambient Temperature: 77.4 Relative Humidity: 45.1 Barometric Pressure: NA Sampling Device: Auger / Core Sampler / Shovel / Trowel / Other: <u>Dedicated Jar</u> Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other: PID Reading (ppm): 0.1	4oz Amber	3	---

Description Data

Generic Sample Description: Crumb rubber

Comments:

Field Blank Field Data

Client/Project Name: <u>Needham Rubber Crums</u>	PROJECT #: 20081622.B50	
Project Location: <u>Needham MA</u>	Sample ID Field Blank	
Sample#: 1643241002-03		

Sample Data

Container	Quantity	Preservative
<u>V09</u>	<u>3</u>	<u>HCl</u>
Date: <u>10/2/2024</u> Time: <u>1200</u> Sampler: <u>CJ</u> Weather: <u>Overcast 60's</u> Blank Water Supplied By: <u>Lab</u> / F&O / Other _____ Comments: <u>Collected in center of Brook's Field (G-032)</u>		

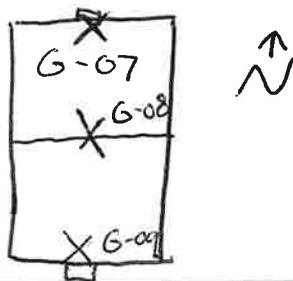
* - Organic-free DI water used in these containers.

Comments:

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
Sample#: 1643241002- 04	<u>Sample Location ID</u> <i>Memorial Field</i> G 7, 608, 609	

Sample Location Description (include sketch map with location of sample)



Sample Data

Sample Data	Container	Quantity	Preservative
Date: 10/02/2024 Time: 1220 Sampler: CJ Weather: Ambient Temperature: 78.5 Relative Humidity: 41.1 Barometric Pressure: Sampling Device: Auger / Core Sampler / Shovel / Trowel / Other: <u>Dedicated Jar</u> Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other: PID Reading (ppm): 0.0	4oz Amber	3	---

Description Data

Generic Sample Description: Crumb rubber
--

Comments:



MAP REFERENCE

THIS MAP WAS PREPARED FROM USGS ORTHOPHOTOGRAPHY, (c) 2013 MASSGIS.

SOURCE: OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS.

FIELD BOUNDARIES APPROXIMATE BASED ON SITE OBSERVATIONS

LEGEND

- FOUNDERS FIELD BOUNDARY
- BROCK FIELD BOUNDARY
- SAMPLE LOCATIONS TO FORM COMPOSITE

SCALE:	
HORZ :	1" = 150'
VERT :	
DATUM:	
HORZ :	
VERT :	
0 75' 150'	
GRAPHIC SCALE	



FUSS & O'NEILL

108 MYRTLE STREET, SUITE 502
 QUINCY, MA 02171
 617.283.4675
 www.fando.com

NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 DEFAZIO PARK
 380 DEDHAM ROAD

NEEDHAM

MASSACHUSETTS

PROJ. No.: 20081266.B10
 DATE: JUNE 2020

FIGURE 2



MAP REFERENCE

THIS MAP WAS PREPARED FROM USGS ORTHOPHOTOGRAPHY, (c) 2013 MASSGIS.

SOURCE: OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS.

MEMORIAL FIELD BOUNDARIES APPROXIMATE BASED ON SITE OBSERVATIONS

LEGEND

PARK BOUNDARY

SAMPLE LOCATIONS TO FORM COMPOSITE

SCALE:	
HORZ.:	1" = 150'
VERT.:	
DATUM:	
HORZ.:	
VERT.:	
0 75' 150'	
GRAPHIC SCALE	



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NEEDHAM HEALTH DEPARTMENT

SITE PLAN
MEMORIAL PARK
92 ROSEMARY ROAD

NEEDHAM

MASSACHUSETTS

PROJ. No.: 20081266.B10
DATE: JUNE 2020

FIGURE 1

~~FUSS & O'NEILL-ENVROSCIENCE, LLC~~

Disciplines to Deliver

(860) 646-2469 • www.FandO.com

- ❑ 146 Hartford Road, Manchester, CT 06040
- ❑ 56 Quarry Road, Trumbull, CT 06611
- ❑ 1419 Richland Street, Columbia, SC 29201
- ❑ 78 Interstate Drive, West Springfield, MA 01089

- ☒ 108 Myrtle Street, #502, North Quincy, MA 02171
☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908
☐ 80 Washington Street, Suite 301, Poughkeepsie, NY 12601

CHAIN-OF-CUSTODY RECORD

4517

Turnaround

- ☐ 1 Day* ☐ 3 Days* ☐ Other _____ (days)
☐ 2 Days* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME

PROJECT LOCATION

PROJECT NUMBER

LABORATORY

Neelam Comb Rubber

Needham MA

20081266.B50

EMSL (NJ)

REPORT TO: Neal Kelly neal.kelly@fgato.com

INVOICE TO:

P.O. No.:

Sampler's Signature: _____

Date: 10/2/24

Source Codes:

MW=Monitoring Well

PW=Potable Water

S=Soil

$$W=W_{\text{aste}}$$

SW=Surface Water

T=Treatment Facility

B=Sediment

$$A = A_{\text{air}}$$

X=Other Aq = Aqueous

(R: crumb Rubber

[illegible]

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements: <i>MCP CAM Cert.</i>
1	<i>Chris Julian</i>				Additional Comments:
2					
3					
4					

Appendix D

Method Detection Limit Laboratory Analytical Report



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101
LIMS Reference ID: AC33101
EMSL Customer ID: ENVI54

December 12, 2024

Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 10/10/2024. The results are tabulated on the attached pages for the following client designated project:

Needham Crumb Rubber

The reference number for these samples is EMSL Order #: AC33101 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101

LIMS Reference ID: AC33101

EMSL Customer ID: ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 12/12/2024 13:03

Sample Condition on Receipt

Cooler ID: Default Cooler	Temperature:	°C
Custody Seals	Y	
Containers Intact	Y	
COC/Labels Agree	Y	
Preservation Confirmed	Y	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC33101-03	1643241002-03	Waste Water	10/2/24 12:00 pm	10/10/2024

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

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108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Positive Hits Summary

Lab ID	Client ID				Sampled
AC33101-03	1643241002-03				10/02/24 12:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 624.1	No TICs found	0.0		µg/L	10/14/2024 18:26



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101

LIMS Reference ID: AC33101

EMSL Customer ID: ENVI54

Attention: Neal Kelly
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North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 12/12/2024 13:03

Work Order Case Narrative

Revised - MDL request change

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 12/12/2024 13:03

Sample Results

Sample: 1643241002-03
AC33101-03 (Waste Water)

Analyte	Result	Q	DF	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GCMS-VOA											
No TICs found	0.0		1			µg/L	10/14/24 18:26	10/14/24 18:26	OPM/WRF	EPA 624.1	EPA 624.1
Acetone	ND		1	15		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Acrolein	ND	C	1	10		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Benzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromodichloromethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromoform	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Bromomethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Butanone	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
tert-Butyl Alcohol	ND		1	10		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Sec-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Tert-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
N-butylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Carbon Disulfide	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Carbon Tetrachloride	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloroethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Chloroethyl Vinyl Ether	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloroform	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Chloromethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Chlorotoluene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Chlorotoluene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dibromo-3-chloropropane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dibromochloromethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dibromoethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dibromomethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,4-dichloro-2-butene	ND		1	2.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,4-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichlorobenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Dichlorodifluoromethane	ND		1	5.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloroethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichloroethane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,2-dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Cis-1,2-dichloroethene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2,2-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3-Dichloropropane	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Cis-1,3-dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trans-1,3-dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1-Dichloropropene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Ethylbenzene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Hexachlorobutadiene	ND		1	1.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
2-Hexanone	ND		1	4.0		µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1

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, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Sample Results

(Continued)

Sample: 1643241002-03 (Continued)**AC33101-03 (Waste Water)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GCMS-VOA (Continued)										
Isopropylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Isopropyltoluene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Methylene Chloride	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
4-Methyl-2-pentanone	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Methyl-tert butyl ether	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Naphthalene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
N-propylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Styrene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2,2-Tetrachloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,1,2-Tetrachloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Tetrachloroethene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Toluene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,3-Trichlorobenzene	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,4-Trichlorobenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2-Trichloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,1-Trichloroethane	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trichloroethene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Trichlorofluoromethane	ND		1	5.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,3-Trichloropropane	ND		1	4.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,2,4-Trimethylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
1,3,5-Trimethylbenzene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Vinyl Acetate	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Vinyl Chloride	ND		1	5.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
o-xylene	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
m&p-xylenes	ND		1	2.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Xylenes, Total	ND		1	1.0	µg/L	10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: 4-Bromofluorobenzene</i>	102%		70-130			10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
<i>Surrogate: Dibromofluoromethane</i>	115%		70-130			10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
<i>Surrogate: 1,2-Dichloroethane-d4</i>	104%		70-130			10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1
<i>Surrogate: Toluene-d8</i>	101%		70-130			10/14/24 18:26	10/14/24 18:26	WF/WRF	EPA 624.1	EPA 624.1

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Attention: Neal Kelly
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Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 12/12/2024 13:03

Quality Control**GCMS-VOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BCJ1488 - EPA 624.1**Blank (BCJ1488-BLK1)**

Prepared & Analyzed: 10/14/2024

Acetone	ND	15	µg/L
Acrolein	ND	10	µg/L
Benzene	ND	1.0	µg/L
Bromobenzene	ND	1.0	µg/L
Bromodichloromethane	ND	1.0	µg/L
Bromoform	ND	1.0	µg/L
Bromomethane	ND	5.0	µg/L
2-Butanone	ND	2.0	µg/L
tert-Butyl Alcohol	ND	10	µg/L
Sec-butylbenzene	ND	1.0	µg/L
Tert-butylbenzene	ND	1.0	µg/L
N-butylbenzene	ND	1.0	µg/L
Carbon Disulfide	ND	1.0	µg/L
Carbon Tetrachloride	ND	1.0	µg/L
Chlorobenzene	ND	1.0	µg/L
Chloroethane	ND	5.0	µg/L
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L
Chloroform	ND	1.0	µg/L
Chloromethane	ND	5.0	µg/L
2-Chlorotoluene	ND	1.0	µg/L
4-Chlorotoluene	ND	1.0	µg/L
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L
Dibromochloromethane	ND	1.0	µg/L
1,2-Dibromoethane	ND	1.0	µg/L
Dibromomethane	ND	1.0	µg/L
Trans-1,4-dichloro-2-butene	ND	2.0	µg/L
1,3-Dichlorobenzene	ND	1.0	µg/L
1,4-Dichlorobenzene	ND	1.0	µg/L
1,2-Dichlorobenzene	ND	1.0	µg/L
Dichlorodifluoromethane	ND	5.0	µg/L
1,1-Dichloroethane	ND	1.0	µg/L
1,2-Dichloroethane	ND	1.0	µg/L
1,1-Dichloroethene	ND	1.0	µg/L
Trans-1,2-dichloroethene	ND	1.0	µg/L
Cis-1,2-dichloroethene	ND	1.0	µg/L
1,2-Dichloropropane	ND	1.0	µg/L
2,2-Dichloropropane	ND	1.0	µg/L
1,3-Dichloropropane	ND	1.0	µg/L
Cis-1,3-dichloropropene	ND	1.0	µg/L
Trans-1,3-dichloropropene	ND	1.0	µg/L
1,1-Dichloropropene	ND	1.0	µg/L
Ethylbenzene	ND	1.0	µg/L

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 12/12/2024 13:03

Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Blank (BCJ1488-BLK1)**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	ND	1.0	µg/L
2-Hexanone	ND	4.0	µg/L
Isopropylbenzene	ND	1.0	µg/L
4-Isopropyltoluene	ND	1.0	µg/L
Methylene Chloride	ND	1.0	µg/L
4-Methyl-2-pentanone	ND	2.0	µg/L
Methyl-tert butyl ether	ND	1.0	µg/L
Naphthalene	ND	2.0	µg/L
N-propylbenzene	ND	1.0	µg/L
Styrene	ND	1.0	µg/L
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L
Tetrachloroethene	ND	2.0	µg/L
Toluene	ND	1.0	µg/L
1,2,3-Trichlorobenzene	ND	2.0	µg/L
1,2,4-Trichlorobenzene	ND	1.0	µg/L
1,1,2-Trichloroethane	ND	1.0	µg/L
1,1,1-Trichloroethane	ND	1.0	µg/L
Trichloroethene	ND	1.0	µg/L
Trichlorofluoromethane	ND	5.0	µg/L
1,2,3-Trichloropropane	ND	4.0	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2.0	µg/L
1,2,4-Trimethylbenzene	ND	1.0	µg/L
1,3,5-Trimethylbenzene	ND	1.0	µg/L
Vinyl Acetate	ND	2.0	µg/L
Vinyl Chloride	ND	5.0	µg/L
o-xylene	ND	1.0	µg/L
m&p-xylenes	ND	2.0	µg/L
Xylenes, Total	ND	1.0	µg/L

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	103	70-130
Surrogate: Dibromofluoromethane	50.00	115	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	104	70-130
Surrogate: Toluene-d8	50.00	100	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Quality Control

(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**LCS (BCJ1488-BS1)**

Prepared & Analyzed: 10/14/2024

Acetone	69.4	15	µg/L	100.0		69	67-134		
Acrolein	181	10	µg/L	200.0		91	60-140		
Benzene	50.3	1.0	µg/L	50.00		101	65-135		
Bromobenzene	46.5	1.0	µg/L	50.00		93	87-121		
Bromodichloromethane	50.8	1.0	µg/L	50.00		102	65-135		
Bromoform	48.0	1.0	µg/L	50.00		96	70-130		
Bromomethane	51.4	5.0	µg/L	50.00		103	15-185		
2-Butanone	90.5	2.0	µg/L	100.0		91	72-129		
tert-Butyl Alcohol	139	10	µg/L	200.0		69	67-143		
Sec-butylbenzene	50.1	1.0	µg/L	50.00		100	86-121		
Tert-butylbenzene	50.0	1.0	µg/L	50.00		100	89-119		
N-butylbenzene	47.9	1.0	µg/L	50.00		96	76-130		
Carbon Disulfide	62.5	1.0	µg/L	50.00		125	82-228		
Carbon Tetrachloride	56.1	1.0	µg/L	50.00		112	70-130		
Chlorobenzene	45.9	1.0	µg/L	50.00		92	65-135		
Chloroethane	51.1	5.0	µg/L	50.00		102	40-160		
2-Chloroethyl Vinyl Ether	93.0	2.0	µg/L	100.0		93	0-225		
Chloroform	50.2	1.0	µg/L	50.00		100	70-135		
Chloromethane	53.1	5.0	µg/L	50.00		106	0-205		
2-Chlorotoluene	47.3	1.0	µg/L	50.00		95	89-116		
4-Chlorotoluene	45.8	1.0	µg/L	50.00		92	78-131		
1,2-Dibromo-3-chloropropane	43.2	5.0	µg/L	50.00		86	56-142		
Dibromochloromethane	52.8	1.0	µg/L	50.00		106	70-135		
1,2-Dibromoethane	48.4	1.0	µg/L	50.00		97	88-121		
Dibromomethane	46.7	1.0	µg/L	50.00		93	85-125		
Trans-1,4-dichloro-2-butene	91.2	2.0	µg/L	100.0		91	10-161		
1,3-Dichlorobenzene	47.8	1.0	µg/L	50.00		96	70-130		
1,4-Dichlorobenzene	46.1	1.0	µg/L	50.00		92	65-135		
1,2-Dichlorobenzene	43.8	1.0	µg/L	50.00		88	65-135		
Dichlorodifluoromethane	65.2 R4	5.0	µg/L	50.00		130	37-119		
1,1-Dichloroethane	50.6	1.0	µg/L	50.00		101	70-130		
1,2-Dichloroethane	46.6	1.0	µg/L	50.00		93	70-130		
1,1-Dichloroethene	54.8	1.0	µg/L	50.00		110	50-150		
Trans-1,2-dichloroethene	52.4	1.0	µg/L	50.00		105	70-130		
Cis-1,2-dichloroethene	50.9	1.0	µg/L	50.00		102	88-142		
1,2-Dichloropropane	49.9	1.0	µg/L	50.00		100	35-165		
2,2-Dichloropropane	60.8	1.0	µg/L	50.00		122	75-134		
1,3-Dichloropropane	48.4	1.0	µg/L	50.00		97	85-116		
Cis-1,3-dichloropropene	55.7	1.0	µg/L	50.00		111	25-175		
Trans-1,3-dichloropropene	56.3	1.0	µg/L	50.00		113	50-150		
1,1-Dichloropropene	52.0	1.0	µg/L	50.00		104	88-116		
Ethylbenzene	47.7	1.0	µg/L	50.00		95	60-140		

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 12/12/2024 13:03

Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**LCS (BCJ1488-BS1)**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	48.0	1.0	µg/L	50.00		96	76-114		
2-Hexanone	96.8	4.0	µg/L	100.0		97	72-131		
Isopropylbenzene	49.6	1.0	µg/L	50.00		99	89-136		
4-Isopropyltoluene	51.0	1.0	µg/L	50.00		102	85-125		
Methylene Chloride	49.3	1.0	µg/L	50.00		99	60-140		
4-Methyl-2-pentanone	97.5	2.0	µg/L	100.0		98	72-126		
Methyl-tert butyl ether	51.9	1.0	µg/L	50.00		104	79-120		
Naphthalene	48.6	2.0	µg/L	50.00		97	73-133		
N-propylbenzene	48.8	1.0	µg/L	50.00		98	77-131		
Styrene	48.3	1.0	µg/L	50.00		97	90-122		
1,1,2,2-Tetrachloroethane	43.0	1.0	µg/L	50.00		86	60-140		
1,1,1,2-Tetrachloroethane	49.7	1.0	µg/L	50.00		99	89-118		
Tetrachloroethene	50.8	2.0	µg/L	50.00		102	70-130		
Toluene	49.7	1.0	µg/L	50.00		99	70-130		
1,2,3-Trichlorobenzene	47.8	2.0	µg/L	50.00		96	79-128		
1,2,4-Trichlorobenzene	49.7	1.0	µg/L	50.00		99	70-130		
1,1,2-Trichloroethane	46.7	1.0	µg/L	50.00		93	70-130		
1,1,1-Trichloroethane	54.3	1.0	µg/L	50.00		109	70-130		
Trichloroethene	49.7	1.0	µg/L	50.00		99	65-135		
Trichlorofluoromethane	55.0	5.0	µg/L	50.00		110	50-150		
1,2,3-Trichloropropane	42.9	4.0	µg/L	50.00		86	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane	54.0	2.0	µg/L	50.00		108	70-130		
1,2,4-Trimethylbenzene	48.8	1.0	µg/L	50.00		98	86-122		
1,3,5-Trimethylbenzene	49.2	1.0	µg/L	50.00		98	88-121		
Vinyl Acetate	49.4	2.0	µg/L	50.00		99	70-130		
Vinyl Chloride	56.5	5.0	µg/L	50.00		113	5-195		
o-xylene	48.3	1.0	µg/L	50.00		97	89-118		
m&p-xylenes	95.6	2.0	µg/L	100.0		96	70-130		
Xylenes, Total	144	1.0	µg/L	150.0		96	70-130		

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	105	70-130
Surrogate: Dibromofluoromethane	50.00	114	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	103	70-130
Surrogate: Toluene-d8	50.00	102	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

Fuss & O'Neill, Inc. [ENVI54]

108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Quality Control**(Continued)****GCMS-VOA (Continued)**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike (BCJ1488-MS1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Acetone	128	15	µg/L	100.0	54.5	73	56-168
Acrolein	230	10	µg/L	200.0	ND	115	40-160
Benzene	50.7	1.0	µg/L	50.00	ND	101	37-151
Bromobenzene	46.2	1.0	µg/L	50.00	ND	92	85-114
Bromodichloromethane	50.9	1.0	µg/L	50.00	ND	102	35-155
Bromoform	46.8	1.0	µg/L	50.00	ND	94	45-169
Bromomethane	51.1	5.0	µg/L	50.00	ND	102	10-242
2-Butanone	93.9	2.0	µg/L	100.0	ND	94	60-155
tert-Butyl Alcohol	166	10	µg/L	200.0	ND	83	57-181
Sec-butylbenzene	49.7	1.0	µg/L	50.00	ND	99	84-113
Tert-butylbenzene	49.6	1.0	µg/L	50.00	ND	99	85-114
N-butylbenzene	46.8	1.0	µg/L	50.00	ND	94	79-117
Carbon Disulfide	61.9 R4	1.0	µg/L	50.00	ND	124	72-122
Carbon Tetrachloride	56.0	1.0	µg/L	50.00	ND	112	70-140
Chlorobenzene	45.4	1.0	µg/L	50.00	ND	91	37-160
Chloroethane	52.9	5.0	µg/L	50.00	ND	106	14-230
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L	100.0	ND		0-305
Chloroform	49.3	1.0	µg/L	50.00	ND	99	51-138
Chloromethane	55.9	5.0	µg/L	50.00	ND	112	0-273
2-Chlorotoluene	47.5	1.0	µg/L	50.00	ND	95	82-112
4-Chlorotoluene	46.2	1.0	µg/L	50.00	ND	92	78-114
1,2-Dibromo-3-chloropropane	43.8	5.0	µg/L	50.00	ND	88	57-166
Dibromochloromethane	52.8	1.0	µg/L	50.00	ND	106	53-149
1,2-Dibromoethane	48.3	1.0	µg/L	50.00	ND	97	86-125
Dibromomethane	47.7	1.0	µg/L	50.00	ND	95	76-136
Trans-1,4-dichloro-2-butene	89.7	2.0	µg/L	100.0	ND	90	74-136
1,3-Dichlorobenzene	47.3	1.0	µg/L	50.00	ND	95	59-156
1,4-Dichlorobenzene	46.1	1.0	µg/L	50.00	ND	92	18-190
1,2-Dichlorobenzene	43.4	1.0	µg/L	50.00	ND	87	18-190
Dichlorodifluoromethane	68.1	5.0	µg/L	50.00	ND	136	65-145
1,1-Dichloroethane	51.2	1.0	µg/L	50.00	ND	102	59-155
1,2-Dichloroethane	48.1	1.0	µg/L	50.00	ND	96	49-155
1,1-Dichloroethene	54.5	1.0	µg/L	50.00	ND	109	0-234
Trans-1,2-dichloroethene	52.1	1.0	µg/L	50.00	ND	104	54-156
Cis-1,2-dichloroethene	50.8	1.0	µg/L	50.00	ND	102	91-116
1,2-Dichloropropane	49.6	1.0	µg/L	50.00	ND	99	0-210
2,2-Dichloropropane	54.2	1.0	µg/L	50.00	ND	108	73-126
1,3-Dichloropropane	48.6	1.0	µg/L	50.00	ND	97	85-121
Cis-1,3-dichloropropene	52.9	1.0	µg/L	50.00	ND	106	0-227
Trans-1,3-dichloropropene	53.8	1.0	µg/L	50.00	ND	108	17-183
1,1-Dichloropropene	53.2	1.0	µg/L	50.00	ND	106	85-112
Ethylbenzene	47.6	1.0	µg/L	50.00	ND	95	37-162

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50

EMSL Sales Rep: Jeromy Bish

Received: 10/10/2024 09:00

Reported: 12/12/2024 13:03

Quality Control (Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike (BCJ1488-MS1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	43.8	1.0	µg/L	50.00	ND	88	78-118
2-Hexanone	102	4.0	µg/L	100.0	ND	102	31-155
Isopropylbenzene	49.2	1.0	µg/L	50.00	ND	98	78-114
4-Isopropyltoluene	50.5	1.0	µg/L	50.00	ND	101	81-112
Methylene Chloride	49.6	1.0	µg/L	50.00	ND	99	10-221
4-Methyl-2-pentanone	104	2.0	µg/L	100.0	ND	104	78-138
Methyl-tert butyl ether	50.3	1.0	µg/L		ND		84-127
Naphthalene	51.1	2.0	µg/L	50.00	ND	102	40-140
N-propylbenzene	49.0	1.0	µg/L	50.00	ND	98	74-123
Styrene	47.4	1.0	µg/L	50.00	ND	95	87-112
1,1,2,2-Tetrachloroethane	43.7	1.0	µg/L	50.00	ND	87	46-157
1,1,1,2-Tetrachloroethane	49.0	1.0	µg/L	50.00	ND	98	81-125
Tetrachloroethene	50.9	2.0	µg/L	50.00	ND	102	64-148
Toluene	50.6	1.0	µg/L	50.00	ND	101	47-150
1,2,3-Trichlorobenzene	49.5	2.0	µg/L	50.00	ND	99	80-118
1,2,4-Trichlorobenzene	49.0	1.0	µg/L	50.00	ND	98	70-130
1,1,2-Trichloroethane	47.2	1.0	µg/L	50.00	ND	94	52-150
1,1,1-Trichloroethane	54.6	1.0	µg/L	50.00	ND	109	52-162
Trichloroethene	49.8	1.0	µg/L	50.00	ND	100	70-157
Trichlorofluoromethane	58.0	5.0	µg/L	50.00	ND	116	17-181
1,2,3-Trichloropropane	43.7	4.0	µg/L	50.00	ND	87	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	55.6	2.0	µg/L	50.00	ND	111	70-130
1,2,4-Trimethylbenzene	53.5	1.0	µg/L	50.00	4.03	99	67-129
1,3,5-Trimethylbenzene	50.2	1.0	µg/L	50.00	1.20	98	79-115
Vinyl Acetate	48.5	2.0	µg/L	50.00	ND	97	70-130
Vinyl Chloride	58.0	5.0	µg/L	50.00	ND	116	0-251
o-xylene	49.3	1.0	µg/L	50.00	1.13	96	85-112
m&p-xylenes	94.4	2.0	µg/L	100.0	ND	94	70-130
Xylenes, Total	144	1.0	µg/L		1.13		70-130

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	104	70-130
Surrogate: Dibromofluoromethane	50.00	114	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	105	70-130
Surrogate: Toluene-d8	50.00	106	70-130

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: 856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54

Attention: Neal Kelly
Fuss & O'Neill, Inc. [ENVI54]
108 Myrtle St
North Quincy, Massachusetts 02171
(860) 646-2469
Neal.Kelly@fando.com

Project Name: Needham Crumb Rubber

Customer PO: 20081266.B50
EMSL Sales Rep: Jeromy Bish
Received: 10/10/2024 09:00
Reported: 12/12/2024 13:03

Quality Control
(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike Dup (BCJ1488-MSD1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Acetone	152	15	µg/L	100.0	54.5	98	56-168	18	24
Acrolein	267	10	µg/L	200.0	ND	134	40-160	15	60
Benzene	53.1	1.0	µg/L	50.00	ND	106	37-151	5	61
Bromobenzene	47.9	1.0	µg/L	50.00	ND	96	85-114	4	7
Bromodichloromethane	52.2	1.0	µg/L	50.00	ND	104	35-155	3	56
Bromoform	50.6	1.0	µg/L	50.00	ND	101	45-169	8	42
Bromomethane	54.4	5.0	µg/L	50.00	ND	109	10-242	6	61
2-Butanone	109	2.0	µg/L	100.0	ND	109	60-155	15	20
tert-Butyl Alcohol	248 R4	10	µg/L	200.0	ND	124	57-181	40	21
Sec-butylbenzene	52.4	1.0	µg/L	50.00	ND	105	84-113	5	11
Tert-butylbenzene	51.9	1.0	µg/L	50.00	ND	104	85-114	4	10
N-butylbenzene	51.0	1.0	µg/L	50.00	ND	102	79-117	9	12
Carbon Disulfide	67.2 R4	1.0	µg/L	50.00	ND	134	72-122	8	17
Carbon Tetrachloride	59.3	1.0	µg/L	50.00	ND	119	70-140	6	41
Chlorobenzene	47.7	1.0	µg/L	50.00	ND	95	37-160	5	53
Chloroethane	54.8	5.0	µg/L	50.00	ND	110	14-230	3	78
2-Chloroethyl Vinyl Ether	ND	2.0	µg/L	100.0	ND		0-305		71
Chloroform	50.8	1.0	µg/L	50.00	ND	102	51-138	3	54
Chloromethane	60.1	5.0	µg/L	50.00	ND	120	0-273	7	60
2-Chlorotoluene	49.4	1.0	µg/L	50.00	ND	99	82-112	4	10
4-Chlorotoluene	48.5	1.0	µg/L	50.00	ND	97	78-114	5	11
1,2-Dibromo-3-chloropropane	52.0	5.0	µg/L	50.00	ND	104	57-166	17	19
Dibromochloromethane	55.9	1.0	µg/L	50.00	ND	112	53-149	6	50
1,2-Dibromoethane	51.5	1.0	µg/L	50.00	ND	103	86-125	6	13
Dibromomethane	50.1	1.0	µg/L	50.00	ND	100	76-136	5	15
Trans-1,4-dichloro-2-butene	100	2.0	µg/L	100.0	ND	100	74-136	11	15
1,3-Dichlorobenzene	49.7	1.0	µg/L	50.00	ND	99	59-156	5	43
1,4-Dichlorobenzene	48.5	1.0	µg/L	50.00	ND	97	18-190	5	57
1,2-Dichlorobenzene	47.3	1.0	µg/L	50.00	ND	95	18-190	9	57
Dichlorodifluoromethane	72.5	5.0	µg/L	50.00	ND	145	65-145	6	15
1,1-Dichloroethane	53.2	1.0	µg/L	50.00	ND	106	59-155	4	40
1,2-Dichloroethane	49.3	1.0	µg/L	50.00	ND	99	49-155	2	49
1,1-Dichloroethene	58.6	1.0	µg/L	50.00	ND	117	0-234	7	32
Trans-1,2-dichloroethene	55.5	1.0	µg/L	50.00	ND	111	54-156	6	45
Cis-1,2-dichloroethene	52.9	1.0	µg/L	50.00	ND	106	91-116	4	9
1,2-Dichloropropane	52.5	1.0	µg/L	50.00	ND	105	0-210	6	55
2,2-Dichloropropane	59.4	1.0	µg/L	50.00	ND	119	73-126	9	12
1,3-Dichloropropane	51.5	1.0	µg/L	50.00	ND	103	85-121	6	13
Cis-1,3-dichloropropene	56.1	1.0	µg/L	50.00	ND	112	0-227	6	58
Trans-1,3-dichloropropene	58.1	1.0	µg/L	50.00	ND	116	17-183	8	86
1,1-Dichloropropene	55.8	1.0	µg/L	50.00	ND	112	85-112	5	8
Ethylbenzene	50.2	1.0	µg/L	50.00	ND	100	37-162	5	63

**EMSL Analytical, Inc.**

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012433101**LIMS Reference ID:** AC33101**EMSL Customer ID:** ENVI54**Attention:** Neal Kelly

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108 Myrtle St

North Quincy, Massachusetts 02171

(860) 646-2469

Neal.Kelly@fando.com

Project Name:

Needham Crumb Rubber

Customer PO:

20081266.B50

EMSL Sales Rep:

Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Quality Control

(Continued)

GCMS-VOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1488 - EPA 624.1 (Continued)**Matrix Spike Dup (BCJ1488-MSD1)****Source: AC32432-01**

Prepared & Analyzed: 10/14/2024

Hexachlorobutadiene	50.9	1.0	µg/L	50.00	ND	102	78-118	15	17
2-Hexanone	115	4.0	µg/L	100.0	ND	115	31-155	12	19
Isopropylbenzene	51.8	1.0	µg/L	50.00	ND	104	78-114	5	10
4-Isopropyltoluene	52.6	1.0	µg/L	50.00	ND	105	81-112	4	12
Methylene Chloride	51.6	1.0	µg/L	50.00	ND	103	10-221	4	28
4-Methyl-2-pentanone	116	2.0	µg/L	100.0	ND	116	78-138	10	16
Methyl-tert butyl ether	55.1	1.0	µg/L		ND		84-127	9	13
Naphthalene	63.3	2.0	µg/L	50.00	ND	127	40-140	21	25
N-propylbenzene	51.4	1.0	µg/L	50.00	ND	103	74-123	5	11
Styrene	49.4	1.0	µg/L	50.00	ND	99	87-112	4	9
1,1,2,2-Tetrachloroethane	47.4	1.0	µg/L	50.00	ND	95	46-157	8	61
1,1,1,2-Tetrachloroethane	51.2	1.0	µg/L	50.00	ND	102	81-125	4	11
Tetrachloroethene	54.5	2.0	µg/L	50.00	ND	109	64-148	7	39
Toluene	53.4	1.0	µg/L	50.00	ND	107	47-150	5	41
1,2,3-Trichlorobenzene	60.5 R4	2.0	µg/L	50.00	ND	121	80-118	20	11
1,2,4-Trichlorobenzene	56.3	1.0	µg/L	50.00	ND	113	70-130	14	25
1,1,2-Trichloroethane	49.8	1.0	µg/L	50.00	ND	100	52-150	5	45
1,1,1-Trichloroethane	57.2	1.0	µg/L	50.00	ND	114	52-162	5	36
Trichloroethene	52.4	1.0	µg/L	50.00	ND	105	70-157	5	48
Trichlorofluoromethane	59.7	5.0	µg/L	50.00	ND	119	17-181	3	84
1,2,3-Trichloropropane	47.6	4.0	µg/L	50.00	ND	95	70-130	9	11
1,1,2-Trichloro-1,2,2-trifluoroethane	58.4	2.0	µg/L	50.00	ND	117	70-130	5	25
1,2,4-Trimethylbenzene	55.6	1.0	µg/L	50.00	4.03	103	67-129	4	13
1,3,5-Trimethylbenzene	52.6	1.0	µg/L	50.00	1.20	103	79-115	5	10
Vinyl Acetate	54.5	2.0	µg/L	50.00	ND	109	70-130	12	25
Vinyl Chloride	62.7	5.0	µg/L	50.00	ND	125	0-251	8	66
o-xylene	51.6	1.0	µg/L	50.00	1.13	101	85-112	4	7
m&p-xylenes	99.7	2.0	µg/L	100.0	ND	100	70-130	5	25
Xylenes, Total	151	1.0	µg/L		1.13		70-130	5	25

Surrogate(s)

Surrogate: 4-Bromofluorobenzene	50.00	100	70-130
Surrogate: Dibromofluoromethane	50.00	111	70-130
Surrogate: 1,2-Dichloroethane-d4	50.00	99	70-130
Surrogate: Toluene-d8	50.00	106	70-130

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Needham Crumb Rubber

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Jeromy Bish

Received:

10/10/2024 09:00

Reported:

12/12/2024 13:03

Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA 624.1 in Waste Water</i>		
Acetone	67-64-1	NJDEP,PADEP
Acrolein	107-02-8	NJDEP,PADEP
Benzene	71-43-2	NJDEP,PADEP
Bromobenzene	108-86-1	NJDEP,PADEP
Bromodichloromethane	75-27-4	NJDEP,PADEP
Bromoform	75-25-2	NJDEP,PADEP
Bromomethane	74-83-9	NJDEP,PADEP
2-Butanone	78-93-3	NJDEP,PADEP
tert-Butyl Alcohol	75-65-0	NJDEP,PADEP
Sec-butylbenzene	135-98-8	NJDEP,PADEP
Tert-butylbenzene	98-06-6	NJDEP,PADEP
N-butylbenzene	104-51-8	NJDEP,PADEP
Carbon Disulfide	75-15-0	NJDEP,PADEP
Carbon Tetrachloride	56-23-5	NJDEP,PADEP
Chlorobenzene	108-90-7	NJDEP,PADEP
Chloroethane	75-00-3	NJDEP,PADEP
2-Chloroethyl Vinyl Ether	110-75-8	NJDEP,PADEP
Chloroform	67-66-3	NJDEP,PADEP
Chloromethane	74-87-3	NJDEP,PADEP
2-Chlorotoluene	95-49-8	NJDEP,PADEP
4-Chlorotoluene	106-43-4	NJDEP,PADEP
1,2-Dibromo-3-chloropropane	96-12-8	NJDEP,PADEP
Dibromochloromethane	124-48-1	NJDEP,PADEP
1,2-Dibromoethane	106-93-4	NJDEP,PADEP
Dibromomethane	74-95-3	NJDEP,PADEP
Trans-1,4-dichloro-2-butene	110-57-6	NJDEP,PADEP
1,3-Dichlorobenzene	541-73-1	NJDEP,PADEP
1,4-Dichlorobenzene	106-46-7	NJDEP,PADEP
1,2-Dichlorobenzene	95-50-1	NJDEP,PADEP
Dichlorodifluoromethane	75-71-8	NJDEP,PADEP
1,1-Dichloroethane	75-34-3	NJDEP,PADEP
1,2-Dichloroethane	107-06-2	NJDEP,PADEP
1,1-Dichloroethene	75-35-4	NJDEP,PADEP
Trans-1,2-dichloroethene	156-60-5	NJDEP,PADEP
Cis-1,2-dichloroethene	156-59-2	NJDEP,PADEP
1,2-Dichloropropane	78-87-5	NJDEP,PADEP
2,2-Dichloropropane	594-20-7	NJDEP,PADEP
1,3-Dichloropropane	142-28-9	NJDEP,PADEP
Cis-1,3-dichloropropene	10061-01-5	NJDEP,PADEP

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Certified Analyses included in this Report
(Continued)

Analyte	CAS #	Certifications
<i>EPA 624.1 in Waste Water (Continued)</i>		
Trans-1,3-dichloropropene	10061-02-6	NJDEP,PADEP
1,1-Dichloropropene	563-58-6	NJDEP,PADEP
Ethylbenzene	100-41-4	NJDEP,PADEP
Hexachlorobutadiene	87-68-3	NJDEP,PADEP
2-Hexanone	591-78-6	NJDEP,PADEP
Isopropylbenzene	98-82-8	NJDEP,PADEP
4-Isopropyltoluene	99-87-6	NJDEP,PADEP
Methylene Chloride	75-09-2	NJDEP,PADEP
4-Methyl-2-pentanone	108-10-1	NJDEP,PADEP
Methyl-tert butyl ether	1634-04-4	NJDEP,PADEP
Naphthalene	91-20-3	NJDEP,PADEP
N-propylbenzene	103-65-1	NJDEP,PADEP
Styrene	100-42-5	NJDEP,PADEP
1,1,2,2-Tetrachloroethane	79-34-5	NJDEP,PADEP
1,1,1,2-Tetrachloroethane	630-20-6	NJDEP,PADEP
Tetrachloroethene	127-18-4	NJDEP,PADEP
Toluene	108-88-3	NJDEP,PADEP
1,2,3-Trichlorobenzene	87-61-6	NJDEP,PADEP
1,2,4-Trichlorobenzene	120-82-1	NJDEP,PADEP
1,1,2-Trichloroethane	79-00-5	NJDEP,PADEP
1,1,1-Trichloroethane	71-55-6	NJDEP,PADEP
Trichloroethene	79-01-6	NJDEP,PADEP
Trichlorofluoromethane	75-69-4	NJDEP,PADEP
1,2,3-Trichloropropane	96-18-4	NJDEP,PADEP
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NJDEP,PADEP
1,2,4-Trimethylbenzene	95-63-6	NJDEP,PADEP
1,3,5-Trimethylbenzene	108-67-8	NJDEP,PADEP
Vinyl Acetate	108-05-4	NJDEP,PADEP
Vinyl Chloride	75-01-4	NJDEP,PADEP
o-xylene	95-47-6	NJDEP,PADEP
m&p-xylenes	179601-23-1	NJDEP,PADEP
Xylenes, Total	1330-20-7	NJDEP,PADEP

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EMSL-CIN-01

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North Quincy, Massachusetts 02171

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List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2025
NYSDOH	New York State Department of Health	10872	04/01/2025
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2025
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2025
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2026
California ELAP	California Water Boards	1877	06/30/2025
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2026

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

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Customer PO: 20081266.B50
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Notes and Definitions

Item	Definition
C	The sample was preserved to a PH of less than 2. Acrolein requires an unpreserved aliquot. Results for Acrolein may be biased.
R4	High percent recovery and no associated postive found in the batch.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RL	Reporting Limit
Wet	Sample is not dry weight corrected.
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



FUSS & O'NEILL ENVIROSCIENCE, LLC

Disciplines to Deliver

(860) 646-2469 • www.FandO.com

AC33101

- ☐ 146 Hartford Road, Manchester, CT 06040
- ☐ 56 Quarry Road, Trumbull, CT 06611
- ☐ 1419 Richland Street, Columbia, SC 29201
- ☐ 78 Interstate Drive, West Springfield, MA 01089

- ☒ 108 Myrtle Street, #502, North Quincy, MA 02171
- ☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908
- ☐ 80 Washington Street, Suite 301, Poughkeepsie, NY 12601

CHAIN-OF-CUSTODY RECORD

4517

Turnaround

- ☐ 1 Day* ☐ 3 Days* ☐ Other _____ (days)
- ☐ 2 Days* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME

PROJECT LOCATION

PROJECT NUMBER

LABORATORY

Needham Crumb Rubber

Needham MA

20081266, B50

EMSL (NJ)

REPORT TO: Neal Kelly neal.kelly@fandO.com

INVOICE TO:

P.O. No.:

Sampler's Signature:

Date: 10/2/24

Source Codes:

MW=Monitoring Well

PW=Potable Water

S=Soil

W=Waste

SW=Surface Water

T=Treatment Facility

B=Sediment

A=Air

X=Other AQ = Aqueous

CR: crumb rubber

Analysis Request

Containers

Item No.	Transfer Check				Sample Number	Source Code	Date Sampled	Time Sampled	Analysis Request												Comments
	1	2	3	4																	
1					1643241002-01	CR	10/2/24	1121	X	X	X										Founders
2					1643241002-02	CR	10/2/24	1147		X	X										Brook Brook
3					1643241002-03	AQ	10/2/24	1200													Brook
4					1643241002-04	CR	10/2/24	1220		X	X										Memorial

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements:
1	Chris Julian	FX	10/7/24	11:40	MCP CAM Cert.
2			10/7/24	11:40am	
3					
4					



Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

EMSL Inc.

Project AC33101

Workorder 3382844

Report ID 373722 on 12/12/2024 (Revised report. See Project Notations Section.)

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 11, 2024.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Kaleb Brown (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Reports - EMSL Inc.

Travis Albert - EMSL Analytical Inc.

Kaleb Brown

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Kaleb Brown
Project Coordinator

(ALS Digital Signature)



Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3382844001	AC33101-01	Oil/Other	10/02/2024 11:21	10/11/2024 09:24	CBC	Collected By Client
3382844002	AC33101-02	Oil/Other	10/02/2024 11:47	10/11/2024 09:24	CBC	Collected By Client
3382844003	AC33101-04	Oil/Other	10/02/2024 00:20	10/11/2024 09:24	CBC	Collected By Client



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
EPA 300.1 Rev. 1.0-1997
EPA 300.0 Rev. 2.1-1993
EPA 353.2 Rev. 2.0-1993
EPA 410.4 Rev. 1.0-1993
EPA 420.4 Rev. 1.0-1993
EPA 365.1 Rev. 2.0-1993
EPA 200.7 Rev. 4.4-1994
EPA 200.8 Rev. 5.4-1994
EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

- P1

Project was received at a temperature greater than six degrees Celsius.
- P2

This Certificate of Analysis has been revised to report to the MDL, data has not been changed. LLB 12/12/24

Sample Notations

Lab ID	Sample ID		
3382844001	AC33101-01	S1	Sample was re-extracted past the holding time for EPA method 8270E.
3382844002	AC33101-02	S2	Sample was re-extracted past the holding time for EPA method 8270E.
3382844003	AC33101-04	S3	Sample was re-extracted past the holding time for EPA method 8270E.

Result Notations

Notation Ref.



Detected Results Summary

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21			
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24			
Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Iron, Total	762	mg/kg	193	64.3	SW846 6010C	#
Manganese, Total	6.6J	mg/kg	19.3	6.4	SW846 6010C	#
Zinc, Total	12600	mg/kg	38.6	12.9	SW846 6010C	#
SEMIVOLATILES						
2-Methylnaphthalene	46.2J	ug/kg	89.3	15.2	SW846 8270E	#
Acenaphthylene	54.5	ug/kg	44.6	15.2	SW846 8270E	#
Acetophenone	112	ug/kg	89.3	15.2	SW846 8270E	#
Anthracene	78.4	ug/kg	44.6	15.2	SW846 8270E	#
Benzaldehyde	151J	ug/kg	179	17.9	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	4410	ug/kg	89.3	19.6	SW846 8270E	#
Chrysene	2110	ug/kg	44.6	15.2	SW846 8270E	#
Fluoranthene	3050	ug/kg	44.6	15.2	SW846 8270E	#
Hexachlorobutadiene	524	ug/kg	89.3	15.2	SW846 8270E	#
Hexachloroethane	221	ug/kg	89.3	20.5	SW846 8270E	#
Naphthalene	172	ug/kg	44.6	15.2	SW846 8270E	#
N-Nitrosodiphenylamine	115	ug/kg	89.3	15.2	SW846 8270E	#
Phenanthrene	426	ug/kg	44.6	15.2	SW846 8270E	#
Pyrene	7070	ug/kg	223	75.9	SW846 8270E	#



Detected Results Summary

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Iron, Total	889	mg/kg	198	66.1	SW846 6010C	#
Manganese, Total	6.7J	mg/kg	19.8	6.6	SW846 6010C	#
Zinc, Total	13200	mg/kg	39.7	13.2	SW846 6010C	#
SEMIVOLATILES						
2-Methylnaphthalene	38.8J	ug/kg	96.2	16.3	SW846 8270E	#
Acenaphthylene	50.8	ug/kg	48.1	16.3	SW846 8270E	#
Acetophenone	181	ug/kg	96.2	16.3	SW846 8270E	#
Anthracene	79.6	ug/kg	48.1	16.3	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	5170	ug/kg	96.2	21.2	SW846 8270E	#
Chrysene	1860	ug/kg	48.1	16.3	SW846 8270E	#
Fluoranthene	2680	ug/kg	48.1	16.3	SW846 8270E	#
Hexachlorobutadiene	486	ug/kg	96.2	16.3	SW846 8270E	#
Hexachloroethane	169	ug/kg	96.2	22.1	SW846 8270E	#
Naphthalene	111	ug/kg	48.1	16.3	SW846 8270E	#
Phenanthrene	453	ug/kg	48.1	16.3	SW846 8270E	#
Pyrene	6890	ug/kg	48.1	16.3	SW846 8270E	#



Detected Results Summary

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

Compound	Result	Units	RDL	MDL	Method	Flag
METALS						
Iron, Total	640	mg/kg	198	65.8	SW846 6010C	#
Manganese, Total	7.5J	mg/kg	19.8	6.6	SW846 6010C	#
Zinc, Total	15200	mg/kg	39.5	13.2	SW846 6010C	#
SEMIVOLATILES						
2-Methylnaphthalene	40.9J	ug/kg	89.3	15.2	SW846 8270E	#
Acenaphthylene	59.8	ug/kg	44.6	15.2	SW846 8270E	#
Acetophenone	152	ug/kg	89.3	15.2	SW846 8270E	#
Anthracene	82.3	ug/kg	44.6	15.2	SW846 8270E	#
bis(2-Ethylhexyl)phthalate	5100	ug/kg	89.3	19.6	SW846 8270E	#
Chrysene	2450	ug/kg	44.6	15.2	SW846 8270E	#
Fluoranthene	3760	ug/kg	44.6	15.2	SW846 8270E	#
Hexachlorobutadiene	426	ug/kg	89.3	15.2	SW846 8270E	#
Hexachloroethane	205	ug/kg	89.3	20.5	SW846 8270E	#
Naphthalene	131	ug/kg	44.6	15.2	SW846 8270E	#
N-Nitrosodiphenylamine	168	ug/kg	89.3	15.2	SW846 8270E	#
Phenanthrene	541	ug/kg	44.6	15.2	SW846 8270E	#
Pyrene	8320	ug/kg	223	75.9	SW846 8270E	#



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	12.9U	U,P1,P2,S1	mg/kg	38.6	12.9	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Cadmium, Total	3.2U	U,P1,P2,S1	mg/kg	9.7	3.2	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Chromium, Total	6.4U	U,P1,P2,S1	mg/kg	19.3	6.4	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Iron, Total	762	P1,P2,S1	mg/kg	193	64.3	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Lead, Total	12.9U	U,P1,P2,S1	mg/kg	38.6	12.9	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Manganese, Total	6.6J	J,P1,P2,S1	mg/kg	19.3	6.4	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Mercury, Total	0.015U	U,P1,P2,S1	mg/kg	0.047	0.015	SW846 7471B	1	10/24/2024 11:12	JMS	A
Selenium, Total	32.2U	U,P1,P2,S1	mg/kg	96.5	32.2	SW846 6010C	10	10/18/2024 10:21	MSY	A1
Zinc, Total	12600	P1,P2,S1	mg/kg	38.6	12.9	SW846 6010C	10	10/18/2024 10:21	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
1,4-Dioxane	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,3,4,6-Tetrachlorophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4,5-Trichlorophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4,6-Trichlorophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dichlorophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dimethylphenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dinitrophenol	177U	U,P1,P2,S1	ug/kg	357	177	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,4-Dinitrotoluene	17.9U	U,P1,P2,S1	ug/kg	89.3	17.9	SW846 8270E	1	10/21/2024 19:49	S7M	A
2,6-Dinitrotoluene	30.4U	U,P1,P2,S1	ug/kg	89.3	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Chloronaphthalene	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Chlorophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Methyl-4,6-dinitrophenol	44.6U	U,P1,P2,S1	ug/kg	179	44.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Methylnaphthalene	46.2J	J,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Nitroaniline	20.5U	U,P1,P2,S1	ug/kg	179	20.5	SW846 8270E	1	10/21/2024 19:49	S7M	A
2-Nitrophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
3,3-Dichlorobenzidine	27.7U	U,P1,P2,S1	ug/kg	179	27.7	SW846 8270E	1	10/21/2024 19:49	S7M	A
3-Nitroaniline	15.2U	U,P1,P2,S1	ug/kg	179	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Bromophenyl-phenylether	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chloro-3-methylphenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chloroaniline	15.2U	U,P1,P2,S1	ug/kg	179	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Chlorophenyl-phenylether	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Nitroaniline	25.9U	U,P1,P2,S1	ug/kg	179	25.9	SW846 8270E	1	10/21/2024 19:49	S7M	A
4-Nitrophenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Acenaphthylene	54.5	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Acetophenone	112	P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Anthracene	78.4	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Atrazine	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzaldehyde	151J	J,P1,P2,S1	ug/kg	179	17.9	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(a)anthracene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(a)pyrene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(b)fluoranthene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(g,h,i)perylene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Benzo(k)fluoranthene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Biphenyl	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroethoxy)methane	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroethyl)ether	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Chloroisopropyl)ether	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
bis(2-Ethylhexyl)phthalate	4410	P1,P2,S1	ug/kg	89.3	19.6	SW846 8270E	1	10/21/2024 19:49	S7M	A
Butylbenzylphthalate	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Caprolactam	34.8U	U,P1,P2,S1	ug/kg	179	34.8	SW846 8270E	1	10/21/2024 19:49	S7M	A
Carbazole	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Chrysene	2110	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dibenzo(a,h)anthracene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dibenzofuran	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Diethylphthalate	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Dimethylphthalate	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Di-n-Butylphthalate	31.3U	U,P1,P2,S1	ug/kg	89.3	31.3	SW846 8270E	1	10/21/2024 19:49	S7M	A
Di-n-Octylphthalate	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Fluoranthene	3050	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Fluorene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorobenzene	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorobutadiene	524	P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachlorocyclopentadiene	26.8U	U,P1,P2,S1	ug/kg	179	26.8	SW846 8270E	1	10/21/2024 19:49	S7M	A
Hexachloroethane	221	P1,P2,S1	ug/kg	89.3	20.5	SW846 8270E	1	10/21/2024 19:49	S7M	A
Indeno(1,2,3-cd)pyrene	15.2U	U,P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Isophorone	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
mp-Cresol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
Naphthalene	172	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A



Results

Client Sample ID	AC33101-01	Collected	10/02/2024 11:21
Lab Sample ID	3382844001	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Nitrobenzene	30.4U	U,P1,P2,S1	ug/kg	89.3	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
N-Nitroso-di-n-propylamine	15.2U	U,P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
N-Nitrosodiphenylamine	115	P1,P2,S1	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
o-Cresol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
Pentachlorophenol	43.8U	U,P1,P2,S1	ug/kg	179	43.8	SW846 8270E	1	10/21/2024 19:49	S7M	A
Phenanthrene	426	P1,P2,S1	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:49	S7M	A
Phenol	30.4U	U,P1,P2,S1	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:49	S7M	A
Pyrene	7070	P1,P2,S1	ug/kg	223	75.9	SW846 8270E	5	10/22/2024 20:36	CGS	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	60.5%	19 – 132	10/21/2024 19:49	
2-Fluorobiphenyl	321-60-8	67.8%	40 – 110	10/21/2024 19:49	
2-Fluorophenol	367-12-4	40.3%	26 – 116	10/21/2024 19:49	
Nitrobenzene-d5	4165-60-0	66%	38 – 112	10/21/2024 19:49	
Phenol-d5	4165-62-2	55.6%	35 – 111	10/21/2024 19:49	
Terphenyl-d14	98904-43-9	93.3%	45 – 126	10/21/2024 19:49	



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	13.2U	U,P1,P2,S2	mg/kg	39.7	13.2	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Cadmium, Total	3.3U	U,P1,P2,S2	mg/kg	9.9	3.3	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Chromium, Total	6.6U	U,P1,P2,S2	mg/kg	19.8	6.6	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Iron, Total	889	P1,P2,S2	mg/kg	198	66.1	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Lead, Total	13.2U	U,P1,P2,S2	mg/kg	39.7	13.2	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Manganese, Total	6.7J	J,P1,P2,S2	mg/kg	19.8	6.6	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Mercury, Total	0.015U	U,P1,P2,S2	mg/kg	0.047	0.015	SW846 7471B	1	10/24/2024 11:13	JMS	A
Selenium, Total	33.1U	U,P1,P2,S2	mg/kg	99.2	33.1	SW846 6010C	10	10/18/2024 10:22	MSY	A1
Zinc, Total	13200	P1,P2,S2	mg/kg	39.7	13.2	SW846 6010C	10	10/18/2024 10:22	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
1,4-Dioxane	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,3,4,6-Tetrachlorophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4,5-Trichlorophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4,6-Trichlorophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dichlorophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dimethylphenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dinitrophenol	190U	U,P1,P2,S2	ug/kg	385	190	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,4-Dinitrotoluene	19.2U	U,P1,P2,S2	ug/kg	96.2	19.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
2,6-Dinitrotoluene	32.7U	U,P1,P2,S2	ug/kg	96.2	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Chloronaphthalene	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Chlorophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Methyl-4,6-dinitrophenol	48.1U	U,P1,P2,S2	ug/kg	192	48.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Methylnaphthalene	38.8J	J,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Nitroaniline	22.1U	U,P1,P2,S2	ug/kg	192	22.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
2-Nitrophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
3,3-Dichlorobenzidine	29.8U	U,P1,P2,S2	ug/kg	192	29.8	SW846 8270E	1	10/21/2024 20:14	S7M	A
3-Nitroaniline	16.3U	U,P1,P2,S2	ug/kg	192	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Bromophenyl-phenylether	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chloro-3-methylphenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chloroaniline	16.3U	U,P1,P2,S2	ug/kg	192	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Chlorophenyl-phenylether	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Nitroaniline	27.9U	U,P1,P2,S2	ug/kg	192	27.9	SW846 8270E	1	10/21/2024 20:14	S7M	A
4-Nitrophenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Acenaphthylene	50.8	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Acetophenone	181	P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Anthracene	79.6	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Atrazine	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzaldehyde	19.2U	U,P1,P2,S2	ug/kg	192	19.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(a)anthracene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(a)pyrene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(b)fluoranthene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(g,h,i)perylene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Benzo(k)fluoranthene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Biphenyl	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroethoxy)methane	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroethyl)ether	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Chloroisopropyl)ether	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
bis(2-Ethylhexyl)phthalate	5170	P1,P2,S2	ug/kg	96.2	21.2	SW846 8270E	1	10/21/2024 20:14	S7M	A
Butylbenzylphthalate	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Caprolactam	37.5U	U,P1,P2,S2	ug/kg	192	37.5	SW846 8270E	1	10/21/2024 20:14	S7M	A
Carbazole	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Chrysene	1860	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dibenzo(a,h)anthracene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dibenzofuran	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Diethylphthalate	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Dimethylphthalate	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Di-n-Butylphthalate	33.7U	U,P1,P2,S2	ug/kg	96.2	33.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
Di-n-Octylphthalate	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Fluoranthene	2680	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Fluorene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorobenzene	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorobutadiene	486	P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachlorocyclopentadiene	28.8U	U,P1,P2,S2	ug/kg	192	28.8	SW846 8270E	1	10/21/2024 20:14	S7M	A
Hexachloroethane	169	P1,P2,S2	ug/kg	96.2	22.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Indeno(1,2,3-cd)pyrene	16.3U	U,P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Isophorone	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
mp-Cresol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
Naphthalene	111	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A



Results

Client Sample ID	AC33101-02	Collected	10/02/2024 11:47
Lab Sample ID	3382844002	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Nitrobenzene	32.7U	U,P1,P2,S2	ug/kg	96.2	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
N-Nitroso-di-n-propylamine	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
N-Nitrosodiphenylamine	16.3U	U,P1,P2,S2	ug/kg	96.2	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
o-Cresol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
Pentachlorophenol	47.1U	U,P1,P2,S2	ug/kg	192	47.1	SW846 8270E	1	10/21/2024 20:14	S7M	A
Phenanthrene	453	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A
Phenol	32.7U	U,P1,P2,S2	ug/kg	192	32.7	SW846 8270E	1	10/21/2024 20:14	S7M	A
Pyrene	6890	P1,P2,S2	ug/kg	48.1	16.3	SW846 8270E	1	10/21/2024 20:14	S7M	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	59%	19 – 132	10/21/2024 20:14	
2-Fluorobiphenyl	321-60-8	65%	40 – 110	10/21/2024 20:14	
2-Fluorophenol	367-12-4	46.6%	26 – 116	10/21/2024 20:14	
Nitrobenzene-d5	4165-60-0	66.3%	38 – 112	10/21/2024 20:14	
Phenol-d5	4165-62-2	60.9%	35 – 111	10/21/2024 20:14	
Terphenyl-d14	98904-43-9	88.4%	45 – 126	10/21/2024 20:14	



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

METALS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Arsenic, Total	13.2U	U,P1,P2,S3	mg/kg	39.5	13.2	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Cadmium, Total	3.3U	U,P1,P2,S3	mg/kg	9.9	3.3	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Chromium, Total	6.6U	U,P1,P2,S3	mg/kg	19.8	6.6	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Iron, Total	640	P1,P2,S3	mg/kg	198	65.8	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Lead, Total	13.2U	U,P1,P2,S3	mg/kg	39.5	13.2	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Manganese, Total	7.5J	J,P1,P2,S3	mg/kg	19.8	6.6	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Mercury, Total	0.016U	U,P1,P2,S3	mg/kg	0.049	0.016	SW846 7471B	1	10/24/2024 11:08	JMS	A
Selenium, Total	33.0U	U,P1,P2,S3	mg/kg	98.8	33.0	SW846 6010C	10	10/18/2024 10:23	MSY	A1
Zinc, Total	15200	P1,P2,S3	mg/kg	39.5	13.2	SW846 6010C	10	10/18/2024 10:23	MSY	A1

SEMIVOLATILES

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,2,4,5-Tetrachlorobenzene	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
1,4-Dioxane	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,3,4,6-Tetrachlorophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4,5-Trichlorophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4,6-Trichlorophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dichlorophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dimethylphenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dinitrophenol	177U	U,P1,P2,S3	ug/kg	357	177	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,4-Dinitrotoluene	17.9U	U,P1,P2,S3	ug/kg	89.3	17.9	SW846 8270E	1	10/21/2024 19:25	S7M	A
2,6-Dinitrotoluene	30.4U	U,P1,P2,S3	ug/kg	89.3	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Chloronaphthalene	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Chlorophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Methyl-4,6-dinitrophenol	44.6U	U,P1,P2,S3	ug/kg	179	44.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Methylnaphthalene	40.9J	J,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Nitroaniline	20.5U	U,P1,P2,S3	ug/kg	179	20.5	SW846 8270E	1	10/21/2024 19:25	S7M	A
2-Nitrophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
3,3-Dichlorobenzidine	27.7U	U,P1,P2,S3	ug/kg	179	27.7	SW846 8270E	1	10/21/2024 19:25	S7M	A
3-Nitroaniline	15.2U	U,P1,P2,S3	ug/kg	179	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Bromophenyl-phenylether	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chloro-3-methylphenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chloroaniline	15.2U	U,P1,P2,S3	ug/kg	179	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Chlorophenyl-phenylether	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Nitroaniline	25.9U	U,P1,P2,S3	ug/kg	179	25.9	SW846 8270E	1	10/21/2024 19:25	S7M	A
4-Nitrophenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Acenaphthene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Acenaphthylene	59.8	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Acetophenone	152	P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Anthracene	82.3	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Atrazine	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzaldehyde	17.9U	U,P1,P2,S3	ug/kg	179	17.9	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(a)anthracene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(a)pyrene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(b)fluoranthene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(g,h,i)perylene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Benzo(k)fluoranthene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Biphenyl	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroethoxy)methane	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroethyl)ether	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Chloroisopropyl)ether	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
bis(2-Ethylhexyl)phthalate	5100	P1,P2,S3	ug/kg	89.3	19.6	SW846 8270E	1	10/21/2024 19:25	S7M	A
Butylbenzylphthalate	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Caprolactam	34.8U	U,P1,P2,S3	ug/kg	179	34.8	SW846 8270E	1	10/21/2024 19:25	S7M	A
Carbazole	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Chrysene	2450	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dibenzo(a,h)anthracene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dibenzofuran	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Diethylphthalate	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Dimethylphthalate	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Di-n-Butylphthalate	31.3U	U,P1,P2,S3	ug/kg	89.3	31.3	SW846 8270E	1	10/21/2024 19:25	S7M	A
Di-n-Octylphthalate	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Fluoranthene	3760	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Fluorene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorobenzene	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorobutadiene	426	P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachlorocyclopentadiene	26.8U	U,P1,P2,S3	ug/kg	179	26.8	SW846 8270E	1	10/21/2024 19:25	S7M	A
Hexachloroethane	205	P1,P2,S3	ug/kg	89.3	20.5	SW846 8270E	1	10/21/2024 19:25	S7M	A
Indeno(1,2,3-cd)pyrene	15.2U	U,P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Isophorone	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
mp-Cresol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
Naphthalene	131	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A



Results

Client Sample ID	AC33101-04	Collected	10/02/2024 00:20
Lab Sample ID	3382844003	Lab Receipt	10/11/2024 09:24

SEMIVOLATILES (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Nitrobenzene	30.4U	U,P1,P2,S3	ug/kg	89.3	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
N-Nitroso-di-n-propylamine	15.2U	U,P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
N-Nitrosodiphenylamine	168	P1,P2,S3	ug/kg	89.3	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
o-Cresol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
Pentachlorophenol	43.8U	U,P1,P2,S3	ug/kg	179	43.8	SW846 8270E	1	10/21/2024 19:25	S7M	A
Phenanthrene	541	P1,P2,S3	ug/kg	44.6	15.2	SW846 8270E	1	10/21/2024 19:25	S7M	A
Phenol	30.4U	U,P1,P2,S3	ug/kg	179	30.4	SW846 8270E	1	10/21/2024 19:25	S7M	A
Pyrene	8320	P1,P2,S3	ug/kg	223	75.9	SW846 8270E	5	10/22/2024 20:12	CGS	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
2,4,6-Tribromophenol	118-79-6	62.9%	19 – 132	10/21/2024 19:25	
2-Fluorobiphenyl	321-60-8	70.7%	40 – 110	10/21/2024 19:25	
2-Fluorophenol	367-12-4	42.5%	26 – 116	10/21/2024 19:25	
Nitrobenzene-d5	4165-60-0	60.3%	38 – 112	10/21/2024 19:25	
Phenol-d5	4165-62-2	58.2%	35 – 111	10/21/2024 19:25	
Terphenyl-d14	98904-43-9	80.7%	45 – 126	10/21/2024 19:25	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3382844001	AC33101-01	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	
3382844002	AC33101-02	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	
3382844003	AC33101-04	SW846 6010C	SW846 3051A	
		SW846 7471B	SW846 7471B	
		SW846 8270E	SW846 3546	

QUALITY CONTROL SAMPLES

METALS

QC Batch

QC Batch	1317128	Prep Method	SW846 3051A
Date	10/17/2024 10:05	Analysis Method	SW846 6010C
Tech.	MEM		

Associated Samples

338284400133828440023382844003

Matrix Spike3893223 (MS1)3383018001 (non-Project Sample)For QC Batch 1317128

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate3893224 (MSD1)3383018001 (non-Project Sample)For QC Batch 1317128

Method Blank3893221 (MB)Created on 10/17/2024 09:37For QC Batch 1317128

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Arsenic, Total	7440-38-2	BLK	0.67U	mg/kg	2.0	U
Cadmium, Total	7440-43-9	BLK	0.17U	mg/kg	0.50	U
Chromium, Total	7440-47-3	BLK	0.33U	mg/kg	1.0	U
Iron, Total	7439-89-6	BLK	3.3U	mg/kg	10.0	U
Lead, Total	7439-92-1	BLK	0.67U	mg/kg	2.0	U
Manganese, Total	7439-96-5	BLK	0.33U	mg/kg	1.0	U
Selenium, Total	7782-49-2	BLK	1.7U	mg/kg	5.0	U
Zinc, Total	7440-66-6	BLK	0.67U	mg/kg	2.0	U

Lab Control Standard3893222 (LCS1)Created on 10/17/2024 09:37For QC Batch 1317128

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Arsenic, Total	7440-38-2	LCS	40.6		40	102	80 - 120		
Cadmium, Total	7440-43-9	LCS	21		20	105	80 - 120		
Chromium, Total	7440-47-3	LCS	21.1		20	106	80 - 120		
Iron, Total	7439-89-6	LCS	1080		1000	108	80 - 120		
Lead, Total	7439-92-1	LCS	108		100	108	80 - 120		
Manganese, Total	7439-96-5	LCS	22.4		20	112	80 - 120		
Selenium, Total	7782-49-2	LCS	103		100	103	80 - 120		
Zinc, Total	7440-66-6	LCS	106		100	106	80 - 120		

QC Batch

QC Batch	1320490	Prep Method	SW846 7471B
Date	10/24/2024 08:01	Analysis Method	SW846 7471B
Tech.	JMS		

Associated Samples

338284400133828440023382844003



QUALITY CONTROL SAMPLES

METALS (cont.)

Matrix Spike 3895659 (MS) 3383382001 (non-Project Sample) For QC Batch 1320490

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3895660 (MSD) 3383382001 (non-Project Sample) For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	0.92	0.0037	0.95	96.4	80 - 120		
Mercury, Total	7439-97-6	MSD	0.8	0.0037	0.84	95.6	80 - 120	RPD 13.10 (Max-20)	

Matrix Spike 3895661 (MS) 3383385001 (non-Project Sample) For QC Batch 1320490

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate 3895662 (MSD) 3383385001 (non-Project Sample) For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	MS	1.1	0.0011	0.95	121*	80 - 120		
Mercury, Total	7439-97-6	MSD	0.83	0.0011	0.89	92.7	80 - 120	RPD 32.30* (Max-20)	

Method Blank 3895657 (MB) Created on 10/23/2024 09:48 For QC Batch 1320490

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Mercury, Total	7439-97-6	BLK	0.016U	mg/kg	0.050	U

Lab Control Standard 3895658 (LCS) Created on 10/23/2024 09:48 For QC Batch 1320490

RESULTS

Compound	CAS No		Result (mg/kg)	Orig. Result (mg/kg)	Spk Added (mg/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Mercury, Total	7439-97-6	LCS	0.39		0.40	98.5	80 - 120		

QUALITY CONTROL SAMPLES

SEMIVOLATILES

QC Batch

Associated Samples

QC Batch	1318932	Prep Method	SW846 3546
Date	10/20/2024 13:30	Analysis Method	SW846 8270E
Tech.	GED		

338284400233828440033382844001

Matrix Spike3894048 (MS)3382843001 (non-Project Sample)For QC Batch 1318932

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Matrix Spike Duplicate3894049 (MSD)3382843001 (non-Project Sample)For QC Batch 1318932

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
2-Methylnaphthalene	91-57-6	MS	1600	0	2160	74.1	59 - 108		
2-Methylnaphthalene	91-57-6	MSD	1830	0	2360	77.8	59 - 108	RPD 13.80 (Max-21)	
Acenaphthene	83-32-9	MS	1690	0	2160	78.4	61 - 105		
Acenaphthene	83-32-9	MSD	1900	0	2360	80.5	61 - 105	RPD 11.70 (Max-17)	
Acenaphthylene	208-96-8	MS	1440	0	2160	66.6	63 - 106		
Acenaphthylene	208-96-8	MSD	1650	0	2360	70.1	63 - 106	RPD 14.20 (Max-17)	
Anthracene	120-12-7	MS	1790	0	2160	83.3	60 - 107		
Anthracene	120-12-7	MSD	1870	0	2360	79.3	60 - 107	RPD 4.12 (Max-20)	
Benzo(a)anthracene	56-55-3	MS	1870	0	2160	86.8	61 - 113		
Benzo(a)anthracene	56-55-3	MSD	2060	0	2360	87.5	61 - 113	RPD 9.89 (Max-22)	
Benzo(a)pyrene	50-32-8	MS	1880	0	2160	87.2	68 - 121		
Benzo(a)pyrene	50-32-8	MSD	2060	0	2360	87.2	68 - 121	RPD 9.08 (Max-24)	
Benzo(b)fluoranthene	205-99-2	MS	1840	0	2160	85.3	64 - 115		
Benzo(b)fluoranthene	205-99-2	MSD	2080	0	2360	88	64 - 115	RPD 12.20 (Max-28)	
Benzo(g,h,i)perylene	191-24-2	MS	1980	0	2160	91.7	57 - 119		
Benzo(g,h,i)perylene	191-24-2	MSD	2230	0	2360	94.4	57 - 119	RPD 12 (Max-30)	
Benzo(k)fluoranthene	207-08-9	MS	1890	0	2160	87.8	63 - 116		
Benzo(k)fluoranthene	207-08-9	MSD	2020	0	2360	85.7	63 - 116	RPD 6.53 (Max-22)	
Chrysene	218-01-9	MS	1930	0	2160	89.7	65 - 113		
Chrysene	218-01-9	MSD	2100	0	2360	88.9	65 - 113	RPD 8.17 (Max-20)	
Dibenzo(a,h)anthracene	53-70-3	MS	1980	0	2160	91.7	59 - 116		
Dibenzo(a,h)anthracene	53-70-3	MSD	2190	0	2360	93	59 - 116	RPD 10.40 (Max-28)	
Fluoranthene	206-44-0	MS	2000	0	2160	92.7	61 - 114		
Fluoranthene	206-44-0	MSD	1990	0	2360	84.5	61 - 114	RPD 0.19 (Max-21)	
Fluorene	86-73-7	MS	1670	0	2160	77.6	62 - 107		
Fluorene	86-73-7	MSD	1890	0	2360	80	62 - 107	RPD 12 (Max-16)	
Indeno(1,2,3-cd)pyrene	193-39-5	MS	1900	0	2160	88	53 - 118		
Indeno(1,2,3-cd)pyrene	193-39-5	MSD	2140	0	2360	90.8	53 - 118	RPD 12.10 (Max-30)	
Naphthalene	91-20-3	MS	1650	0	2160	76.6	60 - 102		
Naphthalene	91-20-3	MSD	1900	0	2360	80.6	60 - 102	RPD 14.10 (Max-21)	
Phenanthrene	85-01-8	MS	1780	0	2160	82.7	61 - 106		
Phenanthrene	85-01-8	MSD	1770	0	2360	74.9	61 - 106	RPD 0.90 (Max-20)	
Pyrene	129-00-0	MS	1810	0	2160	83.8	62 - 117		
Pyrene	129-00-0	MSD	1940	0	2360	82.3	62 - 117	RPD 7.12 (Max-20)	



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

SURROGATES

Compound	CAS No		Result (ug/L)	Expected (ug/L)	Rec. (%)	Limits (%)	Qualifiers
2-Fluorobiphenyl	321-60-8	MS	1920	2160	89.1	40 - 110	
2-Fluorobiphenyl	321-60-8	MSD	2140	2360	90.9	40 - 110	
Nitrobenzene-d5	4165-60-0	MS	2060	2160	95.4	38 - 112	
Nitrobenzene-d5	4165-60-0	MSD	2170	2360	91.8	38 - 112	
Terphenyl-d14	98904-43-9	MS	2340	2160	109	45 - 126	
Terphenyl-d14	98904-43-9	MSD	2520	2360	107	45 - 126	

Method Blank 3894046 (MB) Created on 10/19/2024 08:06 For QC Batch 1318932

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
1,2,4,5-Tetrachlorobenzene	95-94-3	BLK	17.0U	ug/kg	100	U
1,4-Dioxane	123-91-1	BLK	17.0U	ug/kg	100	U
2,3,4,6-Tetrachlorophenol	58-90-2	BLK	34.0U	ug/kg	200	U
2,4,5-Trichlorophenol	95-95-4	BLK	34.0U	ug/kg	200	U
2,4,6-Trichlorophenol	88-06-2	BLK	34.0U	ug/kg	200	U
2,4-Dichlorophenol	120-83-2	BLK	34.0U	ug/kg	200	U
2,4-Dimethylphenol	105-67-9	BLK	34.0U	ug/kg	200	U
2,4-Dinitrophenol	51-28-5	BLK	198U	ug/kg	400	U
2,4-Dinitrotoluene	121-14-2	BLK	20.0U	ug/kg	100	U
2,6-Dinitrotoluene	606-20-2	BLK	34.0U	ug/kg	100	U
2-Chloronaphthalene	91-58-7	BLK	17.0U	ug/kg	100	U
2-Chlorophenol	95-57-8	BLK	34.0U	ug/kg	200	U
2-Methyl-4,6-dinitrophenol	534-52-1	BLK	50.0U	ug/kg	200	U
2-Methylnaphthalene	91-57-6	BLK	17.0U	ug/kg	100	U
2-Nitroaniline	88-74-4	BLK	23.0U	ug/kg	200	U
2-Nitrophenol	88-75-5	BLK	34.0U	ug/kg	200	U
3,3-Dichlorobenzidine	91-94-1	BLK	31.0U	ug/kg	200	U
3-Nitroaniline	99-09-2	BLK	17.0U	ug/kg	200	U
4-Bromophenyl-phenylether	101-55-3	BLK	17.0U	ug/kg	100	U
4-Chloro-3-methylphenol	59-50-7	BLK	34.0U	ug/kg	200	U
4-Chloroaniline	106-47-8	BLK	17.0U	ug/kg	200	U
4-Chlorophenyl-phenylether	7005-72-3	BLK	17.0U	ug/kg	100	U
4-Nitroaniline	100-01-6	BLK	29.0U	ug/kg	200	U
4-Nitrophenol	100-02-7	BLK	34.0U	ug/kg	200	U
Acenaphthene	83-32-9	BLK	17.0U	ug/kg	50.0	U
Acenaphthylene	208-96-8	BLK	17.0U	ug/kg	50.0	U
Acetophenone	98-86-2	BLK	17.0U	ug/kg	100	U
Anthracene	120-12-7	BLK	17.0U	ug/kg	50.0	U
Atrazine	1912-24-9	BLK	17.0U	ug/kg	100	U
Benzaldehyde	100-52-7	BLK	20.0U	ug/kg	200	U
Benzo(a)anthracene	56-55-3	BLK	17.0U	ug/kg	50.0	U
Benzo(a)pyrene	50-32-8	BLK	17.0U	ug/kg	50.0	U
Benzo(b)fluoranthene	205-99-2	BLK	17.0U	ug/kg	50.0	U
Benzo(g,h,i)perylene	191-24-2	BLK	17.0U	ug/kg	50.0	U



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

RESULTS

Compound	CAS No		Result	Units	RDL	Qualifiers
Benzo(k)fluoranthene	207-08-9	BLK	17.0U	ug/kg	50.0	U
Biphenyl	92-52-4	BLK	17.0U	ug/kg	100	U
bis(2-Chloroethoxy)methane	111-91-1	BLK	17.0U	ug/kg	100	U
bis(2-Chloroethyl)ether	111-44-4	BLK	17.0U	ug/kg	100	U
bis(2-Chloroisopropyl)ether	108-60-1	BLK	17.0U	ug/kg	100	U
bis(2-Ethylhexyl)phthalate	117-81-7	BLK	22.0U	ug/kg	100	U
Butylbenzylphthalate	85-68-7	BLK	17.0U	ug/kg	100	U
Caprolactam	105-60-2	BLK	39.0U	ug/kg	200	U
Carbazole	86-74-8	BLK	17.0U	ug/kg	100	U
Chrysene	218-01-9	BLK	17.0U	ug/kg	50.0	U
Dibenzo(a,h)anthracene	53-70-3	BLK	17.0U	ug/kg	50.0	U
Dibenzofuran	132-64-9	BLK	17.0U	ug/kg	100	U
Diethylphthalate	84-66-2	BLK	17.0U	ug/kg	100	U
Dimethylphthalate	131-11-3	BLK	17.0U	ug/kg	100	U
Di-n-Butylphthalate	84-74-2	BLK	35.0U	ug/kg	100	U
Di-n-Octylphthalate	117-84-0	BLK	17.0U	ug/kg	100	U
Fluoranthene	206-44-0	BLK	17.0U	ug/kg	50.0	U
Fluorene	86-73-7	BLK	17.0U	ug/kg	50.0	U
Hexachlorobenzene	118-74-1	BLK	17.0U	ug/kg	100	U
Hexachlorobutadiene	87-68-3	BLK	17.0U	ug/kg	100	U
Hexachlorocyclopentadiene	77-47-4	BLK	30.0U	ug/kg	200	U
Hexachloroethane	67-72-1	BLK	23.0U	ug/kg	100	U
Indeno(1,2,3-cd)pyrene	193-39-5	BLK	17.0U	ug/kg	50.0	U
Isophorone	78-59-1	BLK	17.0U	ug/kg	100	U
mp-Cresol	108394/106445	BLK	34.0U	ug/kg	200	U
Naphthalene	91-20-3	BLK	17.0U	ug/kg	50.0	U
Nitrobenzene	98-95-3	BLK	34.0U	ug/kg	100	U
N-Nitroso-di-n-propylamine	621-64-7	BLK	17.0U	ug/kg	100	U
N-Nitrosodiphenylamine	86-30-6	BLK	17.0U	ug/kg	100	U
o-Cresol	95-48-7	BLK	34.0U	ug/kg	200	U
Pentachlorophenol	87-86-5	BLK	49.0U	ug/kg	200	U
Phenanthrene	85-01-8	BLK	17.0U	ug/kg	50.0	U
Phenol	108-95-2	BLK	34.0U	ug/kg	200	U
Pyrene	129-00-0	BLK	17.0U	ug/kg	50.0	U

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4,6-Tribromophenol	118-79-6	BLK	4460	5000	89.2	19 - 132	
2-Fluorobiphenyl	321-60-8	BLK	2230	2500	89.1	40 - 110	
2-Fluorophenol	367-12-4	BLK	4470	5000	89.3	26 - 116	
Nitrobenzene-d5	4165-60-0	BLK	2310	2500	92.2	38 - 112	
Phenol-d5	4165-62-2	BLK	5190	5000	104	35 - 111	
Terphenyl-d14	98904-43-9	BLK	3060	2500	122	45 - 126	



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

Lab Control Standard			3894047 (LCS)		Created on 10/19/2024 08:06		For QC Batch 1318932		
RESULTS									
Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
1,2,4,5-Tetrachlorobenzene	95-94-3	LCS	1930		2500	77.1	51 - 102		
1,4-Dioxane	123-91-1	LCS	1610		2500	64.6	24 - 104		
2,3,4,6-Tetrachlorophenol	58-90-2	LCS	4430		5000	88.5	55 - 111		
2,4,5-Trichlorophenol	95-95-4	LCS	4760		5000	95.2	60 - 108		
2,4,6-Trichlorophenol	88-06-2	LCS	4540		5000	90.8	59 - 111		
2,4-Dichlorophenol	120-83-2	LCS	4860		5000	97.1	61 - 109		
2,4-Dimethylphenol	105-67-9	LCS	5270		5000	105	59 - 133		
2,4-Dinitrophenol	51-28-5	LCS	5060		5000	101	28 - 135		
2,4-Dinitrotoluene	121-14-2	LCS	1870		2500	74.7	62 - 115		
2,6-Dinitrotoluene	606-20-2	LCS	1910		2500	76.3	61 - 114		
2-Chloronaphthalene	91-58-7	LCS	1810		2500	72.5	59 - 104		
2-Chlorophenol	95-57-8	LCS	5070		5000	101	61 - 106		
2-Methyl-4,6-dinitrophenol	534-52-1	LCS	5530		5000	111	39 - 113		
2-Methylnaphthalene	91-57-6	LCS	1930		2500	77.2	59 - 108		
2-Nitroaniline	88-74-4	LCS	1900		2500	76.2	60 - 115		
2-Nitrophenol	88-75-5	LCS	4820		5000	96.5	60 - 114		
3,3-Dichlorobenzidine	91-94-1	LCS	2960		5000	59.3	25 - 104		
3-Nitroaniline	99-09-2	LCS	2010		2500	80.5	52 - 119		
4-Bromophenyl-phenylether	101-55-3	LCS	1860		2500	74.5	60 - 110		
4-Chloro-3-methylphenol	59-50-7	LCS	5090		5000	102	59 - 115		
4-Chloroaniline	106-47-8	LCS	1910		2500	76.4	42 - 111		
4-Chlorophenyl-phenylether	7005-72-3	LCS	2010		2500	80.4	59 - 107		
4-Nitroaniline	100-01-6	LCS	1820		2500	72.9	49 - 121		
4-Nitrophenol	100-02-7	LCS	5120		5000	102	53 - 124		
Acenaphthene	83-32-9	LCS	1940		2500	77.7	61 - 105		
Acenaphthylene	208-96-8	LCS	1610		2500	64.6	63 - 106		
Acetophenone	98-86-2	LCS	1890		2500	75.5	33 - 98		
Anthracene	120-12-7	LCS	1960		2500	78.5	60 - 107		
Atrazine	1912-24-9	LCS	1920		2500	76.7	62 - 116		
Benzaldehyde	100-52-7	LCS	2140		2500	85.4	46 - 115		
Benzo(a)anthracene	56-55-3	LCS	1970		2500	78.7	61 - 113		
Benzo(a)pyrene	50-32-8	LCS	1950		2500	77.9	68 - 121		
Benzo(b)fluoranthene	205-99-2	LCS	2010		2500	80.2	64 - 115		
Benzo(g,h,i)perylene	191-24-2	LCS	2000		2500	80.1	57 - 119		
Benzo(k)fluoranthene	207-08-9	LCS	2100		2500	83.8	63 - 116		
Biphenyl	92-52-4	LCS	1940		2500	77.5	56 - 100		
bis(2-Chloroethoxy)methane	111-91-1	LCS	2250		2500	89.9	56 - 112		
bis(2-Chloroethyl)ether	111-44-4	LCS	2030		2500	81.3	51 - 109		
bis(2-Chloroisopropyl)ether	108-60-1	LCS	2150		2500	86	38 - 120		
bis(2-Ethylhexyl)phthalate	117-81-7	LCS	2140		2500	85.4	51 - 130		
Butylbenzylphthalate	85-68-7	LCS	2180		2500	87.2	58 - 125		
Caprolactam	105-60-2	LCS	2070		2500	82.7	51 - 119		
Carbazole	86-74-8	LCS	1850		2500	73.9	66 - 117		
Chrysene	218-01-9	LCS	2060		2500	82.3	65 - 113		



QUALITY CONTROL SAMPLES

SEMIVOLATILES (cont.)

RESULTS

Compound	CAS No		Result (ug/kg)	Orig. Result (ug/kg)	Spk Added (ug/kg)	Rec. (%)	Limits (%)	RPD Limit (%)	Qualifiers
Dibenzo(a,h)anthracene	53-70-3	LCS	1900		2500	75.9	59 - 116		
Dibenzofuran	132-64-9	LCS	1820		2500	72.9	62 - 106		
Diethylphthalate	84-66-2	LCS	2010		2500	80.4	59 - 112		
Dimethylphthalate	131-11-3	LCS	1990		2500	79.5	60 - 111		
Di-n-Butylphthalate	84-74-2	LCS	2100		2500	83.9	62 - 125		
Di-n-Octylphthalate	117-84-0	LCS	2210		2500	88.3	47 - 134		
Fluoranthene	206-44-0	LCS	1890		2500	75.7	61 - 114		
Fluorene	86-73-7	LCS	1900		2500	76.2	62 - 107		
Hexachlorobenzene	118-74-1	LCS	1860		2500	74.2	56 - 111		
Hexachlorobutadiene	87-68-3	LCS	2210		2500	88.2	56 - 127		
Hexachlorocyclopentadiene	77-47-4	LCS	1480		2500	59	20 - 124		
Hexachloroethane	67-72-1	LCS	2010		2500	80.3	57 - 101		
Indeno(1,2,3-cd)pyrene	193-39-5	LCS	1810		2500	72.2	53 - 118		
Isophorone	78-59-1	LCS	2070		2500	83	41 - 101		
mp-Cresol	108394/106445	LCS	5460		5000	109	60 - 109		
Naphthalene	91-20-3	LCS	1920		2500	76.6	60 - 102		
Nitrobenzene	98-95-3	LCS	2040		2500	81.4	52 - 113		
N-Nitroso-di-n-propylamine	621-64-7	LCS	2210		2500	88.3	50 - 121		
N-Nitrosodiphenylamine	86-30-6	LCS	2380		2500	95.1	73 - 129		
o-Cresol	95-48-7	LCS	5030		5000	101	61 - 108		
Pentachlorophenol	87-86-5	LCS	5770		5000	115	46 - 138		
Phenanthrene	85-01-8	LCS	1920		2500	76.9	61 - 106		
Phenol	108-95-2	LCS	5010		5000	100	57 - 110		
Pyrene	129-00-0	LCS	2100		2500	83.8	62 - 117		

SURROGATES

Compound	CAS No		Result (ug/kg)	Expected (ug/kg)	Rec. (%)	Limits (%)	Qualifiers
2,4,6-Tribromophenol	118-79-6	LCS	4260	5000	85.2	19 - 132	
2-Fluorobiphenyl	321-60-8	LCS	2110	2500	84.2	40 - 110	
2-Fluorophenol	367-12-4	LCS	4190	5000	83.8	26 - 116	
Nitrobenzene-d5	4165-60-0	LCS	2210	2500	88.3	38 - 112	
Phenol-d5	4165-62-2	LCS	4730	5000	94.7	35 - 111	
Terphenyl-d14	98904-43-9	LCS	2760	2500	110	45 - 126	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3382844001	AC33101-01	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1320102
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
3382844002	AC33101-02	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
3382844003	AC33101-04	SW846 3051A	1317128	10/17/2024 10:05	MEM	SW846 6010C	1318062
		SW846 7471B	1320490	10/24/2024 08:01	JMS	SW846 7471B	1321252
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1319871
		SW846 3546	1318932	10/20/2024 13:30	GED	SW846 8270E	1320102



Needham Public Health Division

Prevent. Promote. Protect.



Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: January 24, 2025

Agenda Item	North Central & MetroWest Local Public Health Training Hub Presentation
Presenter(s)	Kerry Dunnell & Sam Menard

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	Overview of Regional Training Hub Deliverables & Staffing
2.	VOTE REQUIRED BY BOARD OF HEALTH
	None, discussion only.
3.	BACK UP INFORMATION:
	a) North Central MetroWest Training Hub



North Central MetroWest
LOCAL PUBLIC HEALTH TRAINING HUB

North Central MetroWest Training Hub

Inspector Training for Public Health Workforce

Needham BOH Meeting
January 24, 2025

Who We Are

Kerry C. Dunnell, Manager
kdunnell@needhamma.gov

Sam Menard, Lead Trainer
smenard@needhamma.gov

Padraig Martin, Environmental Health Inspector Trainer
pmartin@needhamma.gov

Jennifer Ganghadaran, Housing, Camps & Pools Inspector Trainer
jganghadaran@needhamma.gov

Amy McInerney, Regional Environmental Health Inspector
amcinerney@needhamma.gov

North Central MetroWest Local Public Health Training Hub



Why Public Health Training Hubs?



What can your Training Hub do for you?



Staffing



Training Cadence



What we need from you



How to reach us



Questions?

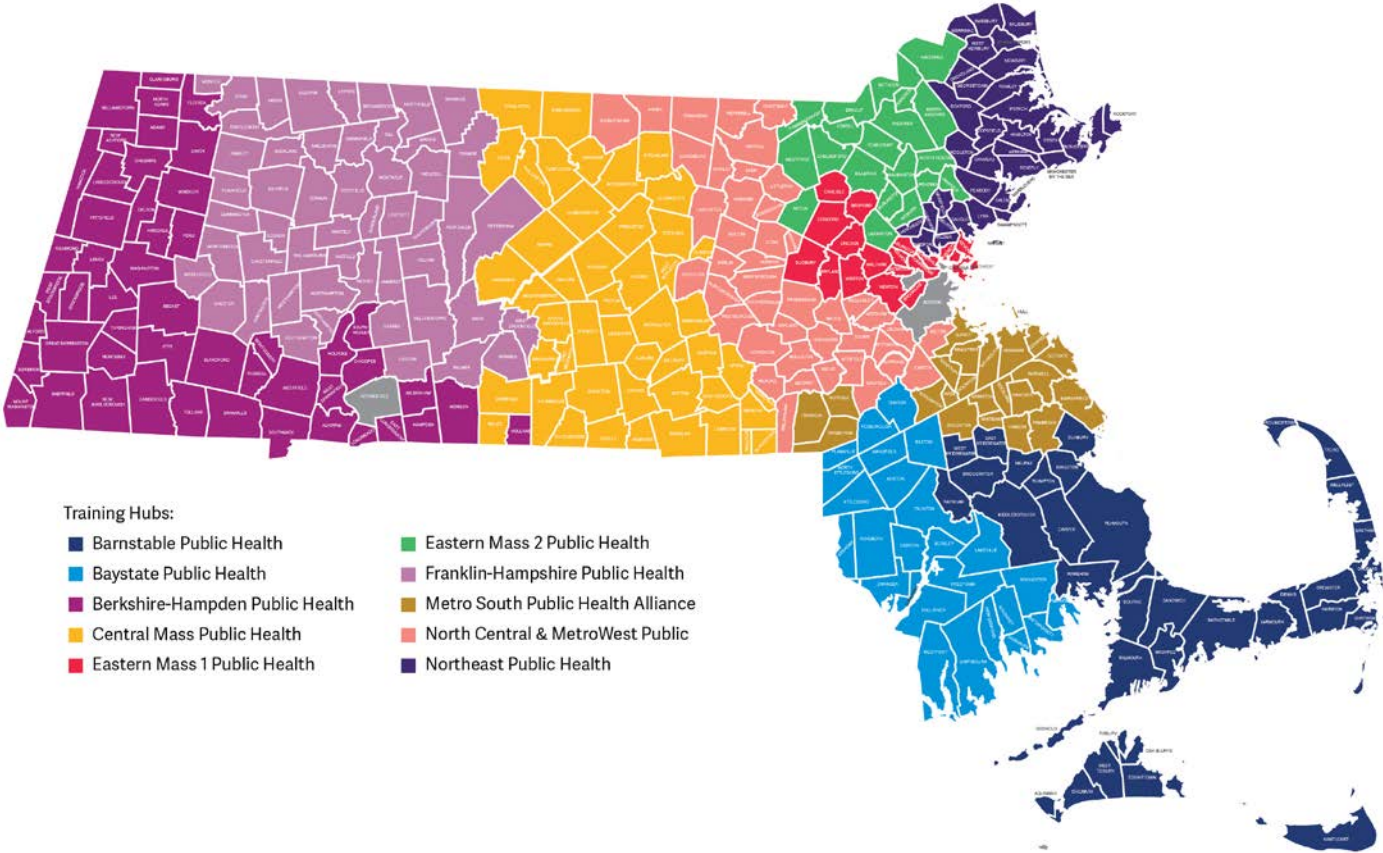


Why Public Health Training Hubs?



- The Special Commission on Local and Regional Public Health in the Blueprint made the following recommendations regarding workforce development:
- *Set education and training standards for local public health officials and staff and expand access to professional development while ensuring diversity.*
- **Action Steps:**
 - *Develop the infrastructure for training and credentialing of the local public health workforce.*
 - *Expand, coordinate and track training opportunities for local public health to ensure the ability of local public health professionals to meet the recommended requirements.*

Training Hub Host	Coverage (Shared Services Arrangement Leads)
BRPC	BPHA, Tri-Town/Southern Berkshire, Southwick, South Hadley, Longmeadow
FRCOG	FRCOG, Foothills, Greenfield, Northampton, Quabbin, Palmer, Orange
CMPH FTH	South Central Partnership for Health, Blackstone Valley, Worcester, Leicester, Charlton, Montachusett/Fitchburg
Needham	Norfolk-8, Needham, Nashoba, Hudson, Northborough
MAPC	Somerville, North Suffolk, Brookline, Sudbury
Randolph	Randolph, Wrentham, Cohasset, Abington, Marshfield
New Bedford	New Bedford, Fall River, North Attleboro, Foxboro, Westport
Barnstable	Barnstable County, Nantucket, Kingston, Halifax
MAPC	Westford, Tyngsborough, Methuen, North Andover, Burlington
Salem	Salem, Topsfield, Melrose, Hamilton



Purpose & Goals of Public Health Training Hub Program:

Purpose:

To enhance the existing LPH training infrastructure where local public health professionals, will receive standardized, hands-on competency training in a variety of areas such as of housing, food, and septic/wastewater.

Goals:

1. To ensure that LPH inspectional staff provide consistent inspections based on the state standard.
2. To ensure that there is equitable, standardized access to training for local public health professionals in a variety of relevant areas.

What can your Training Hub do for you?

- **1:1 Tier 3 Training for all inspectors**
- **Ad hoc refresher and training sessions**
- Technical Assistance – document review, questions
- Equipment Lending Library
- 1:1 work with inspectors pending Tier 3 training
- Meet with Shared Services staff
- Join Advisory Board meetings for questions and information sharing

North Central MetroWest Local Public Health Training Hub

Our Trainers

Sam Menard

Food, Housing, Pools

Padraig Martin

Food, Housing, Pools

Jenn Ganghadaran

Housing, Camps

How to reach us

Primary Point of Contact

Sam Menard smenard@needhamma.gov

North Central MetroWest Local Public Health Training Hub

<https://needhamma.gov/5595/North-Central-MetroWest-Local-Public-Hea>

Training Cadence

- Tier 1 - Self Paced Training
- Tier 2 - Classroom Training
- Tier 3 – Applied In person Training (1:1)

Helping us help you

- Stay in touch!
- What would you like to see on a webpage for the training hub?



Board of Health

AGENDA FACT SHEET

January 24, 2025

Agenda Item	December 2024 Staff Reports
Presenter(s)	Public Health Division staff members

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Each program area within the Public Health Division will give a brief update on current topics, projects, events, accomplishments, and more.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Discussion only.	
3.	BACK UP INFORMATION:
a) Public Health Preparedness –Taleb Abdelrahim b) Epidemiology – Julie McCarthy c) Nursing – Ginnie Chacon-Lopez, Hanna Burnett & Tiffany Benoit d) Environmental Health – Sai Palani & Tara Gurge e) Accreditation – Lynn Schoeff & Alison Bodenheimer f) Traveling Meals – Rebecca Hall g) Substance Use Prevention: Regional – Carol Read & Lydia Cunningham h) Substance Use Prevention: Needham – Karen Shannon, Karen Mullen, Monica DeWinter, Angi MacDonnell, Vanessa Wronski i) Shared Public Health Services – Kerry Dunnell & Samantha Menard	



Unit: Emergency Preparedness

Date: December 2024

Staff: Taleb Abdelrahim

Activities and Accomplishments

Activity	Notes
Medical Reserve Corps (MRC)	NACCHO awarded the Norfolk County-8 (NC-8) MRC unit the full \$10,000 Operational Readiness Award (ORA). This funding will support exciting initiatives and opportunities for the unit this year.
Extreme Temperature Health Impacts Planning	Working on Health Action Plan to document our action to take before and during an extreme temperature event to mitigate health impacts.
Training	Completed Intermediate Emergency Operations Center Functions - a three-day course as part of the Massachusetts Professional Emergency Manager (MPEM) program, fulfilling a key professional development requirement by MEMA.



Unit: Epidemiology

Date: December 2024

Staff: Julie McCarthy

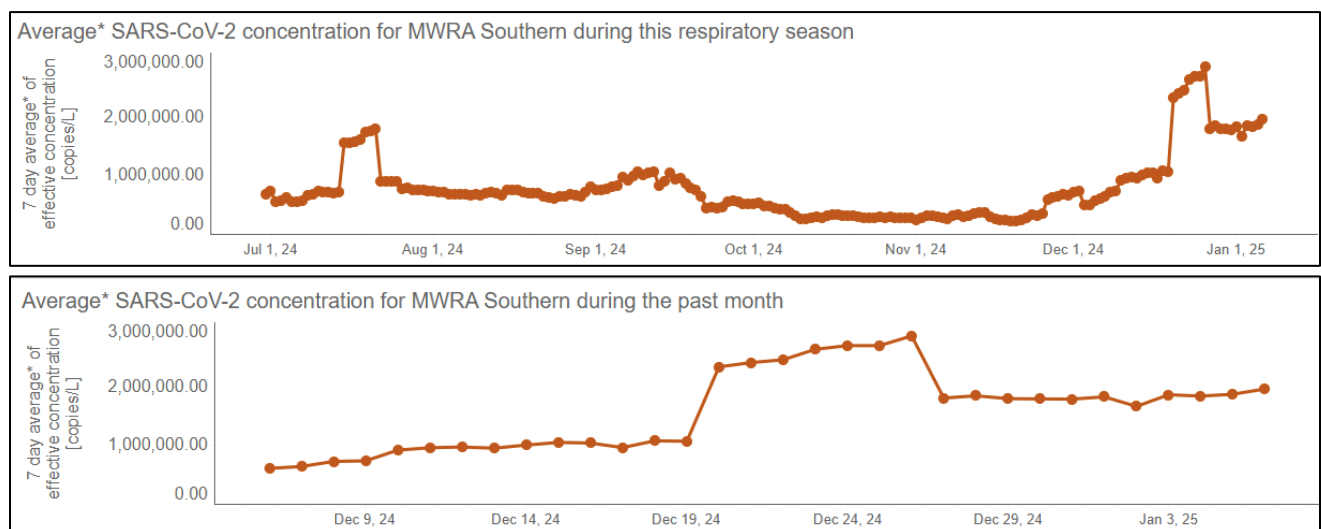
Activities and Accomplishments

Age	Needham- Influenza	MA- Influenza	Needham- Covid-19	MA- Covid-19
Total	56%	35%	35%	18%
Under 5 years	51%	40%	24%	10%
5-19 years	56%	31%	26%	10%
20-34 years	43%	22%	24%	10%
35-49 years	50%	28%	28%	14%
50-64 years	52%	33%	35%	18%
65-79 years	77%	66%	63%	45%
80+ years	77%	68%	62%	47%

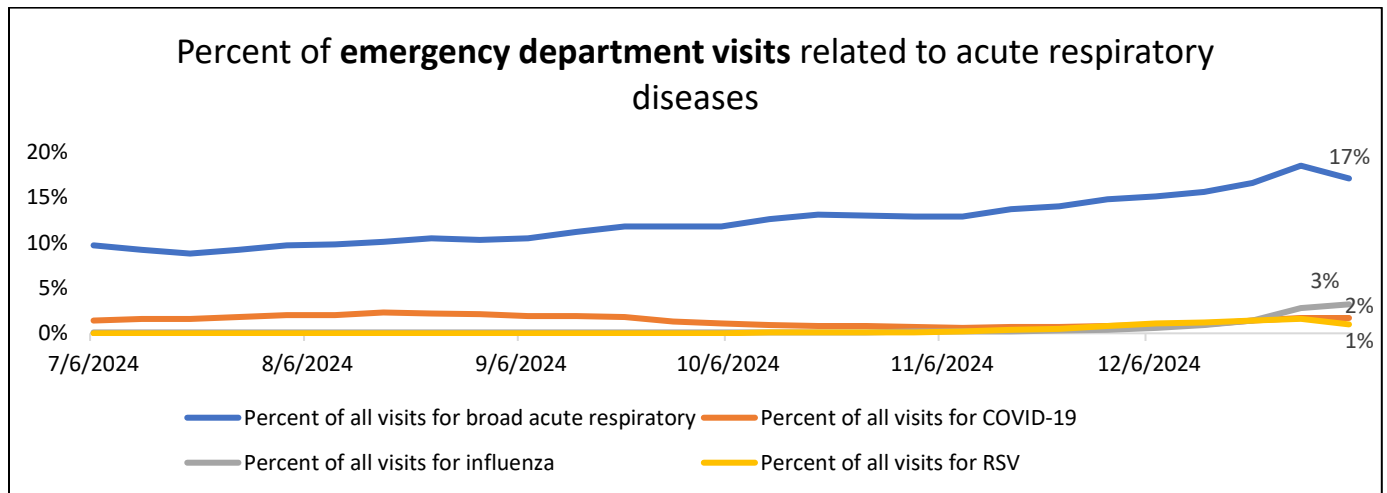
RSV-Cumulative	Needham	MA
60-74 years	35%	18%
75+ years	43%	33%

Source: <https://www.mass.gov/info-details/immunizations-for-respiratory-diseases>

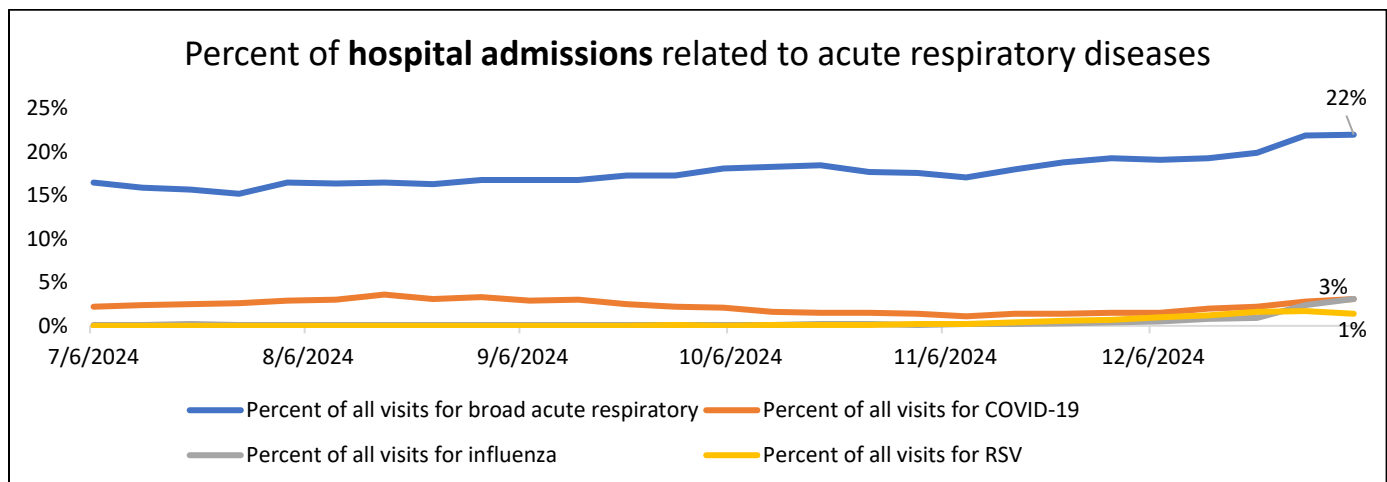
NOTE: A single dose of RSV vaccine is recommended for all adults ages 75 and older and for adults aged 60-74 who are at increased risk of RSV infection. Annual doses are not recommended for those who have already received a previous dose, so I have only included the cumulative number, not those who have received vaccine this season. Additional patient populations may be eligible for the vaccine based on clinical information.



Source: <https://www.mass.gov/info-details/wastewater-surveillance-reporting>



Source: <https://www.mass.gov/info-details/respiratory-illness-reporting>



Source: <https://www.mass.gov/info-details/respiratory-illness-reporting>

Mass General Brigham clinics and hospitals introduced [new masking procedures](#) at the beginning of January due to escalated levels of respiratory virus activity.

Activity	Notes
Biosafety Committee	Scheduling meeting for end of Jan/beginning of Feb to discuss 2025 permitting process including modifying questions asked in annual permit renewal, timeline of document submission and review, and inspections.
MetroWest Adolescent Health Survey	Worked with Karen S to address follow up on questions from BOH at the November meeting.



Needham Public Health Division

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Unit: Public Health Nursing

Date: December 2024

Staff: Hanna Burnett and Ginnie Chacon-Lopez

Activities and Accomplishments

Activity	Notes
Community Outreach	3 CPR classes offered in December. New classes were added for January. BP clinic at the CATH weekly, well attended.
Education	Hanna: MPHA 2024 Annual Conference: Rising in resistance. Ginnie: Various webinars; started a Legal Epidemiology online course through Temple University; and attended the 2024 Merrimack Valley Substance Use Disorder Summit in Westford, MA.
DVAC	Officer Denneno presented on Police Investigations on Domestic Violence Calls in Needham. Created episode 4 for cable series, recording that in February.
Additional Notes	FRIENDS of the Needham Board of Health and Traveling Meals Program donated 30 gift cards to distribute to residents as needed. Efforts to sustain the Gift of Warmth program are continuing.

Potential Foodborne Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2025	2024	2023
Calicivirus/Norovirus						<5							<5	5	5
Campylobacteriosis Confirmed/Probable	<5	<5	<5										<5	10	9
Cryptosporidiosis													0	<5	0
Cyclosporiasis													0	<5	<5
Enterovirus	<5				<5								<5	0	0
Giardiasis													0	0	<5
Salmonellosis		<5											<5	<5	5
Shiga Toxin Producing Organism	<5												<5	<5	<5
Shigellosis		<5											<5	0	0
Vibrio spp													0	<5	<5
Arbovirus	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2025	2024	2023
Babesiosis													0	<5	<5
HGA/Anaplasmosis			<5	<5									<5	<5	<5
Lyme Disease Suspect	6			<5	<5								9	45	58
Lyme Disease Probable		<5	<5	<5		<5							6	35	19
Other Communicable Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2025	2024	2023
Group A streptococcus						<5							<5	0	0
Group B streptococcus													0	<5	<5
Haemophilus influenzae		<5											<5	<5	0
Hepatitis B Confirmed/Probable				<5		<5							<5	5	<5
Hepatitis C Confirmed/Probable	<5	<5											<5	<5	0
Influenza Confirmed			<5	<5	7	25							34	155	193
Malaria													0	<5	-
Legionellosis													0	<5	<5
Novel Coronavirus Confirmed	24	34	27	13	<5	14							115	308	980
Novel Coronavirus Probable	14	7	8	7	<5	8							48	54	188
Pertussis (Bordetella spp.)		<5	<5										<5	0	<5
TB Infection Confirmed	<5	5	<5		<5								12	45	44
TB Infection Contact	<5												<5	<5	-
Varicella					<5								<5	6	<5
Totals	55	55	45	26	19	51	0	0	0	0	0	0	251	690	1519

Immunizations/Injections	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2024	2024	2023
B12	2	1	1	1	2	2							9	8	3
Influenza			332	115	76	8							531	771	719
Tdap						1							1	0	1
Covid-19				30	31	15							76	208	461
VFC						3							3	0	0
Other						5							5	3	0
Total	2	1	333	146	109	34	0	0	0	0	0	0	2	990	1184

Animal-to-Human Bites	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2024	2024	2023
Dog													0	3	3
Cat													0	1	0
Bat					1								1	0	0
Total Bites	0	0	0	0	1	0	0	0	0	0	0	0	1	4	3

www.needhamma.gov/health

Assistance Programs	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2024	2024	2023
Food Pantry						2							2	0	4
Friends	1												1	0	0
Gift of Warmth	0	2	1	5	4	0							12	29	51
GoW Amount	0	1400	300	2394	1877	0							5971	16843	25921
Parks & Rec													0	0	0
Self Help													0	2	6

Education	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2024	2024	2023
CPR Education			88	17	11	14							130	243	197
Matter of Balance Graduates					5								5	15	34
Narcan	3	69	13	8	9	0							102	174	25

Donations:	\$750
Gift Cards Distributed:	0



Needham Public Health Division

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December 2024

Assist. Health Director - Tara Gurge

Full-time Health Agent – Sainath Palani

Part-time Health Agents – Monica Pancare and Pamela Ross-Kung

Unit: Environmental Health

Date: January 24, 2025

Staff members: Tara Gurge, Sainath Palani, Monica Pancare and Pamela Ross-Kung

Activities and Accomplishments

Activity	Notes
Rice Barn Update	Property owner confirmed that settlement is being finalized between them and the former Rice Barn owner. There is already interest from prospective tenants to occupy the space to be used for a new restaurant.
Nicotine Free Generation Outreach	Environmental Health staff created new signage for new Nicotine Free Generation policy. Signage was posted at each retailer the week of December 23 rd at all tobacco retailers and health agent described the policies to each store owner or another representative of the store. An additional visit was performed to provide each retailer with smaller versions of signage and to confirm that blunt wraps were no longer sold at each retailer. Retailers with scanners are actively working on changing their systems so that scanners can flag id's of persons born on or after January 1 st , 2004, and restrict the sale. All retailers understood the regulation changes and our office has not received any questions or complaints from the retail store owners or the public. (Attached at the end of this report)
Dumpster Regulation Update	Environmental Health staff has created initial draft of the online application for the dumpster permit and hope to have it go live in the month of January. The inspectional services departments from the Fire Department and Building Departments are interested in being involved with the review process of the application. Once the application is finalized and live, outreach will be done via email and physical mail by public health staff and the town's Office of Economic Development to inform businesses about the requirement to get their existing and/or new dumpsters permitted and the process to apply online.
Town Regulation Banning Polystyrene (non-orientated), Plastic Stirrers, and Splash	An email was sent out to all food establishments about the restrictions and bans that were to begin on January 1, 2025 related to a citizen petition for Article 45 that was passed in the May 2024 Town Meeting. Health agent answered any questions about the ban and granted some extensions to those that needed additional time to comply with the regulation. Enforcement of the regulation will mainly be done based on complaints

Guards and Restricting Plastic Straws Update	received or if a violation of this regulation is witnessed in an obvious manner at the time of a routine inspection.
Additional Enforcement Actions for Food Establishments by Staff	The Farmhouse has hired a reputable food safety consultant to train staff and get their processes done so that food is being prepared in a safe manner consistently. Reports detailing the trainings and their observations from their audits are being sent to our office for review. Inspectional team met with consultant to discuss progress made what their next steps are as issues appear to continue based on their own audits. Consultant has recommended to temporarily stop doing audits and to focus more on training and process development with the establishment and their staff.
Issuance of end of year permits	Environmental health staff worked to review, and issue permits for all health permits that expired at the end of the year.

Other Public Health Division activities this month: (See report below.)

Activities

<i>Activity</i>	<i>Notes</i>
Body Art	0 – Staff are waiting for applicant to reach back out for a reinspection and to review missing materials.
Demo Reviews/ Approvals	6 - Demolition signoffs: -#26 Carol Rd. -#60 Whiting Way -#32 Fremont St. -#345 Central Ave. -#173 Fairfield St. -#34 Pershing Rd.
Disposal of Sharps Permits	8 – Disposal of Sharps Permits issued to: - Acupuncture Herbs and Beyond - Boston Acupuncture - Chinese Accupuncture and Herbal Medicine - Karla Barbieri - Evolved by Nature (Biotech) - Zdorovie ADH (Adult daycare center) - MLan Biosciences (Biotech) - Invicro (Biotech) Inspections performed for all acupuncturist facilities.

Septage/Grease/ Medical Waste Hauler Permits Issued	16 – Septage/Grease & Medical Waste Hauler Permits Issued to: - B&D Associates (Medical) - Advowaste Medical Services (Medical) - United Medical Waste Management (Medical) - Liquid Environmental Solutions (Grease) - Regan Septic Pumping (Septage) - Podgurski Corp. (Grease/Septage) - Bakers Commodities (Grease) - A Best (septage) - A & K Waste (Grease/septage) - Agri-Cycle Energy (Grease/Septage) - United Site Services Northeast (Septage/Grease) - BNV Enterprises, Inc./Rooterman (Septage/Grease) - Mahoney Environmental (Septage/Grease) - Rodenhiser Excavating (septage) - Wind River Environmental, LLC (septage/Grease) - Clear Choice Drains (septage/grease)
Trash/Recycling Waste Hauler Permit issued	0 - Trash and Recycling Waste Hauler Permit issued.
Food - Plan reviews/Follow- ups/Pre-operation inspections	1 - Initial Pre-operation inspections conducted. - Monsoon Kitchen (Takeout Indian Restaurant)
Food – Temporary Food Event Permits issued	0 – Temporary Food event online permit application reviews and permits issued to:
Food Complaints/ Follow-ups	3 – Food Complaints received. - Starbucks: Complaint about public bathrooms for customers being out of order again. Store manager was contacted to remove any indoor seating from establishment and only field takeout orders. Private bathrooms for employees were still operational. - Little Spoon: Fire inspector witnessed open snap traps on food preparation surfaces upon his inspection of the facility. Owner of establishment was contacted, and traps were removed and owner agreed to not put them out again. Establishment switched pest control companies to match the one contracted with other tenants in building and owner was instructed not to leave back doors to the kitchen open due to concerns of pests but also due to these doors being fire doors. - Roche Brothers: Water line broke from street in front of Rocher Bros. Store was closed for operations on December 11th. Once town got water up and running, a health agent performed a site visit and allowed the reopening of the store.
Housing - Complaints/Follow- ups, etc.	(2/4) - New Housing Complaints/Follow-ups conducted at: - Saint Mary's St. (0/1): Health agent visited site and met with occupants on 12/30/24. One of the cars was removed and the rear of the property looked much

	cleaner. The other two cars were set to be removed on 12/31/24. The health agent requested owner to remove other inoperable unregistered car parked in driveway and to remove any rusted auto parts/tools and any of the large plastic bins filled with miscellaneous things. Mosquitoes were observed at time of inspection and health agent got permission to turn over any buckets or lids filled with water on site. Owner will continue to clean and organize. Board of Health should advise staff on what they want next steps to be, since the deadline has passed. – <u>Chambers St. (Needham Housing Authority/NHA) (0/0) - Update:</u> No update at this time. Will follow up in month of January. U-Haul truck was observed to be parked in front of building and occupant was previously using it to help haul waste out of the unit. – <u>Gage St. (0/0) - Update:</u> No update at this time. Health agent will be following up with owner-occupant in month of January. – <u>Chambers St. (NHA) (0/1) – Update:</u> After a lengthy conversation with occupant of the unit, they did not want to allow access into the unit and wanted to drop the housing case. A letter describing events that occurred and stating that the case would be administratively closed was sent to the landlord and occupant. The occupant was informed that they can contact our office and file a new complaint, and we can open a new case at that time. Occupant still does not have a working fridge due to refusing to accept the one being provided by landlord. – <u>Chambers St. (NHA) (1/1) –</u> Complaint of musty smells in apartment and possibility of mold in the unit. Inspection was performed and no signs of mold were observed within unit and ventilation fan in the bathroom was working. Recommendations for occupants were provided. No follow up required. – <u>Rosemary St. (1/1) –</u> Complaint of mold and excess moistures in a unit. Occupants requested a comprehensive inspection where violations were found and orders to correct have been sent to the responsibly party.
Housing Pre-occupancy inspections	0 – Housing pre-occupancy inspections conducted.
Nuisance complaints/Follow-ups	(2/2) – New Nuisance Complaints/Follow-ups: – <u>Central Ave. (0/0) -</u> Autobody paint shop was caught again painting cars and allowed the migration of volatile fumes (VOCs) to migrate offsite and into an adjacent occupied building. Environmental health staff worked with MADEP, OTA and other town departments to investigate this concern. Legal representation for paint shop has indicated they have had a consultation visit from the Office of Technical Assistance (OTA) and were going to follow those recommendations. Neighbors have been told to call our office if they observe fumes again during normal office hours, otherwise they should call the fire department to come out and witness it and test for volatile organic in the air. <u>Update:</u> In November, we received a follow-up from the owner that the air filtration booth was fixed, and all other matters were being addressed with OTA. MADEP in process of drafting a letter to be mailed to the shop in the next few weeks. No updates in the month of December or January. Will reach back out to DEP on latest updates towards the end of January and to request a copy of their letter for our file.

	- <u>Chestnut St. (0/0)</u> - Health agent had meeting with property owners to address site conditions that are conducive to rats. Property owner added plugs to the drain holes in retaining wall and took other steps to improve site conditions. Area will continue to be monitored, and treatment continues. Update: Property owner has continued to send pest control reports showing how active this site is and captures and activity appear to be decreasing. - <u>Highland Terrace (0/1)</u> - Reports of dumpsters and waste haulers making noise as early as 4 or 5am while serving dumpsters on abutting commercial properties. Waste haulers for those dumpsters were contacted and they will inform dispatch to remind drivers to wait until 7am to service dumpsters in that area. Homeowner will take a video with a time stamp if this continues to occur. Update: Homeowner sent videos with timestamps showing dumpsters being serviced prior to 6am. Footage was sent to waste hauler in question and to stop the servicing of this dumpster that early. Further follow-up with occur if homeowner continues to witness the occurrence of this. - <u>Pickering St. (1/0)</u> – Complaint received about smoking inside the residential complex. Agent requested caller to request an inspection the next time it is witnessed so we can start to document it. They were advised to continue to work with the property manager about this matter. - <u>Warren St. (1/1)</u> – Complaint about witnessing a dead rat on their driveway. Agent went out and met with complainant and did education and canvassing of adjacent properties. One of the adjacent properties had a large unenclosed composting pile but no signs of nesting were observed.
Indoor/Outdoor Pool spot checks and annual permit renewal inspections	6 – Indoor/Outdoor pool spot checks/meetings conducted at: - North Hill - Sheraton (4x)- Pool ordered to be closed on November 25 and remained closed up until December 25. Pool testing logs are mandated to be sent for health agent review for at least the next month. - YMCA - Met with YMCA director and Y risk management and additional pool staff on site to review pool variance requirements to allow the use of temporary stairs in the pool. Reviewed required signage and letter of request. (Uploaded to online permit.)
Planning Board Special Permit / Off-street drainage bond release reviews	3 – Planning Board reviews conducted. - <u>Belle Lane Subdivision</u> – Follow-up letter sent to developer RE: the BOH approved release 5 off-street drainage bonds for the five lots. - <u>Reservoir Ave. Subdivision</u> – Received off-street drainage bond release request for lot 3. Letter sent to developer with next steps. - <u>DPW Complex Phase I Fleet Building addition proposal</u> – Attended Planning Board meeting and issued Public Health Division comments.
Septic Certificate of Compliance (COC)	0 – Septic Certificate of Compliance final signoff issued.
Septic – Construction	3 – Septic Construction Repair Permits issued. - 120 Stratford Rd. (Minor: D-box replacement)

Repair permit issued	- 869 Charles River St. (Minor: D-box replacement) - 111 Windsor Rd.
Septic Failure Letters	0 – Septic system failure letters sent.
Septic Installation inspections	5 – Septic installation inspections conducted at: - 120 Stratford Rd. - 869 Charles River St. - 111 Windsor Rd. (3x)
Septic Deed Restrictions	0 – Septic Deed Restrictions received.
Septic Installer Exam/Permit Issued	6 - Septic System Installer exam and permits issued. - DL Atkinson - Scott Septic - J. Hockman Inc. - R. P. Luttazi - Jack Malone Company, Inc. - J Derenzo Properties LLC
Septic Addition/Reno. to a Home on a Septic reviews	0 – Addition/Reno. to a Home on a Septic reviews conducted.
Septic Plan Reviews/Approvals issued	0 – Septic Plan reviews conducted/approvals issued
Septic – Soil/Perc Tests	0– Septic Soil/Perc Tests conducted.
Septic Trench permits issued	3 – Septic Trench permits issued. - 120 Stratford Rd. - 869 Charles River St. - 111 Windsor Rd
Septic – Abandonment Forms	0 – Septic abandonment/connection to sewer forms received.
Tobacco Compliance Checks/Hearing Scheduled	0 – Tobacco retail routine compliance checks conducted at all permitted establishments.
Well Permit online plan reviews	2 – Well permit online application follow-up plan reviews conducted: - #18 Plymouth Rd. - #97 Highgate Street

Zoning Board of Appeals plan reviews	2 – Zoning Board of Appeals plan reviews conducted for: - #282 Warren St. - #51 Fremont St.
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FY 25 Priority FBI Risk Violations of Interest

Establishment	Date	Violation(s)	Corrective Action/Follow-up
Rainbow ADHC	December 2, 2024	- Proper hand washing was not observed when required such as after handling raw meat, taking out trash, washing dirty dishes, cleaning surfaces and then preparing and handling food. - No sanitizing step was taking place when staff were ware washing utensils and food contact surfaces.	Health agent attempted to educate and have as many violations correct onsite but there was a language barrier. After discussions with their in-house food consultant, the consultant needed at least a week to retrain kitchen staff and manager. An extensive meeting was held with kitchen managers and their food consultants the following week about their plan of action to handle the situation in house. A reinspection was performed and the managers were able to demonstrate improvement. Progress will be monitored at next routine inspection.
Briarwood	December 3, 2024	- Multiple items including but not limited to leftover soups from the day prior did not cool to a safe temperature overnight. - Gravy that was cooked the morning of the inspection was not hot held at a safe temperature prior to lunch service.	- All foods that were out of temperature were discarded. - Gravy was reheated once again before service.
The James	December 6, 2024	- Sanitizer in buckets was depleted and being used to attempt to clean and sanitize food contact surface. - Sausages and mayonnaise made in house were out of temperature and in temperature danger zone.	- Sanitizer in buckets and wiping clothes were replenished and surfaces were sanitized properly. - Out of temperature products were discarded.

Kosta's	December 7, 2024	-Staff were using latex powdered gloves while handling food.	Health agent informed PIC that latex gloves are not recommend to be used while handling ready to eat food and may be used for other purposely such as during cleaning certain areas.
Dominos	December 7, 2024	-Employees failed to wash their hands after leaving to go outside and then began to start prepping food.	-Health agent discussed this matter with the person in charge.
El Mariachi	December 12, 2024	-Employees were observed handling raw meat with gloves on and then touch multiple surfaces without taking gloves off and washing hands afterwards. -Raw meats were stored above ready-to-eat foods in the walk-in refrigerator.	-Employee that was present was educated about this and manager who was not present said he will retrain staff. Translated educational materials and posters were also provided to the store manager.
Restaurant Depot	December 14, 2024	-Raw and exposed squid and shrimp were not protected from contamination with use of a display case or sneeze guards.	-Exposed items were removed from display.
Sweet Boba	December 16, 2024	-The sole employee and PIC at the time of inspection were observed cleaning kitchen and then failed to wash their hands prior to taking orders and making drinks.	- PIC was educated about when it is required to wash their hands and PIC demonstrated this for the remainder of the inspection.
Zdorovie ADH	December 17, 2024	-Employees failed to ware wash dishes correctly. They were observed just rinsing with hot water and no wash or sanitizing step was taking place.	-New staff member who was just hired was working in the kitchen and had yet to be trained on the process. PIC who was not monitoring was informed and they took over and demonstrated the proper procedure. They would make sure to train all new staff prior to having them work on their own.

Dragon Chef	December 20, 2024	-Raw meat was stored above ready to eat product in the walk-in coolers.	-Health agent had PIC reorganize walk in fridge to allow for the raw chicken to be stored appropriately even during busier times.
St. Joseph Elementary	December 20, 2024	-Pizza on site were not at proper hold holding temperatures. It was later observed that being received from another local pizza establishment might be delivered out of temperature.	-Establishment is in the process of applying to use time as a public health control versus using temperature for the pizza on Fridays.
Sweet Tomatoes	December 21, 2024	-Meatballs on steamtable were in the temperature danger zone. -Logs were not being filled out for Time as a Public Health Control for the pizza slices.	- Health agent allowed meatballs to be reheated and staff were educated that all hot held products must be reheated to 165f before hot holding starts. -Slices were discarded and a new log was started.
Comella's	December 23, 2024	-Raw ground veal and calamari was stored above ready to eat products in the walk-in fridge. -Several containers to food located in a fridge were missing use-by dates or had date marking indicating the product was over a week old.	-Raw products were moved to appropriate areas. -All out of date foods or foods that were missing date marking were discarded.
Masala Art	December 27, 2024	-Chicken tikka on buffet line was in the temperature danger zone and not hot held safely. -Green salad on buffet line was not cold held at safe temperatures.	-Chicken was discarded. -Salad was discarded and more ice will be added.
Blue on Highland	December 27, 2024	-The dishwasher in the bar was not dispensing sanitizer and thus was not sanitizing glassware. -Onion soup and marinara sauce were not reheated properly for hot holding and were also in the temperature danger zone.	-Dishwasher was ordered to not be used until it was serviced and confirmed to be dispensing sanitizer. -Soup and sauce were reheated on stove and then placed into the hot holding wells. Health agent educated staff on this.



Needham Public
Health Division

ENFORCEMENT DATE OF NEEDHAM BOARD OF
HEALTH REGULATION ARTICLE 1, SECTION D:
JANUARY 1, 2025

**THE SALE OF TOBACCO
PRODUCTS, INCLUDING
E-CIGARETTES,
TO A PERSON BORN ON OR AFTER
1/1/2004 IS PROHIBITED.**



NICOTINE-FREE GENERATION POLICY

PLEASE SCAN QR TO ACCESS ARTICLE 1

FOR MORE INFORMATION, PLEASE CONTACT THE NEEDHAM PUBLIC HEALTH DIVISION AT (781) 455-7940 x504

Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'25	FY'24	FY'23	FY'22	FY'21	FY '20	FY' 19	FY' 18
Biotech registrations/Plan rev./Insp.	0	0	0	0	0	0							0	15	3	3	0	1	1	1
Bodywork Estab. Insp.	0	0	0	0	0	6							6	8	5	5	6	7	14	11
Bodywork Estab. Permits	0	0	0	0	0	5							5	5	6	5	13	9	9	6
Bodywork Pract. Permits	0	0	0	0	0	7							7	10	5	8	12	23	21	22
Demo reviews	6	4	6	7	3	8							34	96	53	89	76	73	104	105
Domestic Animal permits	0	0	0	0	0	0							0	17	17	15	29	1	21	19
Domestic Animal Inspections	0	0	0	0	0	0							0	2	1	10	8	3	22	3
Food Service Routine insp.	17	24	17	10	26	27							121	224	214	194	134	149	200	225
Food Service Pre-oper. Insp.	0	2	5	0	1	2							10	23	22	22	16	48	12	32
Retail Food Routine insp. Or 6 month check in	0	0	0	0	0	0							0	4	13	11	12	33	46	60
Residential Kitchen Routine insp.	1	2	0	3	1	2							9	5	8	5	5	3	6	8
Mobile Routine insp.	0	0	0	0	0	0							0	5	10	10	10	4	17	13
Food Service Re-insp.	17	19	19	7	2	9							73	114	37	27	7	21	28	53
Food Establishment Annual/Seasonal Permits	0	1	1	0	44	71							117	128	130	138	134	155	140	171
Temp. food permits	2	4	6	2	5	1							20	51	33	37	9	67	134	163
Temp. food inspections	7	2	0	1	1	0							11	24	16	9	3	10	37	29
Farmers Market permits	1	1	1	0	0	0							3	15	11	16	15	14	14	14
Farmers Market insp.	10	0	3	0	0	0							13	65	73	149	124	158	229	127
Food Complaints	3	3	1	0	1	3							11	25	11	13	7	49	18	20
Follow-up food complaints	3	2	1	0	1	3							10	18	12	15	8	48	21	21
Food Service Plan Reviews	1	1	2	0	1	1							6	21	75	13	12	14	20	42
Food Service Admin. Hearings	0	0	0	0	0	0							0	0	0	2	1	3	0	0
Grease/ Septage Hauler Permits	0	0	0	3	9	16							28	25	29	22	13	20	21	24
Housing (Chap II Housing) Annual routine inspection	0	0	0	0	0	0							0	13	9	10	7	7	0	14
Housing Follow-up insp.	0	1	1	2	1	2							7	26	13	3	2	0	0	5
Housing New Complaint	2	2	2	0	0	2							8	38	26	41	40	41	22	22
Housing Follow-ups	5	3	5	3	2	4							22	81	69	65	63	56	28	24

Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'25	FY'24	FY'23	FY'22	FY'21	FY '20	FY' 19	FY' 18
Hotel Annual inspection	0	0	0	0	2	1							3	3	3	3	3	3	3	3
Hotel Follow-ups	0	0	0	0	0	1							1	2	2	0	1	15	0	0
Nuisance Complaints	5	3	4	8	2	2							24	53	36	35	45	34	55	42
Nuisance Follow-ups	7	4	9	11	8	2							41	89	58	41	60	55	69	42
Pool inspections	1	6	0	1	5	1							14	30	14	15	15	13	20	12
Pool Follow up inspections	0	4	0	0	1	5							10	6	5	4	5	3	12	7
Pool permits	0	0	0	0	0	6							6	14	14	15	17	11	19	12
Pool plan reviews	0	0	0	0	0	0							0	0	5	0	5	0	3	44
Pool variances	0	0	0	0	0	5							5	5	7	6	5	6	5	7
Septic Abandonment	0	0	0	0	0	0							0	4	4	9	17	21	9	5
Addition to a home on a septic plan rev/approval	0	0	0	0	1	0							1	1	2	15	5	5	2	2
Septic Install. Insp.	0	4	0	3	0	6							13	26	22	19	11	13	21	28
Septic COC for Component	0	0	0	0	0	2							2	1	2	3	2	5	3	1
Septic COC for complete septic system	0	0	1	1	0	0							2	6	3	4	1	3	4	3
Septic Info. requests	3	4	3	6	5	7							28	60	62	64	86	61	62	51
Septic Soil/Perc Test.	1	1	0	0	0	0							2	6	6	5	8	1	1	2
Septic Const. permits	0	0	1	0	0	3							4	4	5	6	6	6	6	5
Septic Installer permits	1	0	1	0	0	6							8	7	16	11	8	6	8	9
Septic Installer Tests	1	0	0	0	0	0							1	5	9	4	3	2	5	3
Septic Deed Restrict.	0	0	0	1	1	0							2	3	0	0	4	1	1	3
Septic Plan reviews	0	0	0	1	2	0							3	13	29	21	14	8	9	23
Septic Trench permits	1	1	0	0	0	3							5	9	11	12	-	-	-	-
Disposal of Sharps permits	0	0	0	1	0	8							9	10	10	7	8	7	7	9
Disposal of Sharps Inspections	0	0	0	1	1	4							6	8	12	8	8	7	7	7
Rat Nuisance Complaints	1	2	3	10	1	1							18	20	5	6	2	2	1	-
RMD	0	0	0	0	0	0							0	3	2	-	-	-	-	-
Planning Board Subdivision Sp Permit Plan reviews/Insp. of lots	0	2	2	0	6	3							13	10	19	21	20	4	1	1
Subdivision Bond Releases	0	0	0	0	5	0							5	2	1	0	1	0	1	0
Special Permit/Zoning	2	1	1	3	4	2							13	16	19	21	18	17	34	15
Tobacco permits	0	0	0	0	1	6							7	6	7	6	7	10	10	11
Tobacco Routine insp	0	0	0	0	3	3							6	12	7	12	7	8	14	18
Tobacco Follow-up insp.	0	0	0	0	0	6							6	3	0	0	1	8	3	3

Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'25	FY'24	FY'23	FY'22	FY'21	FY '20	FY' 19	FY' 18
Tobacco Compliance checks	6	0	0	0	6	0							12	12	6	6	6	30	30	41
Tobacco complaints	0	0	0	0	0	0							0	0	6	0	0	2	3	4
Tobacco Compl. follow-ups	1	0	2	0	0	0							3	0	6	0	0	1	3	4
Trash Hauler permits	0	0	0	0	0	0							0	16	20	23	16	15	17	14
Medical Waste Hauler permits	0	0	0	2	2	3							7	6	6	2	2	2	2	1
Well - Plan Reviews, Permission to drill letters, Insp.	0	1	0	0	0	2							3	11	14	10	11	2	6	2
Well Permits	0	0	0	0	0	0							0	0	1	4	1	1	1	0
Monthly Totals	105	104	97	87	154	257							804	1540	1357	1355	1195	1405	1642	1668



Needham Public Health Division

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Unit: Accreditation

Date: January 7, 2024

Staff: Alison Bodenheimer, Lynn Schoeff

Activity	Notes
PHAB documents	All required documents were uploaded to the PHAB website and “sent” to PHAB on December 11, 2024.
Quality Improvement	Quality Improvement Plan finalized
Performance Management	Ongoing progress updates made to performance management dashboard with staff
Policies	Hotel Inspections Testing Public Water Fountains Public Health Surveillance



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Unit: Traveling Meals Program

Date: December 2024

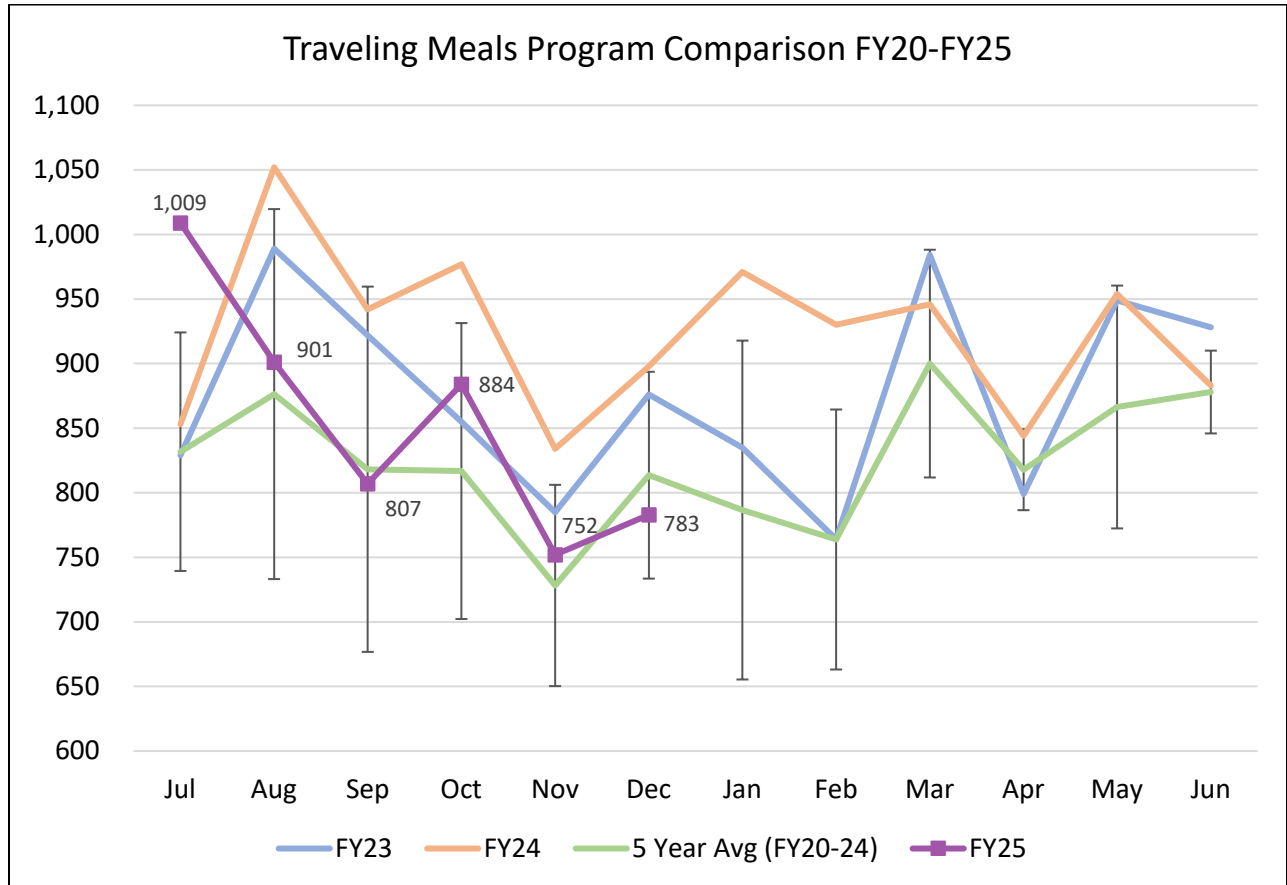
Staff: Rebecca Hall

Activities and Accomplishments

Activity	Notes
<i>Volunteers and Seasonal Drivers delivered meals to homebound Needham residents in need of food.</i>	<i>Meal delivery for month by 29 Volunteer Drivers and Community Partners</i>
<i>783 Meals delivered in December 2024</i> <i>45 Clients at end of December:</i> <i>41 Springwell Consumers</i> <i>4 Private Pay Consumers</i> <i>1 New Client (1 Springwell)</i> <i>2 Cancelled Program (1 Springwell, 1 Private)</i>	<i>No 911 calls initiated</i>
<i>Included flyers about Christmas Day Meal Sign-Up in meal bags</i>	<i>Christmas Day Meals organized by Needham Community Council and prepared/distributed by Temple Beth Shalom on 12/25/24</i>
<i>Included flyers for Community Council Focus Group "Seeking Needham Caregivers of a Loved One with Dementia or Alzheimer's"</i>	<i>Included in appropriate client meal bags</i>

Other Public Health Division activities this month:

Summary overview for the month: **Graph of Meal Deliveries for the month December 2024**





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Unit: Substance Use Prevention MassCALL3 grant: Dedham, Needham, Walpole, Westwood

Date: December 2024

Staff members: Carol Read, M.Ed., CAGS, CPS & Lydia Cunningham, MPH, CHES®

Activity	Notes
Ariana Tornatore, Director of Wellness & Donna Tobin, PhD., Social Emotional Learning Coordinator, Westwood Public Schools- 12/2 In person	- History and overview of MassCALL3 grant and previous substance use prevention grants. - MetroWest Adolescent Health Survey: funding options, data sharing, data dashboard. - Westwood Cares coalition re-start and Drug-Free Communities grant application process.
MassCALL3 Connections Monthly Meeting- 12/3 Regional prevention staff, public health nurses, public health directors and assistant directors, human services staff.	Presentation by Leah Arteaga, Community Relations Representative, Massachusetts Behavioral Health Helpline. Overview of service offered, connection to care, referral process, insurance considerations/cost. Next meeting: January 7 th 9:00am
Needham Community Crisis Intervention Core Team, Deputy Chief Chris Baker, Needham Police Department - 12/3 Jonathan Steeves, EMS Supervisor, Jessica Moss, LICSW, Assistant Director Aging Services, Sara Shine, LICSW, Director Youth & Family Services. Emily Turnbull, LICSW, Jail Diversion Clinician and Kelsey Cournoyer, NPD Crime Analyst.	Monthly service provider meeting: Confidential case management review of response and support for all age residents navigating acute and chronic substance use disorders and/or mental health conditions. Resource sharing – local and state – counseling, assessment, detox, treatment. Needham crisis response data review- crisis response planning including housing insecurity.
MDPH- Office of Local & Regional Health OLRH monthly webinar 12/3	Agenda: Local Public Health Survey Findings Local Public Health Data Solution Update Foundational Public Health Services Update
Massachusetts Alcohol Policy Coalition- 12/4 Elizabeth Parsons, Volunteer Chair & David Jernigan, PhD, Boston University School of Public Health. Youth coordinators: Stormy Leung, MPH Braintree Community Partnership - Mary Cole, MPH, CHES MassCALL3 BUY Bay State Community Services, Quincy.	Agenda: Alcohol Delivery and Digital Advertising research project recruitment: volunteers who live in MA, ages 21-26 needed. Alcohol Policy Day Training Series for youth: Next training 12/14 at Boston University. Legislative visit January 15 th including DPH meeting Alcohol excise tax: seeking resolution signatures, including from Boards of Health and Health Departments. Next meeting: January 29 th 9:00am.
Walpole Community Crisis Intervention Team- Walpole Police Sergeant Tom	Agenda: Town service provider confidential case management review of response and support for

www.needhamma.gov/health

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Hart 12/5 Jillian Nauman, Outreach Coordinator, Aging Services, Dylan Jones, LSCW, WPD Emergency Services Jail Diversion Program (JDP) coordinator- Riverside Community Care	all age residents navigating acute and chronic substance use disorders and/or mental health conditions. Resource sharing, crisis response and non- acute care support. Rebel, WPD service dog.
CARE Massachusetts Opioid Abatement Partnership 12/5 and 12/12 JSI Research & Training Institute, Inc., 2023 contract by the Massachusetts Department of Public Health's (MDPH) Bureau of Substance Addiction Services (BSAS). Training and Technical Assistance to municipalities receiving opioid settlement funds- capacity building, strategic planning and reporting in compliance with the state subdivision agreement. Cheryl Sbarra, JD, municipal consultant.	December 5 th : Words Matter: Stigma and Language. Recovery Month project DPH Leadership and DPH Staff pledge review. Goals: Describe the impact of language in framing what the public thinks about substance use and recovery Give examples of alternatives to stigmatizing language Get answers to questions about how to discuss substance use with your community using an affirming and strengths-based approach. December 12 th : Expenditure Report Correction Required reporting – data quality assurance activities implemented aligned with expenditures. Goals: Review the data quality assurance process for expenditure reports Review feedback rubric on municipality-reported data Review process and timeline for municipalities to respond to rubric.
Charles River Health District- Dover-Needham- Medfield- Sherborn. Public Health Excellence (PHE) site visit meeting 12/6 Kerry Dunnell, MPH, Manager Shared Services -Training Hub Samantha Menard, MPH Assist. Manager.	Agenda: Jess Ferland, Project Coordinator, Office of Local & Regional Health- Shared Services regions manager. Overview and discussion of OLRH goals, fiscal year budget parameters and implementation structures.
Jessica Goldberg, MPH, MSW, Prevention Solutions@ EDC- 12/5 MassCALL3 Strategic Planning and 12/23 Mentoring discussion.	Agenda 12/5: Discussion: MGH team iDECIDE meeting, implementation next steps Community capacity building planning. Next steps for curriculum implementation Everfi: Alcohol Education: Safe and Smart (grades 9-12) and Stanford Smart Talk: Cannabis Prevention & Awareness Curriculum. (grades 6-8)
Substance Prevention Alliance of Needham (SPAN) Winter Meeting- 12/10 Karen Shannon, CPS, Substance Use Prevention Coordinator, Town of Needham	Agenda: 2024 Parent Survey data presentation by Scott Formica, PhD, Senior Research Scientist, SSRE. Survey of approx. 200 parents/caregivers students in grades 6-12 Domains: health and wellness, home/community life, communication with child and other parents, parental attitudes and beliefs, parenting behaviors, prevention and supports.



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Needham Public Health Division Staff Meeting- 12/10 Timothy McDonald, Director of Health and Human Services, Tiffany Benoit and Tara Gurge, Assistant Public Health Directors	Agenda: Mental health and Youth and Family Services Division program presentation by Kristina Kozak, MSW, BCBA. December Board of Health meeting agenda: Revised health regulations, final vote scheduled, Article 1 tobacco including NFG language, Article 22 synthetics, and dumpster regulation.
Amal Marks, Contract Manager, MA Department of Public Health, Bureau of Substance Addiction Services- 12/11 MassCALL3 Prevention Partners (PP) supervision meeting.	Agenda: Strategic planning updates on two curriculums and iDECIDE program scope, current readiness status and implementation plans Monthly PP meeting progress and topic review, resource sharing - MA Behavioral Health Helpline. Town updates: Needham Board of Health approval tobacco/nicotine regulations (NFG) and synthetic cannabinoids Dedham Beth Israel Deaconess Needham grants- Mental Health & Substance Use: Grant #1: \$345,000 (3 years) Dedham Public Schools – Building Equity and Access, tracking every student and teacher every year to identify needs. Grant #2: \$171,000 (3 years) Dedham Care Cab, Transportation program for mental health and substance use appointments and programs.
Needham Homelessness Prevention Coalition- 12/11 Jessica Moss, Assistant Director of Counseling and Volunteers, Needham Council on Aging	Agenda: Tracking interactions with those in need. Data review (various service providers) School update on families with housing concerns Crisis fund updates and planning to grow funds.
Needham Accounting- 12/12 Michelle Vaillancourt, Town Accountant & Lisa McDonough, Administrative Analyst	MassCALL3 grant November expense reimbursement submission. EIM- Virtual Gateway FY25 budget line item review.
Middlesex County District Attorney Marian Ryan Anti-Hate Anti-Bias Taskforce- 12/12	Presentation: Immigration policy anxiety and election fatigue: Community Action Agency of Somerville & Costas Panagopoulos, PhD, Northeastern University. Local updates: ransomware attacks, three-year grant to evaluate the Anti Hate Anti Bias task force and update on violence towards Cambodian Americans.
Webinar: Potential Changes in Federal Cannabis Policy and the Anticipated Public Health Impacts- 12/12 Mathew Swinburne, J.D., and George Townsend, JD, Legal Resource Center for Public Health Policy-Cannabis.	Agenda: How the Controlled Substances Act regulates cannabis, current rescheduling process underway at the DEA, and what rescheduling would mean for federal and state law. How federal law has created a market for intoxicating hemp-derived products; potential changes in federal law aimed at addressing this.

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Needham Public Health Division

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Community prevention, education and advocacy- Underage marijuana use (risk and protective factors) State Representative Marcus Vaughn, 9 th Norfolk- 12/12 Amy Turncliff, PhD, Neuroscientist Rockfern Scientific, Annmarie Galvin, Scituate FACTS Coalition.	Agenda: Presentation on prevention of adolescent cannabis use, rising THC potency in commercial products, general public health regulations and strategies. Policy recommendations including (H113) prohibit billboard advertising of cannabis businesses/products (H154) limit potency and products appealing to young people (H155) improve warning labels on cannabis products to add risk of psychosis and CHS. (H156) improve data collection on cannabis use and harms.
Teagan Seeley, Manager, District Relationships, EVERFI- Alcohol Education: Safe and Smart program (grades 9-12) 12/12	Agenda: Overview of Alcohol Education: Safe and Smart program (formerly AlcoholEdu) Best practices for implementation: facilitator training and support, student monitoring and data collection, no cost for implementation.
Norfolk County Sheriff's Office Youth Task Force- 12/16 Kathryn Hubley, Community Affairs Coordinator. Nora Quinn, M.Ed., Youth Outreach Coordinator	Guest speaker: Laura B. Rosenthal, Suicide Prevention Program Coordinator, Baystate Community Service. Overview of state and local resources, programs available for youth, review of data.
Dedham Organization for Substance Awareness (DOSA) - 12/17 Tae Averett, Program Coordinator, Drug-Free Communities Grant	In person outreach: Tabling at Dedham High School lunch period. Resources provided for impaired driving awareness month.

*NPHD November Report- monthly activities

*Time dedicated to in-person collaboration and capacity building in cluster communities

This report is part of a larger quarterly report to BSAS and is not considered finalized for purposes of the BSAS report. A later version will be available.

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END



Unit: Substance Use Prevention

Date: December 2024

Staff: Karen Shannon, Karen Mullen, Monica De Winter, Angi MacDonnell, Vanessa Wronski

Activities and Accomplishments

Activity	Notes
SPAN Projects & Events	SPAN in the community: SPAN hosted the Winter coalition meeting on December 10 with a presentation of the 2024 SPAN Parent Survey data by Dr. Scott Formica of Social Science Research & Evaluation. Sixteen people attended the meeting. Coming up: A three-part parent education series, “Conversations with Your Middle Schooler: Why You Shouldn’t Wait to Talk About Substance Use.”(see details below under Educ. Action Team) SPAN Newsletter, December issue: https://www.spanneedham.org/newsletter/2024/12/19/2024-issue-13 SPAN social media: https://www.facebook.com/SPANNeedham/ SPAN Action Teams- Education Action Team met on December 6 to finalize the action plan for “Conversations with Your Middle Schooler: Why You Shouldn’t Wait to Talk About Substance Use,” parent education series, geared for parents of 5th through 8th graders. Each session will provide tips, techniques and tangible strategies for talking with their children about underage drinking and other substances. The sessions are scheduled for January 14, February 11 and March 11 at the Rosemary Recreation Complex. Karen Shannon and Angi MacDonnell will be facilitating the presentations and Tony Serio and Kristina Kozak of Needham Youth & Family Services will facilitate the breakout sessions. Mental Health Action Team met on December 4 to plan next steps for their work. The team will continue writing posts for the Rethinking Success newsletter, https://www.spanneedham.org/rethinking-success. Angi installed the interactive display, <i>“What does success mean to you,”</i> at the Needham Library Youth Room to raise awareness about the team’s attention to values about the meaning of success. Nicotine Free Generation: Prevention Team staff continued outreach and education about NFG policy and researched health harms of nicotine.

Needham Public Health Peer Recovery Coach	During December, Angi MacDonnell, Peer Recovery Coach engaged in the following: Worked with 6 people (phone, in person, and text contacts) Average Age: 57 Majority: Female Substance of choice: Alcohol Peer Recovery Service work also included: Dual Recovery Anonymous weekly meeting at Center at the Heights, Needham. • DRA is a 12-step self-help program for individuals who experience both an addiction and a psychiatric challenge. This mutual support community uses a harm reduction approach towards wellness. Meeting attendance during December averaged 4 people per week.
STOP Act grant	SAMHSA grant: STOPing Underage Access and Use of Alcohol: Codifying Youth, Parent and Retailer Education and Compliance in Needham, MA: Alcohol compliance – On December, 16 sixteen employees of Needham alcohol licensed businesses attended ServSafe Alcohol training. Officers Austin Broderick and Sarah Timmerman of the Needham Police facilitated their first session, having become certified instructors in November at the train-the-trainer hosted by the STOP Act Grant prevention team staff. This course replaces the TIPS training course. See summary below. WeCard calendars were purchased by STOP Act grant funds and the grant staff hand delivered them to the 29 Needham alcohol licensed businesses. WeCard calendars provide a visual tool for retailers to determine if a customer is old enough to purchase alcohol. MA Alcohol Policy Coalition – Vanessa Wronski worked with two SALSA students to prepare them for legislative visits at the State House in January. The students will meet with their House Representative Joshua Tarsky to share a prepared statement about the need for an increase to the sales tax on alcohol on January 15.
SALSA	During the month of December 25 SALSA members contributed 114 hours of service in Needham. This month's highlights include: 2 SALSA members participated in Alcohol Policy Training (preparing for 1/15/25 trip to the MA State House). 2 SALSA members co-sponsored the NHS Ping Pong Club Tournament w/SALSA prize wheel to increase awareness. 2 SALSA members participated in the SPAN Winter Meeting on 12/10/24 to hear the Parent Survey Presentation.

Summary for December 2024: Focus this month included STOP Act grant deliverables for hosting responsible beverage server instructor training, hosting the SPAN Winter meeting, preparation for the SPAN middle school parent education series, and final submission of documentation for the NPHD Accreditation Application.

Alcohol Compliance Summary

Business	licens	12/2022	4/2023 C	5/2023 TII	9/2023 C	10/2023 T	12/2023 C	2/2024 TIF	05/2024 C	06/2024 T	10/2024	12/2024 R
Bertucci's	12	Fail	Closed	Closed	Closed	Closed	Closed	closed	Closed	closed	closed	closed
Bin Ends	15	Pass	Pass	1	Fail	1	Pass		Pass	2	Pass	1
Blue on Highland	12	Pass	Pass	1	Pass	0	Pass		Pass		Pass	
Cappella	12	Fail	Pass	0	Pass	7	Pass		Pass		Pass	
The Common Room	12	N/a	N/a	0	N/a	0	N/a	7	Pass	2	Pass	
Cook Needham	12	Fail	Fail	3	Pass	0	Pass	2	Pass		Pass	1
French Press Bakery	12	Fail	Pass	0	Pass	0	Pass		N/a		Pass	
Fuji Steakhouse	12	Pass	Pass	0	Pass	0	Pass	1	Pass		Pass	3
Gari	12	Pass	Pass	0	Pass	1	Pass		Pass		Pass	
Gordons Fine Wines	15	N/a	N/a	0	N/a	0	N/a	1	N/a		Fail	
Hearth Pizzeria	12	Pass	Pass	1	Pass	0	Pass	1	Pass		Pass	
Hungry Coyote	12	N/a	Pass	0	N/a	0	N/a		N/a		N/a	
Latina Kitchen and Bar	12	Pass	Pass	0	Pass	1	Pass		Closed		Closed	
Little Spoon	12	Fail	Pass	0	Pass	0	Pass	5	Pass	5	Pass	
Mandarin Cuisine	12	Pass	Pass	0	Pass	0	Pass	1	Pass		Pass	
Masala Art	12	Pass	Pass	0	Pass	0	Pass		Pass		Pass	
Needham Fine Wines	15	Fail	Pass	0	Pass	0	Fail	3	Pass		Pass	1
Needham Golf Club	12	N/a	N/a	0	Pass	0	N/a	1	Pass		Pass	
Needham Wine & Spirits	15	Pass	Pass	0	Pass	0	Fail	2	Pass		Pass	
Ray's New Garden	12	Pass	Pass	0	Pass	0	Pass		Pass		Pass	
Pancho's Taqueria	12	Fail	Fail	0	Pass	0	Closed		Closed		Closed	
Residence Inn	12	Pass	N/a	0	N/a	0	N/a	1	N/a		N/a	
Reveler Beverage	15	Fail	Pass	0	Pass	0	Pass		Pass	2	Pass	
Rice Barn	12	Pass	Closed	0	Closed	0	Closed		Closed		Closed	
Sheraton Needham	12	Fail	N/a	6	Pass	4	Pass	1	Pass	1	Pass	3
Spiga	12	Pass	Pass	3	Pass	0	Pass		Pass		Pass	
The Farmhouse	12	Pass	N/a	0	Pass	0	Pass	3	Pass	1	N/a	
Homewood Suites	12	N/a	N/a	2	N/a	0	Fail	1	Pass		Pass	1
The James	12	Pass	Pass	0	Pass	0	Pass	3	Pass		Fail	6
Needham General Store	15	Pass	Pass	0	Pass	0	Fail		N/a		N/a	
V.F.W.	12	Pass	Pass	1	Pass	1	Pass		Pass		N/a	
Village Club	12	N/a	N/a	0	N/a	0	N/a		N/a		Pass	
Vinodivino	15	Fail	Pass	0	Pass	0	Pass	2	Pass		Pass	
Volante Farms	12	Pass	Pass	6	Pass	0	Pass		Pass		Pass	

Business	license	12/2022 CC	4/2023 CC	5/2023 TIPS	9/2023 CC	10/2023 TIPS	12/2023 CC	2/2024 TIPS	05/2024 CC	06/2024 TIPS	10/2024CC	12/2024 RBS
Total TIPS attendees				24		15		35		13		16
Total PASSES		18	22		25		21		24		23	
Total FAILS		10	2		1		4		0		2	
Total establishments checked		28	24		26		25		24		25	
Percent failure		36%	8%		4%		16%		0%		8%	

Definitions for spreadsheet:

CC: compliance check

TIP: TIPS training for alcohol licensees

License type 15: Off-premise liquor license

License type 12: On-premise liquor license

Closed: A business which has closed permanently

N/a: A business which was not checked due to a liquor license suspension, compliance check during non-business hours, has not opened yet, or other reason

December 2024 Report

Unit: Shared Services Grants – Public Health Excellence and Contact Tracing

Date: 1/15/24

Staff members: Kerry Dunnell, Samantha Menard, Jennifer Casey, Amy McInerney, Jennifer Gangadharan

Activities and Accomplishments

Activity	Notes
Shared Services- Charles River Public Health District (Towns of Dover, Medfield, Needham, and Sherborn)	<u>Continuing Education and Training</u> Jenn Gangadharan enrolled in MIIS and completed the 5-day email trainings. Sam and Amy attend a webinar titled Public Health Power Hour- Reduced Oxygen Packaging on 12/10 hosted by the FRCOG training hub. <u>Community Support & Engagement</u> Jenn G. coordinated a meeting with Regional PHNs from Foxboro and Seekonk on December 2. The group discussed programming and shared ideas from each jurisdiction and agreed to meet again in January. One long term goal of the group is to expand their network and collaborate with other Regional PHNs. Amy is finalizing the webpage for the Charles River Public Health District Collaborative. The page will go live in January. <u>Strategic Planning</u> After a competitive procurement process BME Consulting awarded a contract to conduct strategic planning with the Charles River PHD Advisory Board. Kerry & Jen Casey met with BME to discuss timetable and deliverables. BME will begin meeting with the Advisory Board in January and continue monthly through the end of the fiscal year. <u>Fee Cost Study</u> BME Consulting prepared a final presentation for the Advisory Board about their work on the fee comparisons and fee cost calculator for use by all CRPHD communities. Amy McInerney will be trained by BME to be the CRPHD point of contact regarding use of the fee cost calculator. <u>Environmental Health Activity</u> <i>Regional environmental health agents support environmental health activities and conduct inspections in all member communities as requested</i>

In December Sam Menard, Assistant Manager, and Amy McInerney, Regional Environmental Health Agent conducted food establishment, Title V and Tobacco inspections in Needham.

The Environmental Health Working Group, including representatives from all communities met on December 17. There were three outcomes from this meeting.

- 1) A final draft of a common variance application form was accepted and will be presented to the CRPHD collaborative Advisory Board for consideration.,
- 2) Participants agreed to research tobacco enforcement options and report to the group at an upcoming working group meeting.
- 3) The next working group meeting will include collaborative review of the self-assessment tool to ensure accuracy and consistency of responses among the four communities.

Regional Public Health Nursing

Jenn G. began monitoring all MAVEN cases for the town of Medfield on December 3, 2024. Jenn will be continuing to do so while the Medfield public health nurse position is vacant to ensure that the requirement for continuous MAVEN coverage is being met.

In preparation for the arrival in early February 2025 of a public health nurse in Dover, Jenn and Kerry met with Kay Peterson MD, Dover Board of Health Chair and Jason Belmonte, Dover Health Director. Topics included onboarding plans, equipment needs, and desired programming in Dover.

Grant Administration & Finance

Staff hosted a quarterly check in meeting with MA DPH Program Coordinator, Jessica Ferland on December 6. The meeting included review of successes and challenges in the most recent reporting period as well as question and answers with Advisory Board members.

Shared Services- North Central & MetroWest Local Public Health Training Hub Serving the 40 communities in the Charles River Health District, Greater Boroughs, MetroWest Public Health Coalition, Nashoba Associated Boards of Health, Norfolk County-8 Public Health shared services arrangements, along with the communities of Bellingham, Holliston and Marlborough.	<u>Staffing</u> An offer was extended to a qualified preferred candidate for the Environmental Health Agent Trainer position. Padraig Martin is scheduled to begin work on January 6, 2025. <u>Continuing Education & Training</u> Housing Training – Sam participated in the final three training days (two in-person and one remote) for Tier 3 Housing trainings for trainers hosted by the Office of Local & Regional Health (OLRH). OLRH will issue approval to provide training in early January 2025. Additionally, OLRH will issue final documents for trainer use with individuals who are ready for Tier 3 training. The first segment of Tier 3 training will focus on how to prepare proper and complete documentation for housing cases Jenn Ganghadaran completed the Tier 2 Housing Training and passed the exam. She will be participating in the next Tier 3 Housing for Trainers. <u>Training Hub groups engagement & support</u> Amy is finalizing the webpage for the North Central MetroWest Local Public Health Training Hub. The page will go live in January. Staff assembled 75 environmental health equipment starter kits for distribution to Tier 3 trainees. The kit includes various essential items needed for food and housing inspections, including a head covering, and a list of the items so that trainees can replenish their supplies with similar items. The equipment is provided in a sturdy work bag. The bag, head covering, and list all are branded with the NCMW Local Public Health Training Hub logo. <u>Training Delivery</u> Sam held a kick-off meeting for three new Food Inspection Tier 3 trainees. OLRH provides a list of individual eligible for Tier 3 training monthly. Individuals are eligible for Tier 3 once they have completed all Tier 1 online trainings and Tier 2 classroom trainings. <u>Funder Communication & Collaboration</u> Kerry and Sam participate each month in work groups as well as two monthly meetings of the ten training hubs led by the Office of Local and Regional Health (OLRH). Workgroups include Evaluation and satisfaction surveys and Assessment tool development. Monthly meetings include discussion of curriculum development and coordination with the Tier 1 and Tier 2 trainings, as well as efforts to align the ten training hubs on job descriptions and communication with Hub communities.
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Needham Public Health Division

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Staff Introductions

January 14, 2025

Taleb Abdelrahim:

Taleb joined Needham Public Safety in December 2019 as Emergency Management Support intern. In March 2020, he moved to Public Health in response to COVID-19-19. He has been supporting the Medical Reserve Corps & Emergency Preparedness programs.

Previously, Taleb worked five years as a Second Mate in an oil tanker carrying liquid petroleum gas, as well as other ships, for various shipping companies. During his seagoing he assumed safety officer responsibilities on board ships.

Taleb is a graduate of the Arab Maritime Academy in Alexandria, Egypt, earning a Bachelor of Science in Maritime Transport - Nautical Technology and Second Mates of Vessel Operations. He has also earned a Master of Science in Emergency Management from the Massachusetts Maritime Academy.

Tiffany Benoit

Tiffany joined Needham Public Health Division in July 2017 as a full time Public Health Nurse. In October of 2020, Tiffany was promoted to Assistant Director of Public Health and oversees the Nursing and Behavioral Health teams. She came to the Needham Health Division while pursuing a Master of Public Health degree at Boston University.

Tiffany has a passion for health promotion through education and communication. Before pursuing her master's degree Tiffany had been working as a dual diagnosis nurse at a psychiatric facility for almost seven years.

Since working with the Needham Health Division Tiffany has enjoyed taking on different roles and responsibilities, including emergency preparedness, Domestic Violence Action Committee, the Community Crisis Intervention Team, and others.

Hanna Burnett

Hanna Burnett joined Needham Public Health in September 2020 as a part-time public health nurse. She received her bachelor's degree in Nursing Science in Finland in 1998. She has lived in Massachusetts since 2005 and has worked in the ICU at St. Elizabeth's hospital for most of her American nursing career. As a foster parent Hanna saw that education, proper resources, and compassionate support offered at the right time could drastically improve the overall health of whole families. Feeling a growing desire to promote health in a community setting, she entered a Master of Public Health program through Liberty University in 2019 and graduated this past

summer. Talk about good timing! Hanna is very excited to be part of an enthusiastic group of professionals whose goal is to improve the health of Needham residents.

Hanna and her husband have three children of their own. She also enjoys playing tennis and reading books. One of her favorite books has been Hold on to Your Kids by Gordon Neufeld & Gabor Mate.

Jennifer Casey

Jen has been with the Town for the past 16-plus years. She joined NPHD in July 2024, as the Administrative Specialist for the Shared Services Division and the Regional Field Training Hub. Jen came to Needham in 2008 as an Accounts Payable Specialist in the Accounting Department after receiving an Accounting Certificate from Mass Bay Community College. In 2009, Jen became the Town Payroll Administrator and then moved to the Department of Public Works in 2010.

In her position at DPW, Jen enjoyed supporting all the divisions within the department with the administrative skills she developed in her previous positions in Needham. She was part of a team collaborating on the implementation of a new payroll software platform. Jen was also the point-person for tracking emergency-related costs after storms and during the COVID crisis, and submitting to FEMA and MEMA for reimbursement. Jen reports that through her various roles in Needham, she developed strong working relationships with her peers and has made many good friends.

Jen loves helping people. If she could go back in time, she would pursue a career in nursing. In her spare time, she loves to take long walks and hikes in the woods with her dog, Luci.

Virginia Chacon-Lopez

Ginnie joined the Needham Public Health Division in January 2023 as a full-time public health nurse and is in the final semester of her MSN Public and Population Health Program at Worcester State University.

Prior to joining Needham, Ginnie worked with pediatric and adolescent populations in primary care and inpatient psychiatry for ten years. She also did contact tracing for Providence College during the 2020-2021 school year and worked with the Visiting Nurse Association to conduct flu vaccine clinics in Boston and COVID testing for healthcare workers. Ginnie also completed a practicum with the Medfield Board of Health.

Ginnie hopes to be able to make a difference in the Needham community, particularly when it comes to the mental health and physical wellbeing in the youth and teen populations, through education, prevention, and health promotion.

Lydia Cunningham

Lydia joined the Needham Public Health Division as a Substance Use Prevention Coordinator in January 2023. She received her Bachelor of Science in Public Health in 2021 from the University of Massachusetts in Lowell, and her Master of Public Health from the Boston University School of Public Health in December 2022. Lydia is also a Certified Health Education Specialist.

Prior to joining NPHD, Lydia worked several part-time jobs, most recently as a health educator with Peer Health Exchange, teaching students from 7-12th grade in Lynn, West Roxbury, and Charlestown, MA. She is passionate about health education, health equity, and empowering young people, and hopes to continue working towards these goals in Needham.

In her free time, Lydia enjoys painting, reading, yoga, and going on long walks and hikes with her husky Yobe and lab Lucy!

Monica DeWinter

Monica has been a Program Coordinator for the Drug Free Communities (DFC) Grant since November 2015. She works within the Public Health Division's Prevention Team to fulfill annual DFC reporting requirements and to support the mission of the Prevention Team. Monica also oversees the work of the Substance Prevention Alliance of Needham (SPAN), a coalition supporting substance use prevention among Needham youth.

Monica received her Master of Public Health from Boston University during which time she was a Program Coordinator at Slone Epidemiology Center for the Thalidomide Survey for seven years.

Her most interesting job was what led her to public health - as an outreach worker for Salud Medical Center in Woodburn, OR, where she worked with Mexican migrant workers and children and where she became proficient in Spanish.

Monica and her husband Michael both grew up in Needham and they have two daughters, Kathleen and Amy.

Kerry Dunnell

Kerry Dunnell has worked in public health at the local, regional, and state levels for more than 20 years, including 5 years part-time here in Needham. Most recently Kerry was the manager of the Metro Regional Preparedness Coalition, a health and medical coordinating coalition serving 60 public health departments and 12 acute care hospitals in the Greater Boston area, linked with the community health centers, long-term care facilities, and EMS providers in those communities. Prior to that, Kerry was the manager of the Local Public Health Institute, worked with stakeholders, subject matter experts, and trainers to develop and maintain a catalog of on-line and in-person trainings specifically for the Massachusetts local public health workforce.

Prior to falling in love with governmental public health in 2002, Kerry worked as a compliance administrator for a Boston mutual fund company, and a regional manager for a small chain of drycleaning stores on the South Shore. Kerry holds an MSW (Community Organizing, Policy

Planning and Administration) from Boston College, and a BA in English from Bates College, and is a member of the Reading Board of Health and MA Environmental Health Association Executive Board.

Kerry loves yoga, being barefoot, singing most anywhere, the ocean, and baseball. She took up running after she broke her ankle in 2014 and hopes to get back to racing and fundraising with Team Challenge this decade.

Jenn Gangadharan

Jenn joined Needham Shared Services team in October 2024 as the Regional Public Health Nurse. Jenn has a variety of experience in community health, most recently working at the Brookline Health Department as an outreach coordinator. Prior to that, she worked in the Wellness Division at VNA Care while also teaching Community Health to nursing students at Simmons University.

Jenn has a BSN from the University of Massachusetts, Amherst.

In her free time, Jenn loves to be outside, active, and near the ocean whenever possible.

Tara Gurge

Tara has worked in the Environmental Health Unit since May 2000, first as the Environmental Health Agent and since 2017, as Assistant Public Health Director for Environmental and Community Health.

Tara holds a Bachelor of Science degree in Environmental Science, a Master of Science Degree in Public Health, and is a Registered Sanitarian. She is also a technical advisor and peer reviewer for the National Environmental Health Association. Tara's work in the field has included internships at the New England Interstate Water Pollution Control Commission and the Mass Department of Environmental Protection as well as a two-year fellowship at the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC NIOSH).

Tara is married and has three wonderful children – Daniel, Benjamin, and Caroline, has two cats (Sweet Pea and Brewster), and has recently adopted a rescue puppy named Bailey.

Rebecca Hall

Rebecca began at NPHD as the Traveling Meals Program Coordinator on March 7, 2022. Her undergraduate degree is from Western Michigan University, and she has an MBA from Babson College. Rebecca has worked in marketing and client service experience in large and small organizations. Her clients have ranged from individual customers to multimillion-dollar corporations.

In recent years, Rebecca operated a home-based baking business specializing in decorated sugar cookies for special occasions.

Angela MacDonnell

Angi has been a project coordinator for the Needham Public Health Department since November 2020 when she joined the Prevention Team to oversee the Vaping Cessation Program at Needham High School. Today Angi supports the Substance Prevention Alliance of Needham (SPAN), the coalition of community stakeholders who support youth and their families in making healthy choices.

Angi spent 20 years working in information technology. It was her role as Technical Support Coordinator at the Holyoke Health Center in Holyoke, MA that introduced her to public health.

Angi is a person living in long-term recovery, and she brings over twenty-five years of lived experience to her prevention work.

In her 20's, Angi had a job cleaning houses in western Massachusetts, among them Emily Dickinson's house. Years later she was a student at Mount Holyoke College and took a poetry class in that home.

Padraig Martin

Pat joined the Needham Public Health Division in January 2025 as an Environmental Health Trainer for the Training Hub. Bringing over a decade of experience in public health, Pat has worked as an inspector, lead health compliance officer, and industrial hygiene technician, with a focus on environmental health.

Padraig holds a Bachelor Science in Public Health and is a Registered Environmental Health Specialist (REHS).

In his free time, Pat enjoys restoring old woodworking machines, making furniture, cycling, and spending time outdoors with his wife and German Shepherd.

Julie McCarthy

Julie joined Needham Public Health as the epidemiologist in November 2021. She holds a B.S. in Biology and M.S. in Infectious Disease and Global Health. After receiving her master's degree, Julie worked in a variety of roles in a Lyme disease lab at Tufts Medical School, beginning with work on a clinical trial that entailed placing uninfected larval ticks on willing participants. Julie then worked with Lyme disease vaccine candidates, and later became the lab manager and data analyst, working on RNA sequencing data generated from a variety of projects within the lab. Ultimately, an interest in using data science in more real-world applications to directly benefit the health of communities lead her to Needham.

Julie lives in Franklin, and enjoys reading, running, yoga, and going on long walks and hikes with her husband.

Timothy Muir McDonald

Tim serves as the Director of Health & Human Services in the Town of Needham, a position he has held since 2017. Prior to this role, Tim served as the Town's Public Health Director for a little over two years. Before that he served in a variety of emergency planning and management roles at the Massachusetts Department of Public Health, the Conference of Boston Teaching Hospitals (COBTH), and Boston's Office of Homeland Security (now Office of Emergency Management).

Timothy holds a bachelor's degree in Government from Harvard College and a master's degree in Public Administration from the Harvard Kennedy School. He completed the HKS-HSPH National Preparedness Leadership Initiative executive training course in 2012. Tim is passionate about how a responsive government can make a difference and improve the lives of its people.

Tim enjoys taking walks in the Arnold Arboretum with his wife, which is right down the street from his house on Peters Hill in Roslindale.

Amy McInerney

Amy joined the Needham Shared Services team as the Regional Environmental Health Agent in July 2024. Prior to this position, she worked in various roles in local public health including with the Academic Public Health Corps, Chelmsford Health Department, and Leicester Regional Public Health Coalition. Amy's first public health job out of school was as a Covid-19 contact tracer for NPHD, so she is happy to be back!

Amy earned her MPH from Boston University in 2021 with a certificate in Health Policy and Law, and her B.S. in Public Health from UMass Lowell in 2019 with a concentration in Community Health-Health Promotion. She also holds certifications in food protection, Title 5 system inspections, and pool operations. Amy is passionate about the intersection in public health where education and equity meet enforcement, so working as an inspector is extremely rewarding.

In her free time, Amy enjoys reading fantasy novels, going on long walks, over-analyzing Taylor Swift lyrics, and spoiling her two cats, Arthur and August.

Samantha Menard

Sam joined the Needham Shared Services Team as Lead Trainer & Assistant Manager in August of 2023. She earned her MPH from Boston University in 2018 with a Certificate in Epidemiology & Biostatistics and her undergraduate degree from the University of Rhode Island where she majored in Animal Science. Sam interned at the Brookline Health Department during grad school and developed a love for local public health.

After graduating Sam spent a year as an Environmental Health Specialist for Newton Health & Human Services followed by four years as a Senior Public Health Inspector for Brookline Health & Human Services. She has served on the Massachusetts Environmental Health Association Executive Board since fall of 2022. Sam holds certifications in lead determination, food protection management, pool operation, and MA Public Health Institute Training in housing.

Sam loves to play volleyball, travel, and listen to podcasts (recommendations are always welcome). She also loves to spend weekends at the beach in Rhode Island, her home state.

Karen Mullen

Karen Mullen worked in sales, marketing, and communication for twenty years prior to her work with the Needham Public Health Division. Karen grew up in New Jersey and is a graduate of Boston College, where she earned her BS in Business and Marketing, and Bentley University, where she earned her MBA.

Karen is a Needham resident whose two children attended Needham Public Schools. She has worked on the Substance Use Prevention team since 2011. Karen works primarily in the schools as the advisor to the Needham High School club *Students Advocating Life without Substance Abuse* (SALSA). She is proud to support the hundreds of Needham teens who have chosen to make their health a priority by educating and advocating for their peers about prevention, health, and wellness.

Karen and her husband Rich rescued Rosie, a puppy from the South who has brought much joy and excitement to their previously empty nest!

Sainath Palani

Sai has a Master of Public Health in Epidemiology & Biostatistics and Chronic & Non-Communicable Diseases from Boston University. He grew up in the suburbs of New Jersey and received his Bachelor of Science in Environmental Science from Rutgers University in May 2017. He worked as an environmental scientist doing a combination of field work and report writing for industrial and hazardous waste sites across the Northeast. He then moved in with his family to Needham and he pursued his MPH degree. During this time, Sai realized that he enjoyed working outside and serving the public and decided to commit to working in local public health. For the past year and a half, he has worked as the Environmental Health Agent at the Quabbin Health District in western Massachusetts.

Sai loves to play tennis, meditate, watch films and stand-up comedy, garden, and hike in the woods or by freshwater bodies.

Monica Pancare

Monica is a Certified Professional – Food Safety (CP-FS) and has been a part-time environmental health agent conducting risk-based food inspections since December 2018. Monica's unique

background in food service management and culinary operations allows her to provide subject matter expertise, technical assistance, and regulatory compliance in food service establishments. She is a chef graduate of The Culinary Institute of America and received her Bachelor of Science in Restaurant Management from Florida International University.

In 2009, Monica went back to the “classroom” in Napa Valley and completed her first level of wine accreditation and achieved the status of certified wine professional. In her spare time, Monica enjoys cooking, restoring vintage Weber grills, mini car trips, and spending time with family.

Kristan Patenaude

Kristan lives in Amherst, New Hampshire, and has worked for the past six years there as the Town’s main meeting secretary for nine boards and commissions. She has previously completed her master’s degree in Environmental Science and Journalism at Green Mountain College in Vermont. She lives with her two children and two cats.

Recently, Kristan has been considering branching out and creating an LLC, as her minute taking business has expanded. She currently takes the minutes for nine different towns: Amherst, NH; Lebanon, NH; Charlestown, NH; New Boston, NH; Falmouth, MA; Boxborough, MA; Lexington, MA; Guilford, CT; and, of course, Needham, MA. Kristan loves learning about new municipalities and their inner workings.

Pamela Ross-Kung

Prior to joining Needham as an Environmental Health Inspector, Pamela worked for Safe Food Management, a consulting firm that she founded over 30 years ago. The firm offers inspectional services to municipalities; audits for retail and wholesale operations; plan reviews for new and existing facilities; epidemiological assistance in suspected or confirmed foodborne illness outbreaks; food safety training; program development and implementation; and assistance to local boards of health to meet the requirements of the FDA Voluntary Retail Program Standards.

Pamela has also worked in the foodservice industry in a variety of roles, which has helped her understand food operations and the daily challenges they face.

Pamela is a Registered Sanitarian, MA Department of Environmental Protection Approved Title V System Inspector, and Soil Evaluator with undergraduate degrees in food science and business management, and a master’s degree in training and development from Lesley University. Pamela is a registered “ServSafe” food safety training instructor, and certified trainer for Hazard Analysis Critical Control Point.

Pamela loves to spend time with her family and take walks with her mini-poodle Lincoln. She is an avid reader and gardener, and in the warmer months she works with her husband tending to their home vegetable garden and fruit trees.

Carol Read

Carol Read, Certified Prevention Specialist, has been working on substance use prevention with the Needham Public Health Division since 2008 when she began doing community outreach. She was the program director and grant manager for Drug Free Communities from 2009-2015 and is now managing a state-funded grant program with the towns of Dedham, Walpole, and Westwood. The grant is Massachusetts Collaborative for Action, Leadership, and Learning, better known as “MassCALL3”. The two primary program goals are to prevent underage substance use and to build prevention capacity across the region.

Carol has a Master of Education in Counseling – Substance Abuse. She worked as a clinician in the evening treatment program for NORCAP, a Southwood Hospital program, and is a licensed Massachusetts school counselor for grades 5-12. Carol is a member of the Board of Health in Medfield, where she has lived for 31 years.

Lynn Schoeff

Lynn came to Needham Public Health Division in 2016 after it was clear that “retirement” wasn’t working for her. Lynn’s forty-year career began as a therapist working with adolescents, families, and substance abusers. She then ran a school-based health center in an urban high school, managed community health programs for a city health department, and directed emergency preparedness programs for a complex system of hospitals and public health departments.

Lynn currently works on public health accreditation, grant-writing, program development, policies and procedures, and other odd jobs around the division.

Lynn is an avid curler. She plays a few times a week, tends bar at the curling club, and is an instructor of this quirky sport that originated in Scotland about 500 years ago.

Karen Shannon

Karen, a Certified Prevention Specialist, has been working on youth substance use prevention since 2015 when she started as a part-time project coordinator for the Drug-Free Communities grant project. In 2019, Karen became the Program Director for the Substance Prevention Alliance of Needham (SPAN), a coalition of community stakeholders who bring a civic-minded, collaborative, and data-driven approach to preventing youth substance use. SPAN offers Needham residents education, support, and resources for preventing or navigating substance use and misuse among Needham youth.

Among Karen’s responsibilities is to lead the Substance Use Prevention Team and to oversee grant-funded programs, including the federal Sober Truth on Preventing Underage Drinking Act grant project (STOP Act).

Dawn Stiller

Dawn Stiller, the Administrative Analyst, manages the financial aspect of the Needham Public Health Division. Dawn has been with the Public Health Division since 2014 and with the Town of

Needham since 2007. She attended Westfield State College and received a Bachelor of Science degree. Dawn has extensive customer service experience from working at CVS for 16 years and other customer service positions. Dawn gained her financial experience working at Harvard School of Public Health, CVS, and the Needham Tax Collector's office. She came to the Health Division after working in the Tax Collector's office.

Dawn likes her current position's combination of financial and administrative responsibilities. She has two wonderful nieces who she enjoys spending time with. She looks forward to family vacations on the Cape. She enjoys traveling with her significant other, attending live music concerts and spending time at different beaches.

Vanessa Wronski

Vanessa joined NPHD in June 2023 as a part-time project coordinator on the STOP grant. She received her Bachelor of Science in Pre-medical Studies in 2013 with hopes of attending medical school, but soon realized that she wanted to help others on a much larger scale. Vanessa received her master's in Healthcare Administration in 2018 from the Massachusetts College of Pharmacy and Health Services, where she also earned her bachelor's degree.

Prior to joining Needham, Vanessa worked for a local organization to provide training and technical assistance in substance use disorders, homelessness, mental health recovery, racial equity, and other public policy concerns.

Vanessa is originally from Brazil and has been in the United States since 2002, with English being her second language. In her free time, she enjoys reading, creating art, baking, and spending time with her family. Vanessa and her husband have been residents of Needham since 2018 and enjoy walking around the town center with their son, Luca, and Cavalier king Charles, Ollie.
