



Needham Board of Health

AGENDA

Tuesday March 29, 2022

9:00 a.m. to 11:00 a.m.

**Powers Hall
Needham Town Hall
1471 Highland Avenue, Needham MA 02492**

Or via Zoom

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" and enter the meeting ID **862 5946 4712** and passcode **504421** or click the link below to register:
<https://us02web.zoom.us/j/86259464712?pwd=cW9xbjNsQXFMYUdKYnByaFAzZEFpdz09>

- **9:00 to 9:05 – Welcome & Review of Minutes (February 10th, March 4th)**
- **9:05 to 9:10 – New Team Members**
- **9:10 to 9:30 – Staff Reports (February)**
- **9:30 to 9:40 – COVID-19 Update**
 - Vaccination Efforts
 - State-level Hospitalization Data
- **9:40 to 9:50 – #1688 Central Avenue and Licensed Site Professional Scope**
- **9:50 to 10:00 – Synthetic Field Turf Testing & Results**
- **10:00 to 10:10 – Continued Discussion of Pesticide Use Reduction Project**
- **10:10 to 10:40 – Medical Marijuana Regulations**
- **10:40 to 10:50 – Continued Discussion of Entheogenic Plants and their Impacts**
- **10:50 to 10:55 – Board of Health Votes: Agent Re-designation & Charge to Educate & Inform Community re: Health Implications of Policies & Programs**
- **10:55 to 11:00 – Other Items**
 - *Board of Health Re-Organization at April 2022 Meeting*
 - *314 CMR 16.00: Notification Requirements for Pollution/Combined Sewer Overflow*
 - *Olin College Plumbing Variance – Information Only*
 - *Proposed Legislation S2667 Private Wells – Information Only*
- **Next BOH meetings**
 - Regular Monthly Meeting April 27, 2022 6:00 to 8:00 p.m.
- **Adjournment**

(Please note that all times are approximate)



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Board of Health Meeting Minutes DRAFT

Date: February 10, 2022

Location: Remote via Zoom per Governor Charles Baker's COVID-19 Executive Order 3/12/2020 and amended as of 6/15/2021

Members: Robert A. Partridge, MD, MPH, Chair
Christina S. Mathews, MPH, Vice Chair
Edward Cosgrove, PhD, Member
Stephen Epstein, MD, MPP, Member
Kathleen Ward Brown, ScD, Member

Staff Present: Timothy Muir McDonald, Health and Human Services Director; Tara Gurge, Assistant Director of the Public Health Division; Tiffany Zike, Assistant Director of Public Health; Maryanne Dinell; Karen Shannon; Carol Read; Mary Fountaine; Lynn Schoeff; Julie McCarthy; and Diana Acosta

Call to Order

Dr. Partridge called the meeting to order at 5:00PM and initiated roll call. Present were Dr. Partridge-Y, Dr. Brown-Y, Ms. Mathews-Y, Dr. Cosgrove-Y and Dr. Epstein-Y.

The meeting is being conducted remotely using Zoom consistent with Governor Baker's March 12, 2021 executive order and as amended on June 15, 2021, regarding COVID-19. The materials for this meeting were circulated previously and are available on the Town website. This meeting is being recorded.

Approval of Minutes of January 20, 2022

Upon motion duly made by Dr. Epstein and seconded by Dr. Cosgrove, it was unanimously voted to approve the above minutes as amended. Dr. Partridge-Y, Ms. Mathews-Y, Dr. Brown-Y, Dr. Cosgrove-Y and Dr. Epstein-Y. Motion passed 5-0.

Staff Reports

Emergency Management – Michael Lethin

Mr. Lethin reported that the Emergency Operations Center had a pre-incident meeting on Thursday and made the decision to close Town buildings and postpone the Covid clinic scheduled for Saturday, January 29th. The decrease in road traffic was a boon to the DPW in its cleanup efforts. The high snowfall rates created challenges to snowfall removal and some roads were impassible in the late afternoon. Recovery efforts Saturday night resulted in clear roads on Sunday, and the snow was hauled away on Monday. The light and fluffy nature of the snow caused only sporadic and short-term power



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outages, and the opening of a warming center was not needed. The heavy storm during the following week presented challenges along with a fire at the Harvey establishment.

The hazard assessment contract was awarded to Coll Consulting, which will lead the hazard and vulnerability assessment. This assessment will be supported by the emergency management performance grant of \$8,500. The Town has recently been awarded \$3,000, which will fund hazmat tabletop exercises for Town departments, the hospital and other partners.

MEMA confirmed that personal protective equipment is available for any municipal facility that requires supplies to continue and maintain services. Although Mr. Lethin has not yet received requests, this equipment (KN95 and surgical masks) is available to the Library, Center at the Heights, and Parks and Recreation. The Police Department has also stockpiled equipment that is readily available.

Emergency Management – Ms. Zike for Taleb Abdelrahim

Ms. Zike reported that Mr. Abdelrahim is assisting the nurses with the Covid child vaccine clinics. He is setting up Medical Reserve Corps (MRC) trainings for next year, and next week will be coordinating training with the Brookline Police Department on active threat and situational awareness. The NC-8 MRC activation questionnaire has been submitted, and a \$50,000 grant has been awarded for Covid response from Metro-West Health Foundation. Plans for setting up outdoor testing are underway. The Abbott testing machine will be rented for one year with the requirement of at least 300 tests/per year. The cost of each test is \$45 and takes twelve minutes to obtain results. The machine can also test for flu. A decision will be made about the purchase of a machine by February 2023.

Travelling Meals Program – Maryanne Dinell

Ms. Dinell reported that 711 meals had been delivered in January. A 911 call was initiated for a consumer in need of medical attention. Ms. Dinell reminded the Board that she is retiring in a few weeks, and she said was grateful for the opportunity to have served the Town.

Ms. Gurge reported that interviews for Ms. Dinell's replacement had been conducted and final interviews were scheduled for next week.

Environmental Health – Tara Gurge and Diana Acosta

Ms. Gurge reported that a sixty-day permit had been issued to The Rice Barn. Follow-up inspections by Ms. Acosta and Ms. Pancare revealed the same routine violations week after week. A revised agreement signed by the owner included additional food safety requirements. Also, the owner is required to hire and work with a food consultant to have additional training for his existing and new staff, and unannounced inspections will be conducted. Copies of food consulting reports will determine an extension of the food permit beyond sixty days. An assessment will be done at the end of March.

Discussion ensued about the problems created by a possible language barrier. Mr. McDonald stated that it is the responsibility of the owner to request translation services. The owner of the Rice Barn has hired a food consultant he has worked with previously who speaks Chinese. An employee on site also has offered to translate in Thai for employees who need it. Dr. Epstein noted that it is also the owner's responsibility to establish his or her authority with staff and the rules of operation. Mr. McDonald



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stated that the Public Health Division is considering a process whereby written materials of memoranda of agreement are provided in the owner's native language.

Ms. Acosta reported that she is awaiting the delivery of the ten PurpleAir sensors awarded by the state. The sensors must be deployed within sixty days of receipt. She has reached out to the superintendent of schools and school principals and has received a favorable response from the Pollard Middle School science department. She has clarified their use as being outdoor and not indoor. Collaboration with the schools will enable Wi-Fi access of the sensors. Dr. Brown noted that Town buildings would also provide access. Dr. Brown will work with Ms. Acosta in identifying suitable locations.

Ms. Acosta reported that an emergency approval of demolition of the Muzi Ford buildings was approved by the Building Department on January 28th due to an impending Nor'easter storm. All documents were submitted for the demolition health review. The contractor has arranged for follow-up of two pest control companies.

A dog-on-dog bite incident occurred on December 9, 2021 at a dog daycare in Dedham. On January 24, 2022, Ms. Acosta was contacted by the Rabies Program Coordinator from the MA Department of Agricultural Resources because she is the backup Animal Control. (The current Animal Control Officer is on leave and the backup in the Police Department was out of the office with Covid.) There was a delay in the daycare providing the state with the biting animal's information, and they were found to be living in Needham. Ms. Acosta was instructed to contact the owner in order to verify the dog was still alive. Diana contacted the owner and verified through a visual inspection that the dog was alive. Diana was instructed to issue, and immediately release, a ten-day quarantine of the dog as the quarantine period had already passed. The quarantine slip was given to the owner and a copy was sent to the MA Rabies Program in the Division of Animal Health.

Accreditation Report - Lynn Schoeff

Ms. Schoeff reported that the Public Health Accreditation Board (PHAB) Pathways Program had requested the submittal of a crisis communication plan. Ms. Schoeff worked with several plans that already existed and worked them into one plan to submit to PHAB. A review and feedback on the plan and other documents submitted is expected by the end of February. As part of the pilot program, Ms. Schoeff will also review and provide feedback to another community. She will update the Board in March.

MassCall3 Cluster – Carol Read

Ms. Read introduced Ellisa Dockstader as the MassCall3 Coordinator. With a background in nursing for five years, Ms. Dockstader is in her last semester at the Boston University School of Public Health and will be receiving a certificate in human rights, social justice and health policy law. She is excited to be working with Ms. Read on the project through a diversity, equity and inclusion lens.

Ms. Read reported that she had facilitated two in-person TIPS trainings, along with Sgt. Jay Sullivan of Dedham Police and Needham Chief John Schlittler, at both Dedham Town Hall and Needham Town Hall. Ms. Read is working with Ms. Dockstader on the year-one strategic plan for the tri-town grant that services Dedham, Walpole and Westwood.



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Dr. Epstein noted that of the eleven sales-to-minors violations, six establishments did not send employees for training. Mr. McDonald noted that the Select Board had voted on suspensions which took into account whether the establishment had attended TIPs training.

Dr. Brown noted that she has been following a local podcast (The Weekend Sober Podcast) conducted by two local women. Residents discuss their struggle to maintain sobriety during the pandemic.

Ms. Read encourages any opportunity to discuss the components and realities of alcoholism. She offered several resources to support the Board's efforts to raise public awareness. Dr. Brown stated that this particular impact of the pandemic will be unravelling for a long time.

Substance Use Prevention – Karen Shannon

Ms. Shannon reported the Parent Action Team had launched a new initiative called T.A.L.K., "Talk About Life with Your Kids." Biweekly messages posted on the Substance Prevention Alliance of Needham (SPAN) social media pages provide middle and high school parents with conversation starters and tips for engaging between parent and child. Children of parents who talk with them about the dangers of substance use early and often are fifty percent less likely to use drugs than those who do not receive these critical messages at home. The campaign, which has reached 1,500-1,800 parents on SPAN's social media pages, is ongoing with plans to continue through the end of May.

Ms. Shannon also reported that on January 10th the STOP grant (STOPping Underage Access and Use of Alcohol) team organized a TIPS training for Needham alcohol licensees. Twenty-one people attended the in-person training facilitated by Carol Read and Officer Jay Sullivan of the Dedham Police Department. There were nine alcohol-licensed businesses represented at the session. Of the eleven businesses which received sales-to-minor violations during the December 1st compliance checks, six sent employees to the training. At the January 31st training, six employees from Needham businesses attended the training, two businesses of which had sales-to-minor violations. Three business out of the eleven with violations were not represented at either training.

Ms. Shannon also reported that there are now two hundred members in the Needham High School SALSA program (Students Advocating Life without Substance Abuse). During January, thirty-six SALSA students contributed over one hundred and seventeen hours of service. Seventeen students returned to the Pollard Middle School eighth-grade wellness classes for the first in-person presentation in two years. They shared healthy decision-making skills to avoid risky behaviors and practiced refusal skills in skits. Very favorable feedback was received from this peer-to-peer outreach.

Ms. Shannon reported that SPAN posted information on their social media pages about "Dry January," a public health initiative that was begun in 2012 by Alcohol Change UK, a British charity. Dry January is an opportunity for adults to reflect on their own alcohol consumption and choose to stop drinking alcohol for the month. SPAN's post included resources about alcohol abstinence including "The Weekend Sober" podcast hosted by local community members.



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Public Health Nursing – Mary Fountaine

Ms. Fountaine reported that Ms. Burnett had conducted eleven Covid vaccination clinics in January. The case investigation team was able to provide outreach to almost 98% of pediatric cases, totaling close to 600 cases. Both Ms. Fountaine and Ms. Burnett were recertified in CPR and were in the process of achieving certification as CPR Instructors. Two new Boston College nursing students started in January.

Dr. Epstein expressed alarm that hepatitis cases are running ahead of average with eight cases in 2020, six cases in 2021 and nine cases thus far in 2022. Ms. Fountaine advised that hepatitis-c cases do not require follow-up, and no reason for the numbers was readily available. Dr. Epstein requested follow-up be done, which Ms. Fountaine agreed to perform. Dr. Brown asked for information on a case of legionellosis, which had been lost to follow-up.

Discussion followed on the January Covid report attached hereto. Dr. Epstein commented on the positivity rate of 7.8%, far above the comfort level of 2.5% or below, and discussed establishing a standard for releasing the mask mandate in municipal buildings.

Mr. McDonald noted that the Department of Elementary and Secondary Education (DESE) is adopting a “mask-friendly” policy in the schools as of February 28th. Schools may reduce mask wearing if 80% of the children are vaccinated. The Health and Safety Committee decided to extend that deadline to March 7th, one week after February vacation with its increased risk of exposure to due travel.

Discussion ensued on the mask mandate, which is now under local, rather than state, control. Dr. Epstein suggested that since vaccinations are due to be posted for the school-age group in the spring, that Needham adopt the policy that requires students to be fully up-to-date on vaccinations in order to go maskless. While DESE requires 80% of population “fully vaccinated,” this policy would be in line with the CDC policy requirement of up-to-date vaccination. He noted that the high school has an up-to-date vaccination rate closer to 60% which is not sufficient. The school should notify students that they are due to have a booster, and if they have not received it, they would be required to wear masks. Ms. Zike noted that it would be difficult for schools to enforce this policy.

Dr. Epstein stated that the hospital in Needham was overwhelmed during the recent outbreak of Omicron cases, and he noted the existence of the German variant now in progress. His main concern is to do everything possible to maintain a vaccination policy that will ensure the reduction in hospitalizations in the event of an outbreak of another variant.

Ms. Zike noted that clinics were busy during the Omicron outbreak but have significantly trailed off. Discussion ensued on enlisting the schools to get the message about the importance of vaccinating and boosting children out to vaccine-reluctant parents. Ms. Burnett and Ms. Fountaine will reach out to Susannah Hann in school health services on enlisting the cooperation of parents in vaccinating their children, and Dr. Partridge will take the matter to the school Health and Safety Committee.



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Discussion ensued on the need for effective outreach. The Board suggested that a letter from the Superintendent be sent to families notifying them that the Board of Health strongly recommends, for the health and safety of the school community and community at large, that all children be vaccinated and boosted on the spring timeline. Staff members are available to answer parents' questions about the vaccination in general or refer them to their pediatrician for specific concerns.

Mr. McDonald agreed to discuss the Board's concerns and suggestions with the Health and Safety Committee.

1688 Central Avenue and Licensed Site Professional Scope of Work

Mr. McDonald reported that, pursuant to a meeting with Town Counsel, a request for proposal was sent to seventeen state-approved companies in the MetroWest region, excluding any companies that had worked with the developer and any companies that had records of any license or financial violations. The cost would be funded by a special warrant article that had been passed to allow for funding technical expert consultation contracts.

The scope of the project would be two-pronged: the opinion of the expert on the project without knowing what is proposed by the developer; and a separate opinion of the project comparing and contrasting what is proposed with an opinion on the specific aspects of the proposals. The developer and its counsel have the right to set the terms of the site professional's access to the site and the Board of Health does not have authority to override. However, the Board's report to the Planning Board will reflect those facts if they have interfered with a full assessment.

Residents Holly Cooke and Maggie Abbruzzese appeared before the Board. Ms. Cooke wanted to be assured that not only would all official municipal departmental files be made available to the site professional, but all other files and documents from concerned residents including emails, etc. Ms. Abbruzzese asked for clarification of the Board of Health's role in advising the Planning Board of its opinion based on the assessment.

Dr. Epstein noted that the Board will provide an opinion to the Planning Board based on the report by the site professional. If the site professional is not able to provide a full assessment due to inaccessibility to the site, that will be included in the Board's report. A building permit would require the Board of Health to sign off prior to issuance.

Mr. McDonald noted that the Board has the authority under Chapter 111 of the M.G.L. to safeguard the health and safety of the community. If a building presents a potential environmental hazard, the Board can issue an emergency order and require that remediation efforts be done before the issuance of a building permit.

Mr. McDonald will update the Director of Planning and Community Development by email and cc members of the Board.



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Synthetic Field Turf Testing and Results

The report revealed the presence of acetone. Discussion ensued. Ms. Gurge noted that the engineer at Fuss and O'Neill had stated that acetone is widely used as a solvent in laboratories and cannot be removed from the lab.

Following discussion, it was agreed that Ms. Gurge would contact Fuss and O'Neill to inquire whether it would be feasible to conduct a retest in the summer or fall along with a field blank. Mr. McDonald noted that there were two other elevated compounds found. Ms. Gurge will research previous reports, and Dr. Brown will follow up with the engineering firm for further clarification.

Pesticide Reduction PSA and Brochure Drafts

Mr. McDonald stated that a pesticide reduction campaign was launched in response to health concerns from a resident, as well as the general widespread use of pesticides on residential lawns. An informative public service announcement and brochure warns residents that pesticides are harmful and should be eliminated if possible. Mr. McDonald reported that the resident is not satisfied with the efforts made thus far and continues to express frustration that the Town is not going far enough to encourage the reduction of chemicals.

Discussion ensued. Dr. Epstein noted the resident did not have the support of the Town, and the warrant article banning the use of all chemicals was defeated at the last Town Meeting. Mr. McDonald noted that the Town participates in the state-generated integrated pest management at all school and town buildings. He also cited that on the upcoming Town Meeting a warrant article asks for funding of \$360,000 to remove the buildup of nitrogen at Walker Pond and advocates for less use of fertilizers.

Discussion ensued on the format and content of the brochure and materials with suggestions for clarification. A moderate approach was suggested to encourage better practices and reduction wherever possible. It was noted that some chemicals are needed to eliminate toxic growth like poison ivy, so the entire banning of chemicals would not be appropriate.

Ms. Gurge will work with Ms. Ally Littlefield in revising the materials incorporating the suggestions of the Board and will present at a later meeting.

Hungry Coyote Restaurant Compliance Issues

Mr. McDonald updated the Board on the Hungry Coyote Restaurant compliance issues. He stated that the restaurant has made progress, has been granted a conditional six-month permit, and will be subject to increased scrutiny going forward.

Mr. McDonald stated that his goal is to develop protocols for a more consistent process for the Health Division in cases of food code violations and would include translated memoranda of understanding when there is a language barrier. Dr. Epstein suggested a single sheet with multiple languages stating that a translated copy of the document is available on request.



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Mr. McDonald went on to say that no one anticipated Hungry Coyote's defiance of the closure order. He noted that typically restaurant owners appear before himself and Ms. Gurge who act as administrative hearing officers. He suggested changing this practice so that the owner appears before the entire Board at one of its scheduled meetings. The recorded meeting may then be reviewed for clarification of what was discussed and required. It must be absolutely clear that once a closure order is issued, the court process will immediately be instituted if the restaurant continues to operate in defiance of the order. Mr. McDonald suggested that specific guidelines should be in place to ensure that an established process is followed.

Discussion also ensued on the assessment of fines. Defiance of closure orders should definitely carry consequences of fines. However, if the owner cooperates, the assessed fines could be held in suspension pending six months of continued compliance. If problems continued, however, the fines would be levied. While the fines are nominal, the real cost to the restaurant is loss of revenue during closure. Ms. Gurge clarified the difference between fines and fees for inspection.

Dr. Epstein stated that the restaurant must be held accountable for remaining in operation for three days in blatant violation of the closure order until it was clear that the Board was going forward with the injunction. Dr. Epstein said that holding fines in suspension in this case would create a poor precedent. Dr. Cosgrove agreed with Dr. Epstein that on the first day of defiance of the closure order, the Health Division should have filed a court injunction to padlock the premises. The Board must set a clear precedent that defiance will not be tolerated.

Mr. McDonald noted that the restaurant's liquor license has been suspended with the possibility of revocation. The Select Board was very concerned that the alcohol manager was absent from the premises, a direct violation of the license. Dr. Epstein pointed out that the Select Board may view the Board's action in suspending fines as an interpretation of a "slap on the wrist" in light of its serious consideration to revoke the liquor license.

Mr. McDonald stated that the Board had adopted the state standard that fines should go directly to the Town. Ms. Gurge noted that violation of the Federal Code contains criminal and non-criminal assessment of fines.

Mr. McDonald will reach out to Town Counsel for further clarification and report back to the Board at its next meeting.

Next Meetings

March and April – to be determined.

Adjournment

Upon motion duly made by Dr. Epstein and seconded by Dr. Brown, it was unanimously voted to adjourn. Dr. Partridge-Y, Dr. Brown-Y, Ms. Mathews-Y, Dr. Cosgrove-Y and Dr. Epstein-Y. The meeting adjourned at 7:24PM.

Attachment: February, 2022 Meeting Packet



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Board of Health Meeting Minutes DRAFT

Date: March 4, 2022

Location: Remote via Zoom per Governor Charles Baker's COVID-19 Executive Order 3/12/2020 and amended as of 6/15/2021

Members: Robert A. Partridge, MD, MPH, Chair
Christina S. Mathews, MPH, Vice Chair
Edward Cosgrove, PhD, Member
Stephen Epstein, MD, MPP, Member
Kathleen Ward Brown, ScD, Member

Absent: Christina S. Mathews, MPH, Vice Chair

Staff Present: Timothy Muir McDonald, Health and Human Services Director; Tara Gurge, Assistant Director of the Public Health Division; Tiffany Zike, Assistant Director of Public Health; and Julie McCarthy

Call to Order

Dr. Partridge called the meeting to order at 6:00PM and initiated roll call. Present were Dr. Partridge-Y, Dr. Brown-Y, Ms. Mathews-Y, Dr. Cosgrove-Y and Dr. Epstein-Y.

The meeting is being conducted remotely using Zoom consistent with Governor Baker's March 12, 2021 executive order and as amended on June 15, 2021, regarding COVID-19. The materials for this meeting were circulated previously and are available on the Town website. This meeting is being recorded.

Covid-19 Update

Julie McCarthy updated the Board on Covid-19 including the following highlights:

- Incidence rate, percent positivity and vaccination rates
- Needham tests over time
 - o Total tests last two weeks vs. % positivity
- Needham daily cases 11/15/21-3/4/22
- Needham cases by age
- Needham vaccination and booster rate
- State trends in cases and hospitalizations
- On the lookout: BA.2 variant
- CDC updated mask guidance 2/25/22



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- Downward trend continues in MA daily cases and percent positivity
- MA new confirmed cases by age
- MWRA wastewater monitoring
- Hospitalization rates (per 100K) all ages

Dr. Partridge stated that the town of Wellesley had lifted its mask requirement to be effective as of March 7th.

Mr. McDonald noted that the Board had an emergency order in place requiring face coverings in municipal buildings and places where youth and seniors frequent, i.e. library, senior center, parks and recreation programs, etc. Since the order does not have a sunset provision, he asked the Board for its decision to either modify or rescind the emergency order.

Discussion ensued. If the order is lifted, the Board's strong advisory for masking in indoor settings for vulnerable populations would remain in place.

Vote to Rescind Emergency Order

Upon motion duly made by Dr. Epstein and seconded by Dr. Brown, it was unanimously voted to rescind the emergency order regarding face coverings to be effective on March 7, 2022. Dr. Partridge-Y, Dr. Brown-Y, Dr. Cosgrove and Dr. Epstein-Y. Motion carries, 4-0.

Mr. McDonald stated that KN95 and surgical masks had been distributed to town departments. Dr. Brown expressed concern that the respirator protection requirement for N95 masks is not being enforced. Ms. Zike stated that the N95 masks available at Home Depot and CVS are not medically approved and do not require medical fitting. Outreach continues to older residents to get boosted, as well as the 5-11 year age group to be fully vaccinated.

Next Meetings

March 29 and April 27.

Adjournment

Upon motion duly made by Dr. Epstein and seconded by Dr. Brown, it was unanimously voted to rescind the emergency order regarding face coverings to be effective on March 7, 2022. Dr. Partridge-Y, Dr. Brown-Y, Dr. Cosgrove and Dr. Epstein-Y. Motion carries, 4-0.

Attachment: *March 4, 2022 Meeting Packet*



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Staff Introductions

March 7, 2022

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. He has been supporting the Medical Reserve Corps & Emergency Preparedness programs.

Previously, Taleb worked five years as a Second Mates in oil tanker, liquid petroleum gas, and more 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.

Roland Abuntori

Roland began working at NPHD in February 2022 as a part time environmental health agent in the Shared Public Health Services program. He is currently studying for a master's degree at the Harvard T.H. Chan School of Public Health. Prior to graduate school, Roland worked as an Environmental Health and Safety Specialist with the Florida Dept. of Health in Miami where he was responsible for ensuring health and safety compliance in hospitals, clinics, pharmacies, and tattoo parlors across the Dade County. He also worked as a covid-19 investigator-contact tracer. He earned his bachelor's degree in Environmental Health from East Central University in Oklahoma. Roland is credentialed by the National Environmental Health Association as a Registered Environmental Health Specialist and Registered Sanitarian.

In his free time Roland likes to go to the movies or play soccer with friends.

Diana Acosta

Diana Acosta, the Shared Public Health Services Grant Project Manager, has been with NPHD since August 2017 after earning her MPH from Boston University in May of that year. In the final semester of graduate school, Diana was the Environmental Health Intern for the Brookline Health Department. In her time in Needham, she has earned her Registered Sanitarian/Registered Environmental Health Specialist, ServSafe Food Protection Manager, Certified Pool Operator, MA PHIT Housing Inspector, Soil Evaluator, and Title 5 System Inspector certificates. She enjoys attending various conferences like NEHA and AFDO's respective Annual Educational Conference to continue learning about the field and improving her work.

Before falling into the public health field, she studied and worked in marine biology. As an undergrad, Diana worked with a lab which led her to work in Belize for two summers where she worked primarily underwater using scuba, diving throughout the entire Belizean Barrier reef, the second largest barrier reef in the world. She was also able to spend a semester in the rainforests of Far North Queensland in Australia.

Hanna Burnett

Hanna Burnett joined Needham Public Health in September 2020 as a part time public health nurse. She received her bachelor's in nursing science in Finland in 1998. She has lived in MA since 2005 and has worked in the ICU at St. Elizabeth's hospital for most of her American nursing career. As a foster parent she 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 on 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 The Five Love Languages by Gary Chapman.

Monica DeWinter

Monica is 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 Substance Prevention Alliance of Needham (SPAN), a coalition supporting substance use prevention among Needham youth.

Monica received her Master's in Public Health from Boston University during which time she was a Program Coordinator at Slone Epidemiology Center for the Thalidomide Survey for 7 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 (13) and Amy (10).

Ellisa Dockstader

Ellisa is the program coordinator for the Needham MassCALL3 program (Massachusetts Collaborative for Action, Leadership, and Learning). She works with the health departments in Dedham, Needham, Walpole, and Westwood on a strategic plan to prevent substance use in youth. Ellisa is currently finishing her master's program at Boston University School of Public Health where she is studying health policy and law, and human rights and social justice. Prior to coming to Boston, Ellisa worked as



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a patient care tech at Intermountain Hospital in Salt Lake City, Utah for four years. She has Bachelor of Science degree in Health Anthropology from the University of Utah.

Ellisa is passionate about health equity. She also works for the Activist Lab at BUSPH where she writes articles to engage students and organizes advocacy events.

Mary Fontaine

Mary joined the Public Health Division as a full-time nurse in fall 2020, the midst of the pandemic, to assist in Covid-19 response and contact tracing. She finished her Master of Science in Nursing, with a concentration in Global Public Health, in spring 2021 and is excited to get more involved in other aspects of public health post-pandemic.

Mary is married to a disabled veteran, and they fill their home with rescued dogs and cats, particularly those with special needs. Before changing careers for nursing, Mary worked as a biologist in various fields, including wastewater treatment and nuisance wildlife removal.

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 MA Registered Sanitarian. She is also a Technical Advisor and Peer Reviewer for the National Environmental Health Association. Her 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 (18), Benjamin (15), and Caroline (10) and has two cats (Sweet Pea and Brewster) and has recently adopted a rescue puppy named Bailey.

Rebecca Hall

Rebecca begins as the new 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.

Jazmine Hurley

Jazmine began working at Needham Public Health in 2021 as a program coordinator with the STOP Act program. Prior to coming to Needham, Jazmine spent three years working in housing navigation and case management with people experiencing homelessness.

Jazmine has undergraduate degrees in Sociology and in Health, Society, and Policy from the University of Utah. She is currently enrolled in a Master of Social Work program at Boston College. Jazmine's experience in public health includes research on college student contraception use, perceptions of mental health, intimate partner violence training, patient adherence, and the prevalence of past torture within new refugee populations.

Previously, Jazmine was a professional ballet dancer, and has since found passion in yoga, bouldering, and hiking. She and her cat, Mr. Bento, have recently relocated from Vermont and are excited to explore Needham and the surrounding areas.

Jessica Kent

Jessica is joining the new Accreditation Team in March 2022. She has a Bachelor of Arts in Public Health with a minor in Data Analytics from Regis College and is currently an MPH candidate at Purdue University.

For the past two years, she has been involved in Covid response at both the Food and Drug Administration and the Provincetown Health Department.

Michael Lethin

Michael joined the Town of Needham in August 2020 as the Emergency Management Administrator. Prior to coming to Needham, Michael worked as an Emergency Manager in the Massachusetts Air National Guard, and he continues to serve in the Air Guard as a reservist in the Office of the Inspector General. He also previously worked as an emergency preparedness intern at the Boston Public Health Commission, reviewing and updating point of distribution plans. Michael received a BA in Political Science from Wheaton College and an MS in Security Studies from the University of Massachusetts, Lowell.

Michael enjoys exploring new places in Boston and is an avid reader of science fiction.

Ally Littlefield

Ally initially joined NPHD in June 2021 as an intern and transitioned to part-time Environmental Health Agent in February 2022. She recently received her Master of Science in Nutrition at UMass Amherst and has a background in public health nutrition. Ally previously worked as an administrative assistant for the UMass Extension Nutrition Education Program where she assisted with the development of classroom curriculum. She loves working within communities and is fascinated by all aspects of public health.



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Before beginning her professional career, Ally was a baton twirler in the UMass Minuteman Marching Band for 5 years. In her free time, she enjoys group fitness classes and spending time with her family and corgi.

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.

In her 20's Angi had a job cleaning houses in western Massachusetts, among them Emily Dickinson's house. Years later I was a student at Mount Holyoke College and took a poetry class in her home.

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, she 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 to use data science in more real-world applications to directly benefit the health of communities around her lead her to Needham.

She lives in Newton, and enjoys reading, running, and yoga, and going on long walks and hikes with her husband!

Cindi Melanson

Cindi is joining the new Accreditation Team in March 2022 after serving as the Director of Administration at the Harvard T. H. Chan School of Public Health for the past 9.5 years. Cindi also worked at the Centers for Disease Control and Prevention from 1999-2012 in many capacities including, as Branch Chief (Policy and Practice Fellowship and Public Health Prevention), Senior Health Scientist and Deputy (Office of Public Health Research), and Public Health Advisor.

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. He 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.

Karen Mullen

Karen Mullen worked in sales, marketing and communication for 20 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) and is the co-founder and coordinator of *Needham 5th Quarter*, a substance-free event for teens that takes place after all home football games at Needham High School. 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 recently rescued Rosie, a puppy from the South who has brought much joy and excitement to their previously empty nest!

Monica Pancare

Monica has her 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 degree 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 (CWP). In her spare time, Monica enjoys cooking, restoring vintage Weber grills, mini car trips, and spending time with family.

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, Norwood, and Westwood. The



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grant is Massachusetts Collaborative for Action, Leadership, and Learning, better known as “MassCALL3”, and it supports underage substance use prevention work.

Carol has a Master of Education in Counseling – Substance Abuse. She is currently a member of the Board of Health in Medfield, where she has lived for 30 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 40-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 and is an instructor of this quirky sport that originated in Scotland about 500 years ago.

Karen Shannon

Karen is 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.

Prior to working with the Needham PH Division, Karen was home for 11 years with her three children, who are now 26, 24, and 21. Before then, she worked in financial services for 7 years, both as a call center manager and a corporate trainer.

Karen is passionate about health, nutrition and fitness. She has completed 4 marathons and stays as active as possible. She is also recently certified in Reiki Level 2.

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 nieces who she enjoys spending time with and she has the best two kitties in the world.

Tiffany Zike

Tiffany joined Needham Public Health Division in July 2017 as the 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 for Needham Public Health. 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.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Emergency Management

Date: February 2022

Staff member: Michael Lethin

Activities and Accomplishments

Activity	Notes
Emergency Operation Plans	Procured a web-based access for the Emergency Operations Plans for Town buildings, accessible by desktop, supplementing physical plans and a mobile app.
Hazard and Vulnerability Assessment	HVA process has been kicked off. The tool selected will align Needham with Region 4AB. The LEPC will collaboratively fill out the tool at its May meeting.
Blizzard After-Action Review	The Town conducted a hot wash for the January 29 th Blizzard and an After-Action Report was produced and distributed capturing lessons learned.
MEMA Training	MEMA provided "Until Help Arrives" for the Town leadership meeting and are available to provide the training to other groups in town. The new EOC/Training Room at the Public Safety building has been approved by MEMA for regional trainings once it is complete.



Emergency Management Support Monthly Report February 2022

Prepared by: Taleb Abdelrahim

This monthly report is to provide an update on what I have been doing under supervision of Tiffany Zike.

Summary of work:

- Writing COVID Drive-thru PCR Testing Action Plan
- Coordinating and scheduling MRC training events (in-person training) about:
 1. An opening shelter with American Red Cross
 2. CPR training from nursing department
- Submitted our NC-8 February 2022 MRC Activation Survey, which is required to be reported to HHS to remain as an active MRC unit

Acronyms:

PCR	Polymerase Chain Reaction
MRC	Medical Reserve Corps
NC-8	The Norfolk County-8 (Canton, Dedham, Milton, Needham, Norwood, Walpole, Wellesley, and Westwood)
HHS	Health and Human Services



NEEDHAM PUBLIC HEALTH DIVISION

Unit: Public Health Nursing

Month: February 2022

Staff member: Hanna Burnett, Mary Fountaine

Activities and Accomplishments

Activity	Notes
Community Outreach	Vaccine clinics, THN class, Gift of Warmth, Blood pressure clinics, B12 assistance.
CPR Certifications	Hanna and Mary are both now BLS Instructors
Communicable Disease Investigation	Case investigation and reporting review

Summary overview for the month:

Hanna held clinics at CATH, Babson University and Needham Housing, and did a home visit for a flu shot for a total of 50 adults and 5 children vaccinated. Hanna is mentoring a BC nursing student and a Bentley University intern once a week. Other activities include Gift of Warmth assistance, a B12 injection, and attending a suicide prevention conference.

Mary received the new order of Narcan and has been working to expand take-home naloxone [THN] programming. The THN class proposed for Needham Housing is being postponed due to changes at the NHA office. THN class was held at the RRC on February 24 for 3 attendees. Covid-19 contact tracing has been phased out, but pediatric cases are still being monitored to assist NPS with their dashboard reporting. Follow-up on Hepatitis as per last month's request by Dr Epstein (see separate report) and conversation with ISIS Help regarding tuberculosis reporting has prompted a revamp of the monthly spreadsheet for infectious disease, which should be ready for FY 2023 this summer. Blood pressure clinics offered at two NHA locations, on the 1st and 3rd Thursdays of the month, ongoing. BC nursing student will be in office once a week through April.

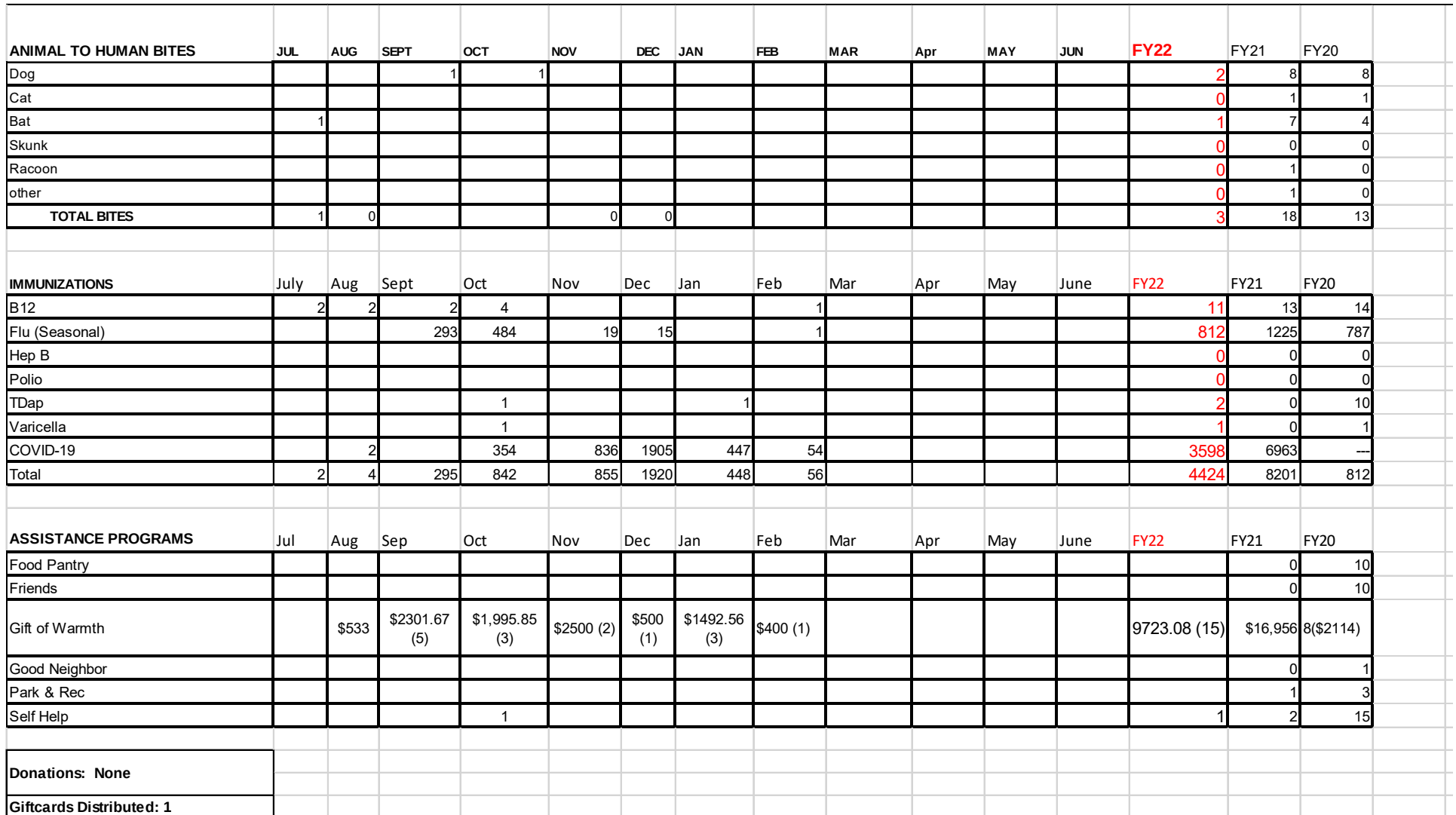
The nursing office has communally been working to expand CPR trainings, so that all three nurses are certified as instructors and aligned with the same training center. A training for MAPHN nurses was scheduled for March 10, and upcoming CPR training for MRC staff in the coming months. At-home antigen Covid-19 tests for town staff arrived and were distributed via our conference room.



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COMMUNICABLE DISEASES:	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	Apr	MAY	JUN	FY22	FY21	FY20
Amebiasis													0	1	1
Chickungunya													0	0	1
Babesiosis	3												3	5	4
Borrelia miyamotoi	1												1		
Campylobacter	2		1	1	1								5	15	15
COVID 19 Confirmed	37	101	110	99	151	658	1340	183					2679	1416	327
COVID Probable	3	8	5	2	8	109	204	6					345	118	37
COVID Contacts	20	25	20	9	18	21	5						118	1006	242
Cryptosporidium													0	1	0
Cyclosporiasis													0	0	5
HGA													0	2	6
Enterovirus													0	0	1
Giardiasis													0	0	4
Haemophilus Influenza								1					1	1	0
Hepatitis B		1	1	1	1	1	1						6	9	3
Hepatitis C		0		0	1	2	2	0					5	6	8
HGA		1											1	3	6
Influenza					7	14	4						25	1	51
Invasive Bacterial Infection		1	1										2	1	1
Legionellosis				1				1					2	0	2
Listeriosis													0	0	0
Lyme	7	7	6	7	2	3	3	2					37	38	38
Measles													0	0	0
Meningitis													0	0	1
Meningitis(Aseptic)													0	0	0
Mumps													0	0	2
Noro Virus													0	1	2
Pertussis													0	0	2
RMSF(Rocky Mt Spotted Fever)													0	0	1
Salmonella		1					1						2	3	1
Shiga Toxin													0	0	0
Shigelloia													0	1	0
Strep Group B				1				1					2	2	2
Strep (GAS)													0	0	3
Strep Pneumoniae													0	0	0
Tuberculosis						1							1	0	0
Latent TB								2					2	7	0
Varicella						1							1	1	4
Vibrio		1											1	0	0
West Nile virus													0	0	0
TOTAL DISEASES	72												3239	2638	770
Revoked/Suspect Diseases Investigated		1	2	2	1		2	1					9	3	6





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Hepatitis C Case Review:

As per request made at the January meeting, a review of Hepatitis C cases was made to investigate potential trends.

A records check for previous years uncovered a discrepancy in the numbers previously reported. Numbers accurate to March 1:

FY 2022 Hepatitis C cases currently in MAVEN: 0 confirmed, 5 probable, 5 revoked

FY 2021 Hepatitis C cases currently in MAVEN: 2 confirmed, 2 probable, 7 revoked

FY 2020 Hepatitis C cases currently in MAVEN: 1 confirmed, 2 probable, 5 revoked

FY 2019 Hepatitis C cases currently in MAVEN: 2 confirmed, 1 probable, 4 revoked

This discrepancy is likely explained by the case definition for revoked Hep-C cases:

MA Event Classification (2021):	Same as CSTE event classification with the addition of the revoked case classification below.	
	<i>Revoked</i>	Any case less than or equal to 2 months of age with or without clinical criteria and regardless of laboratory results OR Any case greater than 2 months of age and less than 18 months of age, with or without clinical criteria, with evidence of anti-HCV antibodies, but no report of a NAT for HCV RNA or HCV antigen by 36 months of age OR A case with or without clinical criteria with: ▪ Evidence of anti-HCV antibodies, but no report of a positive NAT for HCV RNA or HCV antigen within 12 months of a positive HCV antibody result AND ▪ Evidence of a negative Nucleic Acid Test (NAT) for HCV RNA within 12 months of the HCV antibody positive result (NOT including a negative genotype) AND ▪ No evidence of test conversion

Because there is a 12-month window for cases to be confirmed or revoked, the current fiscal year should always have a higher case count than previous years. Furthermore, since we pull reports monthly, the updates from months or years previous are not being reflected in the rolling case count. This will be taken into account when the communicable disease spreadsheet is revised for FY2023.

Currently, none of the FY 2022 cases have been confirmed. All of the FY 2022 cases that have had a NAT drawn for confirmation have been revoked. The remaining cases either have not had a NAT drawn, or have not had their results updated in MAVEN.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Substance Use Prevention

Date: February 2022

Staff: Karen Shannon, Karen Mullen, Monica De Winter, Angi MacDonnell, and Jazmine Hurley

Activities and Accomplishments

Activity	Notes
Vaping Grant	This grant is in final stages.
SPAN Projects/Events	T.A.L.K., "Talk About Life with your Kids." bi-weekly posts for this parent conversation starter campaign continue via the SPAN social media pages. New content will continue through the end of the school year. SPAN Mental Health Minutes Angi MacD. interviewed several mental health clinicians in Needham to create short videos for SPAN social media pages. The videos provide answers to questions around youth mental health concerns and offer resources for supporting youth and their families. SPAN event planning: Changing the Culture Around Mental Illness, planned for Monday, March 14, with former N.H. Supreme Court Chief Justice John Broderick presenting. SPAN February Newsletter created and distributed to SPAN membership.
STOP Act grant	SAMHSA grant: STOPing Underage Access and Use of Alcohol: Codifying Youth, Parent and Retailer Education and Compliance in Needham, MA - Drafted TIPS training press release - Ordered We Card calendars for licensees - Delivered TIPS training certificates to Needham businesses
SALSA	- During February 36 SALSA youth prevention advocates contributed over 105 hours of service in Needham. Students participated in meetings with SPAN Parent Action Team members, weekly SALSA action team meetings and leadership team meetings, a general meeting and the 84 Movement meetings/events. Pollard 8th grade presentations returned in-person for the first time in two years! 17 SALSA Prevention advocates presented & taught refusal skills, dispelled myths & encouraged



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	• healthy behaviors for 80 Pollard Middle School students during their Wellness classes. • 6th Graders at High Rock MS watched a PSA and took a quiz developed by NHS SALSA members focusing on healthy decision making. 6th Graders indicated on a post event survey that they appreciated the PSA, welcomed more education & information about vaping, healthy decision making and ways to stay healthy.
Medical Marijuana Regulations Research and Review	Working group convened for fifth meeting on 2/28 to review questions for the Cannabis Control Commission and Cheryl Sbarra of the MA Assoc. of Health Boards. The Working Group plans to submit a follow-up summary to the Board of Health (BOH) at the March meeting to respond to the Board's questions and requests for further research on requests by Sira Naturals to amend the BOH's medical marijuana regulations (Article 20).
Needham Parent Survey 2022	Karen S. met with Scott Formica, consultant, to finalize questions for the upcoming Parent Survey. The online survey, open to all Needham parents of children in grades 6-12, will be translated into 5 languages and open for 6 weeks beginning early April.
Norfolk County Sheriff's Substance Use and Mental Health Task Force	Kathryn Hubley of the Norfolk County Sheriff's Office is leading the Substance Use and Mental Health Task Force and invited Karen S. and Angi MacD. to attend their monthly meeting. Karen and Angi attended on 2/28.
Parent Al-anon group	Meetings held every Monday evening. Attendance remains steady averaging 6-8 people each week. Hometown Weekly continues free publishing of meeting announcement in Needham edition.
Training	2/2 Beth Israel Deaconess Community Listening Session, KS, AMD, KM 2/3 Riverside Navigating Suicide Prevention, KS, AMD, KM 2/27 PTTC Understanding the Prevention Field's Role in Harm Reduction, AMD 2/25, 2/27, PTTC Pharmacology of Cannabis, online, 3 hrs, KS
Other Meetings	SPAN Steering Committee, 2/9 CCIT Quarterly mtg, 2/8 SPAN Parent Action Team, 2/10 SPAN Youth Action Team, 2/10 HHS Racial Equity Committee, 2/10 DVAC meeting, 2/11 Spring Fest Middle School event, 2/16 The 84 Adult Advisor Conference 2/16 Medical Reserve Corp. training, 2/17 Medical Marijuana Working Group, 2/28 The 84 Mental Health Workshop 2/28 Medical Marijuana editing meeting w/Lynn S., 2/9, 2/25 Diversity Equity and Inclusion meeting w/TMM, 2/18



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Summary for Month of February 2022: Focus this month included planning of SPAN virtual event on March 14, SPAN Action Team planning, Mental Health Minute production, follow-up on TIPS training and planning for future sessions.

MassCALL3 cluster: Dedham- Needham- Norwood- Walpole – Westwood: Prevention programs and activities
Needham Public Health Division (NPHD): Meetings, public health- prevention programs and activities

Mass. Department of Public Health- Local Boards of Health *interagency* COVID-19 response: February 1st | 8th | 15th
Webinar Tuesdays 3:00pm Jana Ferguson, Assistant Commissioner Department of Public Health, Dr. Sam Wong, MPH, Director & Rachel Cain, Ph.D. Office of Local & Regional Health. Including panelists: Dr. Catherine Brown, State Epidemiologist, Bureau of Infectious Disease and Laboratory Sciences. Laurie Courtney, Anne Gilligan- Ann Marie Stronach, DESE, Donna Quinn-Mary Clark, Office of Preparedness and Emergency Management and Cheryl Sbarra, Executive Director MAHB.

Office Based Addiction Treatment Training and Technical Assistance (OBATtta): February 1st *Zoom* Addiction play, *Spiro Spero* written and performed by Judith Austin, PMHNP. Authentic portrayal of the impact of SUD and experiences of treatment, health care and community response. OBATtta *Zoom* meeting Grayken Center for Addiction, Boston Medical Center. Facilitated by Colleen LaBelle, MSN, RN-BC Director and Justin Alves, RN, MSN, ACRN Clinical Nurse Educator. Discussion: addiction, chronic brain disease, the stigma of substance use disorder (SUD) and addiction- barrier to request help, access SUD treatment, medication assisted treatment (MAT) outcomes, access recovery support services-peer support.

Needham Public Health Division- Medical Marijuana regulations: February 1st *Zoom* Discussion Needham BOH response to draft regulation changes document, written by Lynn Schoeff, Needham Public Health. Sira Naturals amendment request Article 20, Sections 20.5.2 and 20.6.5 (B) and (C). Needham medical marijuana regulation (Article 20, Regulation to Ensure the Sanitary and Safe Operations of Registered Marijuana Dispensaries and the Sale of Marijuana to Persons with Documented Medical Needs) Reference: Massachusetts Cannabis Control Commission (CCC) 935 CMR 501.00 Medical Use of Marijuana M.G.L. c. 941 Medical Use of Marijuana. Tara Gurge, MPH and Tiffany Zike, RN, MPH Assistant Public Health Directors, Diana Acosta, MPH, Karen Shannon, CPS, SPAN Director, Lynn Schoeff, Julie McCarthy, Epidemiologist. Statutory clarification action steps: TZ outreach to Cheryl Sbarra, MAHB- TG outreach to Cannabis Control Commission.

Needham MassCALL3 Project Coordinator meetings: February 2nd | 9th | 16th | 23rd *In person* | February 8th | 11th | 18th | 23rd | 25th *TEAMS* Ellisa Dockstader, Student Intern IV part-time staff. Boston University School of Public Health (BUSPH) Expected MPH completion May 2022. Strategic Planning: Primary focus: Mission and scope of MassCALL3 Part B. program- data collection (quantitative and qualitative resources and updated assessment tools) capacity building – outreach to cluster towns, project/task timeline and weekly work schedule (in-person- *TEAMS*)

Beth Israel Deaconess Needham (BIDN) Leahy Health: February 2nd *Zoom* Community Health Needs Assessment, 501© 3 requirement. Service area: Dedham- Needham- Westwood – Norwood. Community Listening Sessions program, Allyssa Kence, Community Benefits Director. Facilitated by Madison MacLean, MPH, JSI Inc. Presentation: *Preliminary Themes and Data Findings*. Qualitative and quantitative data presentation and 6 themes: Mental Health | Social Determinants of Health | Diversity, Equity, Inclusion | Substance Use | Access to Care | Community Connections and information sharing. Attendee feedback on: data presentation, perceptions of data, BIDN priority areas of focus and actions to address community needs.

Medfield Youth Outreach Services: February 3rd *In person*- Meri Haas, Program Coordinator, Medfield Cares About Prevention (MCAP) DFC grant funded coalition. Resources and guidance: parent -caregiver survey, CDC-DFC parameters staffing, fiscal year budget amendments and programmatic reporting compliance. Collaboration with Medfield Board of Health: tobacco regulations, penalties, licensee compliance checks (local and FDA) health data collection and sharing.

Addiction recovery forum: February 3rd *Zoom* Michael Blanchard, Inspirational Photography, Cross Roads Gallery, Oak Bluffs, MA. Personal story of addiction, mental health, journey to treatment and recovery supplemented by the healing power of photography, the arts, and creative expression- *Miksang* meditative form of photography, “good eye” in Tibetan. Hosted by: Zullo Gallery, Medfield, MA.

Middlesex District Attorney’s Office: February 3rd *Zoom* MDAO Anti- Hate Bias Task Force Meeting Antonia Soares Thompson, Esq. Director of Racial Justice Initiatives Agenda: Criminal investigations, The balance between the integrity of a law enforcement investigation, prosecution, public transparency and accountability. speakers Kevin Kennedy Esq. Chief of Police Lincoln, William B. Evans, former Commissioner Boston Police- Boston College, Executive Director Public Safety.

MassCALL3 program Technical Assistance Center for Strategic Prevention Support (CSPS): February 3rd-10th- 17th- 24th *Zoom* Ben Spooner, CPS, TTA liaison. MassCALL3 Part B foundation eight (8) Guiding Principles of Prevention grounded in equity and cultural humility. Review and discussion: Status of data collection and assessment processes | Regional Leadership Team meeting goals| DEI consultant bid/contract procurement – final contract Nicole Augustine, MPH RIZE Consultants | building connections and engagement with diverse populations, traditionally underrepresented people classified by race, ethnicity, gender, sexual orientation, socioeconomic status, age, physical abilities and religious beliefs | youth risk behavior survey options (CTC- MWAHS EDC | Strategic planning timeline-DPH-BSAS grant program compliance. Ellisa Dockstader, MassCALL3 Project Coordinator, BUSPH-MPH candidate- May 2022.

MA DPH- Bureau of Substance Addiction Services (BSAS) February 4th | 18th *Zoom* **Office Hours** Bi-monthly virtual networking meetings. Andy Robinson, CPS Lead Program Coordinator, Substance Misuse Prevention Unit. MassCALL3 program, facilitated by the Center for Strategic Prevention Support (CSPS) Gisela Rots, MS, Project Director, Ben Spooner, CPS Ivy Jones Turner, MPA and Debra Morris, MPA MCHES Training/Technical Assistance Specialists. **February 4th Agenda:** MassCALL3 program status updates: upcoming trainings, DPH-BSAS funding guidelines, strategic planning timeline, SSRE programmatic reporting, coalition partners on-line survey (due March 31st) Q& A segment and future **Office Hours** topics - Breakout groups. **February 18th Agenda:** Black History Month Resources *A Reckoning in Boston*: PBS documentary racism and gentrification- conference *Gender Identity, Gender Expression and Sexual Orientation: Promoting Resilience and Healthy Outcomes for LGBTQ and Gender Diverse Students*, March 28, 2022 Clemente Course, Boston | Review and discussion: *Infusing Asset-Based Methodologies and Cultural Responsiveness in your Strategic Planning Efforts* webinar, Wilder Research. Regional breakout groups: Western/Central | Northeast | Metro Boston. Reflection questions: What is one thing you learned or took away from the training? What methods of data collection are you using? What is Journey Mapping and ripple effect mapping?

MassCALL3 DEI consultant capacity: February 7th Zoom Nicole Augustine, MPH Founder RIZE Consultants, LLC. Introductory meeting: overview of background and services of RIZE. BSAS equity centered prevention (8) Guiding Principles, goals data collection/assessment processes and regional strategic planning. Ellisa Dockstader, MassCALL3 Project Coordinator. Next steps: Information sharing, BSAS- MassCALL3 RFA and strategic planning timeline, RIZE contracting procedures, service fees.

Needham Public Health Division (NPHD) staff meeting: February 8th Zoom Timothy McDonald, Health & Human Services Director. Agenda: New staff introductions, COVID-19 updates, Needham distribution N95 masks and rapid tests, Staff program sharing and status on progress.

Rep. Denise Garlick 13th Norfolk FY21: February 8th Zoom 7:00pm Needham- Dover- Medfield 43,000 population. Legislative overview- recap Collin Fedor, Chief of Staff Maureen Callahan, Community liaison. Current leadership positions: Chair, House Committee on Bills in the Third Reading, Member Opioid Recovery and Remediation Fund Advisory Council Chair, Commission on Status of Persons with Disabilities. FY22 state budget overview- 4 priority areas: Education \$5.5 billion Mental Health Services \$608 million Environment \$ 323 million Food Security \$30.5 million ARPA funding (town- county- state) FY23 state budget creation timeline.

Needham CCIT Community Partners: February 8th Zoom Community Partners, quarterly meeting. Data sharing- program updates: Attendees: BIDN Dr. G McSweeney, Kathy Merrigan, RN, Kathy Davidson, CNO, Jen Pinto, LICSW Trottmann. Newton Wellesley Hospital Lauren Lele, MPA. Donald Anastasi, Needham Fire Department, Deputy Chief Chris Baker, Needham Police. Quincy Family Resource Center, Candice Kunigenas, LICSW Riverside Emergency Services Justin Towne, Nathan Foster and Kim Kidders Montoya, LICSW, Core Team meeting: Case support for residents navigating acute and chronic substance use disorders and/or mental health conditions, homelessness and domestic violence. Lt. Chris Baker- Michael Lamb- Katherine McCullough, Needham Police Department, Tiffany Zike, RN, MPH, Mary Fountaine, RN and Hanna Burnett, RN Public Health nurses, Jessica Moss, Kerrie Cusack LICSW Aging Services and Sara Shine, LICSW Director Needham Youth & Family Services.

Boston Public Health Commission capacity: February 9th Zoom Dishon Laing, Recovery Services, Prevention Program Manager. Introduction Oluwadamilola "Dami" Philip Sargent Mass. National Guard, Program Director, Brockton Area Multi- Services Inc. (BAMSI) *Services to adults and children with developmental disabilities, mental illness, behavioral health and public health needs.*

Mass. General Hospital – iDECIDE*: February 9th Randi Schuster, PhD Principal Investigator. *Review and discussion: Mass. Interscholastic Athletic Association (MIAA) guidelines related to school staff SUD referrals to diversion programs – processes related to submitting rule change requests. iDECIDE, in school diversion/intervention program developed by Center for Addiction Medicine- Institute for Health and Recovery in collaboration with the Massachusetts Department of Public Health.*

**a tier two intervention program intended for adolescents who have begun to show early signs of problematic substance use behavior... promotes education and empowerment, instead of punishment, as an equitable response to adolescent substance use. Providing science-based knowledge and skills...4 core modules, 75 minutes- flexibility of delivery in one, two, or four sessions.*

Needham Board of Health: February 10th *Zoom* Tim McDonald, Director Health & Human Services-Tiffany Zike, RN, MPH Assistant Public Health Director. Tara Gurge, MPH, Assistant Public Health Director. Agenda: Staff reports | Needham COVID-19 Update Vaccination Efforts Update on Center for COVID Control Mask Policy & Letter from Charles River Regional Chamber | Sira Naturals Request for Modifications to Permit/Regulations | Hungry Coyote Restaurant Compliance | #1688 Central Avenue and Licensed Site Professional Scope | Brewery Concept, Economic Development Manager | Alcohol compliance checks -TIPs Training | Synthetic Field Turf Testing| Upcoming meetings: Status BOH FY 21-22 Goals | Discussion NEW 314 CMR 16.00: Notification Requirements Promote Public Awareness of Sewage Pollution/Combined Sewer Overflow Notifications. Next meeting: Friday, March 4th Mask regulation review and discussion.

MDPH- Office of Local and Regional Health (OLRH) capacity: February 10th *Call* | February 23rd *Zoom* Dr. Sam Wong, Director OLRH. Introduction Oluwadamilo “Dami” Philip Sargent Mass. National Guard, Program Director, Brockton Area Multi- Services Inc. (BAMSI) *Services to adults and children with developmental disabilities, mental illness, behavioral health and public health needs.*

Riverside Emergency Services: February 14th *Zoom* Elizabeth Crew, LICSW Regional Director, Emergency Services. ES services and capacity review: Protocols for home psychological evaluation and intervention, 24/7 mobile crisis program, 24/7 phone support, hospital (ED and in patient) psychological evaluation parameters and protocols with follow-up care and communication to referral source. Tiffany Zike, RN, MPH Assistant Public Health Director and Jessica Moss, LICSW Assistant Director Needham Aging Services.

Prevention Solutions@EDC consultation: February 14th *Call* February 16th *Zoom* Leadership Team meeting | February 23rd *Zoom* Jessica Goldberg, MPH Prevention Solutions consultant (funded BSAS- Needham MassCALL3 FY22) Evaluation and Strategic Planning technical assistance (TA) timeline: Responsibilities, tasks and collaborations to support Needham MassCALL3 Prevention Partners strategic planning year one | data collection tools revisions/review- diversity, equity and inclusion foundational principals focus and strategies to engage community members and key stakeholder representatives from diverse and underrepresented demographic groups- race, ethnicity, gender identity and socio- economic status.

Needham Town Accountant: BSAS-MassCALL3 FY22 budget: February 15th *TEAMS* Michelle Vaillancourt, Town Accountant and Lisa McDonough, Accountant. Review FY22 budget and expenses. Dawn Stiller, Public Health Division Office Administrator-Expenditures reimbursement January 2021- Invoice submission Virtual Gateway- EIM system.

AdCare – BSAS training: February 15th *Zoom* VIRTUAL: *Infusing Asset-Based Methodologies and Cultural Responsiveness in your Strategic Planning Efforts.* Wilder Research, Nora Johnson-Kristin Dillon. Learning objectives: Identify concrete steps to infuse strategic planning with cultural responsiveness | Share approaches for engaging diverse communities to identify community assets | Identifying community assets, risks | Describe ways to integrate community assets into strategic planning phases | Ensure efforts are authentic and community-driven. **Toolkit:** *Infusing Equity and Cultural Responsiveness in Local Youth Substance Use Prevention Efforts* https://www.wilder.org/sites/default/files/imports/PartnershipForSuccess_SPF-InfusingEquityCulturalResponsiveness_6-21.pdf

Needham Public Health Division (NPHD) supervision: February 16th *In person* February 18th | 24th *TEAMS* Tiffany Zike, MPH, Assistant Public Health Director. Review and discussion (1) MassCALL3 FY22 budget – Line Item Amendment (2) DEI consultant procurement processes, bid and Scope of Work for Needham contract (3) Status update: SAPHE Public Health Excellence grant shared services (cross jurisdictional sharing) MDPH- CDC COVID -19 case guidance, contact tracing and epidemiology. Needham Public Health lead with Dover and Medfield.

NPHD Epidemiology capacity: February 16th *In person* Julie McCarthy, MS Infectious Disease & Global Health, Epidemiologist Review and discussion: (1) Historical access to state and Needham community health data SUD treatment data (MASS CHIP- TEDS) Overdose deaths, Overdose non-fatal, hospital ED data, EMS ambulance data. (2) Strategies to obtain BIDN and NWH ED data (Needham- Dedham- Westwood) Riverside Emergency Services evaluation data – in home, RES office and BIDN- NWH. (3) MassCALL3 grant data goals: data review quantitative and quantitative ages 12- 20 years. community health data options- BIDN and NWH CHNA and HRIA regional | Police incident | EMS | TEDS treatment data – Mass. CHIP.

MassCALL3 Part B. - Needham Prevention Partners: February 16th *Zoom* Regional Leader meeting: Dedham- Needham- Walpole and Westwood. Agenda: MassCALL3 program overview, 8 Guiding Principles of Prevention, grounded in equity and cultural humility | | New Leadership Team members | Town demographic data | Data collection processes (quantitative & qualitative) | Outreach school health (youth focus groups) | Requests for Key Stakeholder Interviews (10- 12 per town) strategic planning timeline. Attendees: Amal Marks, CPS, BSAS Prevention Program Manager Jess Goldberg, MPH, Prevention Solutions, Evaluation consultant, Tiffany Zike, RN, MPH Assistant Public Health Director- Julie McCarthy, MS Needham Epidemiologist | Kylee Sullivan- Jessica Tracey- Krissy King, MPH Dedham Public Health- DOSA | Melissa Ranieri, Director Walpole Public Health | Karen Shannon, CPS- Monica DeWinter, MPH, SPAN coalition, Ellisa Dockstader, Project Coordinator.

Needham SPAN coalition: February 17th *Call* Karen Shannon, CPS, SPAN coalition. Discussion: Becca Schmill Foundation introduction, mission and youth engagement goal, request for resources and BSF team meeting for PhotoVoice program.

Needham STOP Act grant: February 17th *Calls* (2) Monica DeWinter, Project Coordinator | Sargent Jay Sullivan, Dedham Police Department. Follow- up TIPs training program, Dedham Town Hall January 31st Review: 15 attendee test results, 3- year certification status - distribution TIPs certification cards. (6 Needham licensee attendees | 9 Dedham licensee attendees)

MA Alcohol Policy Coalition: February 23rd *Zoom* 7:00pm. David Jernigan, PhD., Professor, Department of Health Law, Policy and Management Boston University School of Public Health and Xixi Zhou, BUSPH intern. Discussion: APHA- Data project: Home Delivery and Alcohol to-go observational data collection, *Alcohol Policy and Citizen Science: Alcohol Availability Observational Tool*- underage access- local licensee overview- infographic flyer to follow- St Patrick's Day tracking focus ages 21-30 focus | State update: **End** of Massachusetts referendum petition "Happy hour" and other drink promotions. **Hold** Draft resolution- data/research citations on underage alcohol access risks/use rates reflecting. Prevention specialists including: Liz Parsons, Gisela Rots, Heather Warner, Wendy Penner, Alexis Polocoff, Aubrey Ciol, Brianna Keating, Dr. Amy Turncliff. Maryanne Frangules, Director MOAR. Next meeting: March 30th

Bright Solutions Consulting Group: February 24th *Zoom* Amanda Decker, Director. Mentoring Cohort, monthly meeting, recently awarded DFC grant Program Managers. *Building Youth Engagement in Community Prevention*. Facilitators: Lyn Frano, Braintree Public Health Department and Steph Patton, MPH Stoughton OASIS prevention coalition.

Becca Schmill Foundation: February 24th *Zoom* Deb Mann Schmill, Founder. *Advocating for and funding programs that reduce the occurrence and impact of Adverse Childhood Experiences (ACEs) such as sexual assault, cyberbullying and other social media harms, and improve mental and substance use treatment*. Review and discussion: Building youth engagement, PhotoVoice project overview, Needham youth projects structure and safeguards, Needham PhotoVoice program resources program communications and youth recruitment strategies. Amy Baumgartel- Singer, The Wheeler School and Sarah Johnson.

MA DPH- Bureau of Substance Addiction Services (BSAS) contract: February 25th *Zoom* Amal Marks, CPS Prevention Program Coordinator. Review and discussion: Needham MassCALL3 FY22 budget, expenditures YTD, forecasted expenditures, consultation contracts status, UFR line additions (community member incentives- thank you gift cards- graphic design logo- project coordinator weekly hours and AP19 conference) (2) Needham Leadership Team meeting 2/16 Zoom (3) Status regional data collection, community engagement barriers and timeline.

Norfolk DA Michael Morrissey prevention: February 28th *Call* Jennifer Rowe, Assistant District Attorney. Agenda: Norfolk County 2021 opioid overdose death (OOD) data (7 communities zero OOD) | 2021 fatal crash data | Diversion “Good Decisions” class, Licensed clinician. Mondays 3:30pm-5:30pm. Referrals (family/school) to Meghan Cronin. Student substance use incidents, no formal charge needed for diversion class referral, | TEAM RIVAL update Distracted driving- Distractology Arbella Insurance- AAA *Shifting Gears* marijuana driving impact, *community service hours* | \$500 Prom & Graduation grant application | Discussion: countywide data initiative, youth risk behavior survey primary focus substance use (content- scope- grade levels- administration options) Presentation: Kendall Bennett, MS *Google Data Studio* data platform. Town survey link pending for data priorities. Next meeting: April 11th

NPHD Office Administrator: February 28th *TEAMS* Dawn Stiller Review: FY22 MassCALL3 budget expenditures, Line Item Amendment (UFR shifts)- DEI consultant procurement processes, bid outreach, contract award timeline.

Needham Health & Human Services Department- Public Health Division projects/program support:

(1) January monthly report (2) Department of Mental Health Case Management Supervisor contact (research and outreach) resident support- CCIT Community Partners meeting invite (3) DEI consultant Needham procurement protocols: bid outreach, Scope of Work and timeline (4) Becca Schmill Foundation- PhotoVoice resources program communications.

Certified Prevention Specialist re-certification application: Submitted February 28th Required credential, Mass. Department of Public Health – Bureau of Substance Addiction Services (BSAS) MassCALL3 grant program manager. International Certification and Reciprocity Consortium (IC & RC) Prevention Specialist (2-year certification) Domains: Planning and Evaluation | Prevention Education and Service Delivery | Communication Community Organization | Public Policy and Environmental Change. Re-certification, 40 CEU hours, Alcohol, Tobacco and other drugs, prevention, recovery, mental health promotion. USPS mail CEU certificates Mass. Board of Substance Abuse Counselor Certification, Inc (MBSACC)
Town holiday: February 21st President’s Day **Respectfully submitted:** Carol Read March 11, 2022 **END Page 6 of 6 PAGES**



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Traveling Meals Program

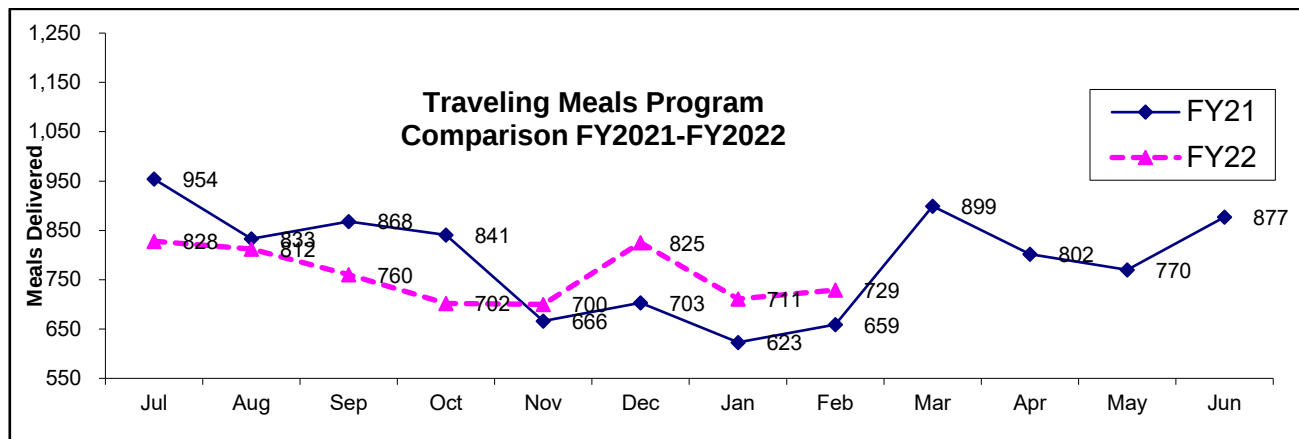
Monthly Report for February , 2022

Staff member: **Rebecca Hall, Program Coordinator**

Activities

Activity	Notes
<i>COVID 19 –precautions continue by volunteers as they deliver meals to homebound Needham residents in need of food.</i>	<i>Covid caution in place Meal delivery for month completed by 28 volunteers</i>
<i>729 Meals delivered in February, 2022 43 Consumers currently 35 Springwell Consumers 8 Private Pay Consumers</i>	<i>No 911 calls initiated</i>

Summary overview for the month: **Graph of Meal Deliveries for the month February, 2022**





NEEDHAM PUBLIC HEALTH DIVISION



Unit: Accreditation report

Date: February 2022

Staff: Lynn Schoeff

Activities and Accomplishments

Activity	Notes
Public Health Accreditation Board (PHAB) Pathways Program	- Served as a reviewer of another department's communication plan. - Received feedback on the Needham Readiness Assessment
Marijuana Regulations	Continued research and writing about possible modifications to the Needham medical marijuana regulation
Policies	Updated staff introduction document for BOH and staff orientation packets.
Staffing	Hired two part-time employees to work on public health accreditation. They will begin in March.



Needham Public Health Division

February 2022



Assist. Health Director - Tara Gurge

Health Agents - Diana Acosta, Monica Pancare and Sheri Miller-Bedau

Unit: Environmental Health

Date: 3/29/2022

Staff members: Tara Gurge, Diana Acosta, Monica Pancare and Sheri Miller-Bedau

Intern: Ally Littlefield

Activities and Accomplishments

Activity	Notes
Staffing Changes	On February 8, 2022, Part-time Environmental Health Agent, Sheri Miller-Bedau resigned from Needham Public Health. A new posting for her replacement has been circulated by the Human Resources Department. On February 28, 2022, Diana Acosta became the Shared Public Health Services Grant Program Manager. She will now be managing the Shared Services Grant between Needham, Dover and Medfield. Roland Abuntori has been hired as a Part Time Environmental Health Agent under the Shared Services Grant. He is currently taking training courses.
The Rice Barn	Mojin Solutions conducted a Person-In-Charge training on February 2, 2022. Additional ServSafe Food Manager training conducted for a new full-time staff member. ServSafe certificate still pending. An audit was also conducted by Mojin Solutions on February 16, 2022. Cleaning logs were being sent to the Public Health Division but there was a lack of pest control reports being sent. We contacted owner and he was able to reinstate weekly pest control per his MOU requirements. At the end of the month, we will review all audit information to determine if sufficient trained staff is present on site and verify whether ongoing improvement is being observed in order to issue an extended food permit.
Sweet Tomatoes Pizza MOU issued for Time as a Public Health Control	After repeated violations during routine inspections, Sweet Tomatoes was issued a Memorandum of Understanding (MOU) to follow proper Time as a Public Health Control protocols. Tara and Diana met with the owner via Zoom and discussed the proper protocols. A log was also sent over. Sweet Tomatoes will be sending logs weekly for the next 3 months.
MA Dept. of Public Health Intern	Applied for a MA Dept. of Public Health summer intern to help our Env. Team with our ongoing projects.
Awarded two grants from NEHA-FDA Retail Flexible Funding Model Grant Program	Needham Public Health was granted money from the National Environmental Health Association (NEHA) and US Food & Drug Administration (FDA)'s NEHA-FDA Retail Flexible Funding Model (RFFM) grant submission. We were awarded a development base grant of \$4,882.25 which will help us continue working to meet and audit all 9 of the Voluntary National Retail Food Regulatory Program Standards set by the FDA. We also were awarded \$7,500 to attend trainings such as NEHA's Annual Education Conference and FDA seminars.

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

Activities

Activity	Notes
Demo Reviews/ Approvals	8 - Demolition signoffs: - 24 Damon Road - 28 Wyoming Ave - 68 Garden Street - 95 Hunnewell Street - 1607 Central Ave - 115 Wilshire Park - 76 Woodledge Road - 1056 Greendale Road
Food	1 – Plan Review Items/inquiries received from: - <u>Smoothie Bar a 915 Great Plain Ave.</u> – Still pending. Application Submitted. Pending Special Permit. Next step is walk through. (Confirmed that owner has been having some contractor delays, but he is planning on having a walk-through set up the end of March.)
Food Complaint/Follow-up	1/1 – Food Complaint/Follow-up – - <u>The Rice Barn</u>- A customer reported they had a reaction to an ingredient in their soup that had gluten in it. The customer told the server that they need gluten free as they have Celiac disease. Diana followed up with the owner and Tara shared the complaint with the consultant that is working with the establishment currently. Additional training on Food Allergies was provided to staff on site.
Housing Complaints/Follow-ups	4/4– Housing Complaints/Follow-ups conducted at: – <u>Briarwood Rehab (x2)</u> – Repeat complaint. Same family reported a strong scent of urine is still present in their family member’s room. They reported seeing insects in the room as well. Diana reached out to the director. Maintenance inspected the room and had pest control treat the room along with rooms next to it during their weekly visit. A pest control report was submitted which reported no activity. Tara also received a complaint from daughter of occupant. Reported ongoing pest activity and unsanitary conditions. Director increased pest control to 2x/week and increased the cleaning and disinfection of the room with the activity, along with the abutting rooms, since pests were found in the walls. Also required the use of a more effective pest control treatment, which was recommended by the pest control company. Will continue to monitor and receive copies of biweekly pest control and cleaning reports from director. – <u>Yurick Road</u> – A home that Diana previously inspected in the Needham Housing Authority is reporting ongoing mold/mildew concerns. The resident sent updated photos and reported that the Needham Housing Authority has only provided one dehumidifier which has not helped the living situation. Diana followed up with maintenance and the director of Needham Housing Authority. Maintenance reported they had a contractor out to check for moisture in the attic and a mold remediation company though no reports were sent to the Public Health Division. The director reported that NHA is working to address all the ongoing issue. “Other than supplying the resident with a humidifier the only other remedy is building new homes which is the goal. As you may know the NHA is currently working with Cambridge Housing Authority Consultants (CHA) on the best avenue to take on the redevelopment.” – <u>Hamilton Highlands/Former Webster Green Apts.</u> - Tara received another concern about no communication and no return calls back from the property manager when issues arise. Concerns reported of overflowing trash chute that was jammed which maintenance reportedly didn’t address in a timely manner. Also received North Bldg. Elevator assessment report, which listed items that needed to be addressed. Tara shared report with Building Commissioner and Fire Chief. Tara had a monthly Zoom check in call with Hamilton Corp. and Assist. Building Commissioner also joined briefly on the call. We discussed these items, along with the elevator repairs which Corp. assured us were in the process of being addressed. New communication plan to be submitted,

	along with copies of pest control reports. Pest control has been improving on site and Corp. will ensure that these overflowing trash concerns will be addressed in a timely manner.
Nuisance – Complaints/ Follow-ups	1/1 – Nuisance Complaints/Follow-ups: - <u>Stephen Palmer Apts.</u> - Repeat complaint received from same resident about ‘banging’ noises coming from second floor unit above hers. Health agreed to have the resident log a week’s worth of consecutive daily noise logs. Sample noise log provided for resident to use. We will review completed noise logs once returned to determine if there is a pattern to these noises and look at when they typically occur. We will plan on contacting the resident in the unit above to discuss possible causes of noises during peak times as noted in the logs.
Planning Board site plan reviews	6 - Planning Board reviews conducted for: - 100 Highland Ave. (Needham Gateway - X Golf) - 120 Highland Ave. (Needham Gateway - Carbon Health) - 100-120 Highland Ave. - Addition of Dumpsters request. - 589 Highland Ave. (Wingate) - Greene’s Field - Needham Farmers Market (new location plan review.) - Latina Kitchen and Bar – Outdoor seating expansion request.
Septic	3 - Septic-related Plan Reviews: 1 – Conditional Approval Letter Issued: - 1607 Central Ave. 2 – Septic Abandonment forms received: - 1607 Central Ave. - 39 Brookside Rd.
Zoning Board of Appeals plan reviews	2 – Zoning Board of Appeals plan reviews conducted for: - <u>#26 Ardmere Rd.</u> - <u>#473 High Rock St.</u>

FY 21 Priority FBI Risk Violations Chart (By Date)

Restaurant	Insp. Date	Priority Violation	Description
Pancho's Taqueria	2/3/2022	COS 3-302.11 (A)(2) Raw Animal Foods Separated from each other <i>- Code: Foods shall be protected from cross contamination by: Except when combined as ingredients, separating types of raw animal foods from each other such as beef, fish, lamb, pork and poultry during storage, preparation, holding, and display by: (a) Using separate equipment for each type, or (b) Arranging each type of food in equipment so that cross contamination of one type with another is prevented and (c) preparing each type of food at different times or in separate areas.</i>	Kitchen - Raw chicken stored over raw beef. Storage corrected.
		COS- 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be</i>	Kitchen - The temperature of the Cooked carnitas in the Walk-in Cooler was 45 degrees. Voluntarily discarded

		<i>maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i> COS 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i> 3-501.18 Ready-to-Eat Food Disposition - <i>Code: A TCS/RTE food as specified in paragraph 3-501.17 (A)(B) shall be discarded if it: exceeds 7 days at 41°F or lower (except for the time that the product is frozen) or is in a container or package that does not bear a date or day or is appropriately marked with a date or day that exceeds a temperature and time combination as specified in 3-501.17(A). Refrigerated, RTE/TCS food prepared in a food establishment and dispensed through a vending machine with an automatic shutoff control shall be discarded if it exceeds 7 days at 41°F or lower.</i>	Kitchen - The temperature of the Raw shrimp in the Coca-Cola drink cooler under counter was 46 degrees. Raw fish was at 45°. Milk was 47°F. All items voluntarily discarded. Kitchen - Pico containers past expiration date on containers. Old stickers still on container. Pico was prepped this morning.
The Farmhouse	2/5/2022	COS MA 590.003 (C) FC 3-301.11 (B) - Preventing Contamination from Hands - <i>Code: Except when washing fruits and vegetables, food employees may not contact exposed, ready-to-eat food with their bare hands and shall use suitable utensils such as deli tissue, spatulas, tongs, single-use gloves or dispensing equipment. Single-use natural rubber latex gloves are not recommended for food contact in food establishments</i>	Basement - Latex gloves noted in use. Gloves removed and vinyl substituted. Discussion w PIC on latex allergies.
Spiga	2/5/2022	COS 3-501.14 (A) Cooling Cooked Foods - <i>Code: Cooked TCS foods shall be cooled within 2 hours from 135°F to 70°F and within a total of 6 hours from 135°F to 41°F or less.</i>	Kitchen - Marinara sauce in walk in 143. Product removed and cooled in smaller pans. Discussion w cooks and Chef on how to cool foods properly in ice bath
Dragon Chef	2/10/2022	COS 3-304.11 Food Contact with Soiled Items - <i>Code: Food shall only contact surfaces of: equipment and utensils that are</i>	Kitchen - Linens used. Replaced with Saran Wrap.

		<i>cleaned and sanitized; single-service and single-use articles; or linens, such as cloth napkins that are used to line a container for the service of foods AND are replaced each time the container is refilled for a new consumer.</i> 3-302.11 (A)(2) Raw Animal Foods Separated from each other - <i>Code: Foods shall be protected from cross contamination by: Except when combined as ingredients, separating types of raw animal foods from each other such as beef, fish, lamb, pork and poultry during storage, preparation, holding, and display by: (a) Using separate equipment for each type, or (b) Arranging each type of food in equipment so that cross contamination of one type with another is prevented and (c) preparing each type of food at different times or in separate areas.</i>	Kitchen - Eggs stored over raw broccoli. Eggs need to be on a lower shelf.
Subway	2/14/2022	COS 7-201.11 Storage Separation <i>- Code: Poisonous or toxic materials shall be stored so they cannot contaminate food, equipment, utensils, linens, and single-service and single use articles by: (A) Separating the poisonous or toxic materials by spacing or partitioning; and (B) Locating the poisonous or toxic materials in an area that is not above food, equipment, utensils, linens, and single-service or single-use articles.</i>	Kitchen - Gatorade and sodas are stored on same shelf as specialty cleaner & polish. All drinks moved off to a drink shelf
Fooda	2/15/2022	COS 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i>	Servery - The temperature of the Pizza in the Salad bar cold wells left was 52 degrees. These items were delivered and placed out around 9 am. Items in the salad bar all moved to under counter coolers to bring down temp.
Home Kitchen Inc.	2/15/2022	3-302.11 (A)(1) Raw Animal Foods Separated from RTE - <i>Code: Food shall be protected from cross contamination by: (1) Separating raw animal foods during storage preparation, holding and display from: (a) Raw RTE food including other raw animal food such as fish for sushi or molluscan shellfish or other raw RTE food such as fruits and vegetables, and (b) cooked RTE food.</i>	Kitchen - Raw eggs stored on middle shelf of walk in cooler. Need to move eggs to a lower shelf.

		COS 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable <i>Salmonellae</i> shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.	Kitchen - The temperature of the Diced tomatoes in the Walk in Cooler was 66 degrees. Voluntarily discarded. Was using in prep.
Sweet Tomatoes	2/19/2022	3-501.14 (A) Cooling Cooked Foods - Code: Cooked TCS foods shall be cooled within 2 hours from 135°F to 70°F and within a total of 6 hours from 135°F to 41°F or less. 3-501.19 (B)(1)(3)(4) Time as a Public Health Control - 4 Hours - Code: If time rather than temperature is used as the public health control up to a maximum of 4 hours: the food shall have an initial temperature of 41°F or less when removed from cold holding temperature control, or 135°F or greater when removed from hot holding temperature control; the food shall be cooked and served, served at any temperature if RTE, or discarded, within 4 hours from the point in time when the food is removed from temperature control; and the food in unmarked containers or packages, or marked to exceed a 4-hour limit shall be discarded. 7-301.11 Separation - Code: Poisonous or toxic materials shall be stored and displayed for retail sale so they cannot contaminate food, equipment, utensils, linens, and single service and single-use articles by separating the poisonous or toxic materials by spacing or partitioning, and locating the poisonous or toxic materials in an area that is not above food, equipment, utensils, linens, and single-service or single-use articles.	Kitchen - Cooked chicken breast was observed at room temperature @81f at 6pm PIC stated they were put there at 1-2pm. Product discarded. Kitchen - TCS Pizza held at room temperature in excess of 41f without conformance to procedures as required. Cease and desist holding at room temperature no pizza slices shall be maintained at room temperature. Administration hearing required by LBOH. Kitchen - Improper storage of toxic chemicals next to food and equipment
Treat Cupcake Bar	2/19/2022	3-304.11 Food Contact with Soiled Items - Code: Food shall only contact surfaces of: equipment and utensils that are cleaned and sanitized; single-service and single use articles; or linens, such as cloth napkins that are used to line a container for the service of foods AND are replaced each time the	Front of house - Sink soiled. Food contact Equipment(whips) stored improperly, unsanitary and soiled. Do not use for storage.

		container is refilled for a new consumer. 7-201.11 Storage Separation - <i>Code: Poisonous or toxic materials shall be stored so they cannot contaminate food, equipment, utensils, linens, and single-service and single use articles by: (A) Separating the poisonous or toxic materials by spacing or partitioning; and (B) Locating the poisonous or toxic materials in an area that is not above food, equipment, utensils, linens, and single-service or single use articles.</i>	Back of house - Gel bait, WD 40 stored improperly next to equipment. Store properly
French Press Bakery - Expansion	2/23/2022	COS 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i>	Expansion area - Items in turbo Air two door cooler were at 45°. Voluntarily discarded.
Beth Israel Deaconess Hospital Kitchen	2/26/2022	3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i> 3-501.16 (A)(2) (B) Proper Cold Holding Temps. - <i>Code: Except during preparation, cooking, or cooling, or when time is used as the public health control as specified under section 3-501.19, and except as specified under paragraph (B) and in paragraph (C) of this section, TCS food shall be maintained at 41°F or less. Eggs that have not been treated to destroy all viable Salmonellae shall be stored in refrigerated equipment that maintains an ambient air temperature of 45°F or less.</i>	Kitchen - Cooked sliced deli beef @47f in Deli refrigerator Product discarded. All products tested with PIC Kitchen - Chicken salad 44f Discarded

Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'22	FY'21	FY '20	FY' 19	FY' 18
Biotech registrations	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1
Bodywork Estab. Insp.	0	0	0	0	0	5	0	0	0	0	0	0	5	6	7	14	11
Bodywork Estab. Permits	0	0	0	0	0	5	0	0	0	0	0	0	5	13	9	9	6
Bodywork Pract. Permits	0	0	0	0	0	5	1	0	0	0	0	0	6	12	23	21	22
COVID 19 Complaints	0	1	1	0	0	1	0	0	0	0	0	0	3	123	0	0	0
COVID 19 Follow Ups	0	1	1	0	0	1	0	0	0	0	0	0	3	122	0	0	0
Demo reviews	8	8	11	9	0	3	11	8	0	0	0	0	58	76	73	104	105
Domestic Animal permits	3	1	0	1	0	0	0	0	0	0	0	0	5	29	1	21	19
Domestic Animal Inspections	0	3	3	2	0	0	1	0	0	0	0	0	9	8	3	22	3
Food Service Routine insp.	16	24	14	10	16	17	7	15	0	0	0	0	119	134	149	200	225
Food Service Pre-oper. Insp.	5	0	5	4	0	0	0	1	0	0	0	0	15	16	48	12	32
Retail Food Routine insp. Or 6 month check in	0	0	1	2	2	2	1	2	0	0	0	0	10	12	33	46	60
Residential Kitchen Routine insp.	0	2	1	0	0	0	0	1	0	0	0	0	4	5	3	6	8
Mobile Routine insp.	0	0	1	0	0	0	0	0	0	0	0	0	1	10	4	17	13
Food Service Re-insp.	0	0	0	2	2	5	3	0	0	0	0	0	12	7	21	28	53
Food Establishment Annual/Seasonal Permits	4	1	0	1	62	56	7	0	0	0	0	0	131	134	155	140	171
Temp. food permits	1	2	10	5	0	0	0	0	0	0	0	0	18	9	67	134	163
Temp. food inspections	1	1	3	1	0	0	0	0	0	0	0	0	6	3	10	37	29
Farmers Market permits	3	1	0	0	0	0	0	0	0	0	0	0	4	15	14	14	14
Farmers Market insp.	31	24	33	45	0	0	0	0	0	0	0	0	133	124	158	229	127
Food Complaints	2	0	1	2	2	1	1	1	0	0	0	0	10	7	49	18	20
Follow-ups food complaints	2	0	1	2	2	1	1	1	0	0	0	0	10	8	48	21	21
Food Service Plan Reviews	2	2	1	1	0	0	1	0	0	0	0	0	7	12	14	20	42
Food Service Admin. Hearings	0	0	0	0	1	0	0	1	0	0	0	0	2	1	3	0	0
Grease/ Septage Hauler Permits	0	0	1	0	7	9	4	0	0	0	0	0	21	13	20	21	24
Housing (Chap II Housing) Annual routine inspection	0	0	0	7	0	0	0	0	0	0	0	0	7	7	7	0	14
Housing Follow-up insp.	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	5
Housing New Complaint	3	1	6	5	1	4	5	4	0	0	0	0	29	40	41	22	22
Housing Follow-ups	9	3	6	8	3	4	5	4	0	0	0	0	42	63	56	28	24
Hotel Annual inspection	0	0	0	0	0	3	0	0	0	0	0	0	3	3	3	3	3
Hotel Follow-ups	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15	0	0
Nuisance Complaints	8	6	5	3	0	2	2	1	0	0	0	0	27	45	34	55	42
Nuisance Follow-ups	7	8	6	3	2	2	2	1	0	0	0	0	31	60	55	69	42
Pool inspections	0	1	0	0	0	6	0	0	0	0	0	0	7	15	13	20	12
Pool Follow up inspections	0	1	0	0	0	1	0	0	0	0	0	0	2	5	3	12	7
Pool permits	0	1	0	0	0	5	2	0	0	0	0	0	8	17	11	19	12
Pool plan reviews	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	44
Pool variances	0	1	0	0	0	4	0	0	0	0	0	0	5	5	6	5	7
Septic Abandonment	1	1	1	2	0	0	1	2	0	0	0	0	8	17	21	9	5

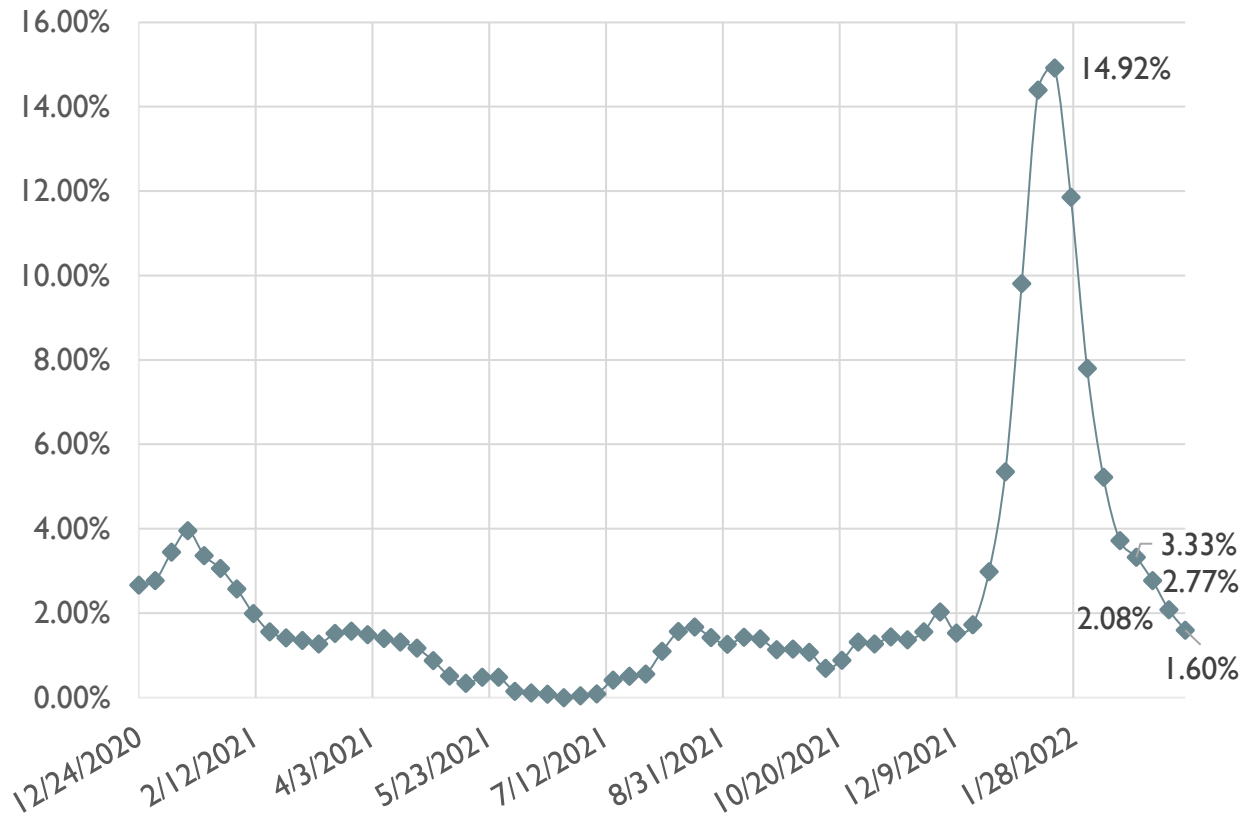
Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'22	FY'21	FY '20	FY' 19	FY' 18
Addition to a home on a septic plan rev/approval	0	3	2	1	3	0	1	1	0	0	0	0	11	5	5	2	2
Septic Install. Insp.	0	2	2	4	0	4	2	0	0	0	0	0	14	11	13	21	28
Septic COC for repairs	0	1	0	0	0	0	0	0	0	0	0	0	1	2	5	3	1
Septic COC for complete septic system	0	0	0	1	1	1	0	0	0	0	0	0	3	1	3	4	3
Septic Info. requests	5	4	3	6	5	6	4	5	0	0	0	0	38	86	61	62	51
Septic Soil/Perc Test.	1	0	0	0	0	1	0	0	0	0	0	0	2	8	1	1	2
Septic Const. permits	0	0	2	0	0	1	0	0	0	0	0	0	3	6	6	6	5
Septic Installer permits	0	0	1	0	0	4	1	0	0	0	0	0	6	8	6	8	9
Septic Installer Tests	0	0	1	0	0	1	1	0	0	0	0	0	3	3	2	5	3
Septic Deed Restrict.	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	3
Septic Plan reviews	1	3	3	4	2	1	1	1	0	0	0	0	16	14	8	9	23
Septic Trench permits	0	1	1	2	0	1	0	0	0	0	0	0	5				
Disposal of Sharps permits	0	0	0	0	2	4	1	0	0	0	0	0	7	8	7	7	9
Disposal of Sharps Inspections	0	0	0	1	2	4	1	0	0	0	0	0	8	8	7	7	7
Planning Board Subdivision Sp Permit Plan reviews/Insp. of lots	0	1	1	1	1	1	2	6	0	0	0	0	13	20	4	1	1
Subdivision Bond Releases	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Special Permit/Zoning	2	1	0	1	3	1	1	2	0	0	0	0	11	18	17	34	15
Tobacco permits	0	0	0	0	2	4	0	0	0	0	0	0	6	7	10	10	11
Tobacco Routine insp	0	0	0	0	6	0	0	0	0	0	0	0	6	7	8	14	18
Tobacco Follow-up insp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	3	3
Tobacco Compliance checks	0	0	0	6	0	0	0	0	0	0	0	0	6	6	30	30	41
Tobacco complaints	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	4
Tobacco Compl. follow-ups	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4
Trash Hauler permits	0	0	0	0	1	0	0	0	0	0	0	0	1	16	15	17	14
Medical Waste Hauler permits	0	0	0	0	2	0	0	0	0	0	0	0	2	2	2	2	1
Well - Plan Reviews, Permission to drill letters, Insp.	3	0	0	0	1	2	1	0	0	0	0	0	7	11	2	6	2
Well Permits	3	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	0

COVID-19 UPDATE

March 29th, 2022
Needham Public Health

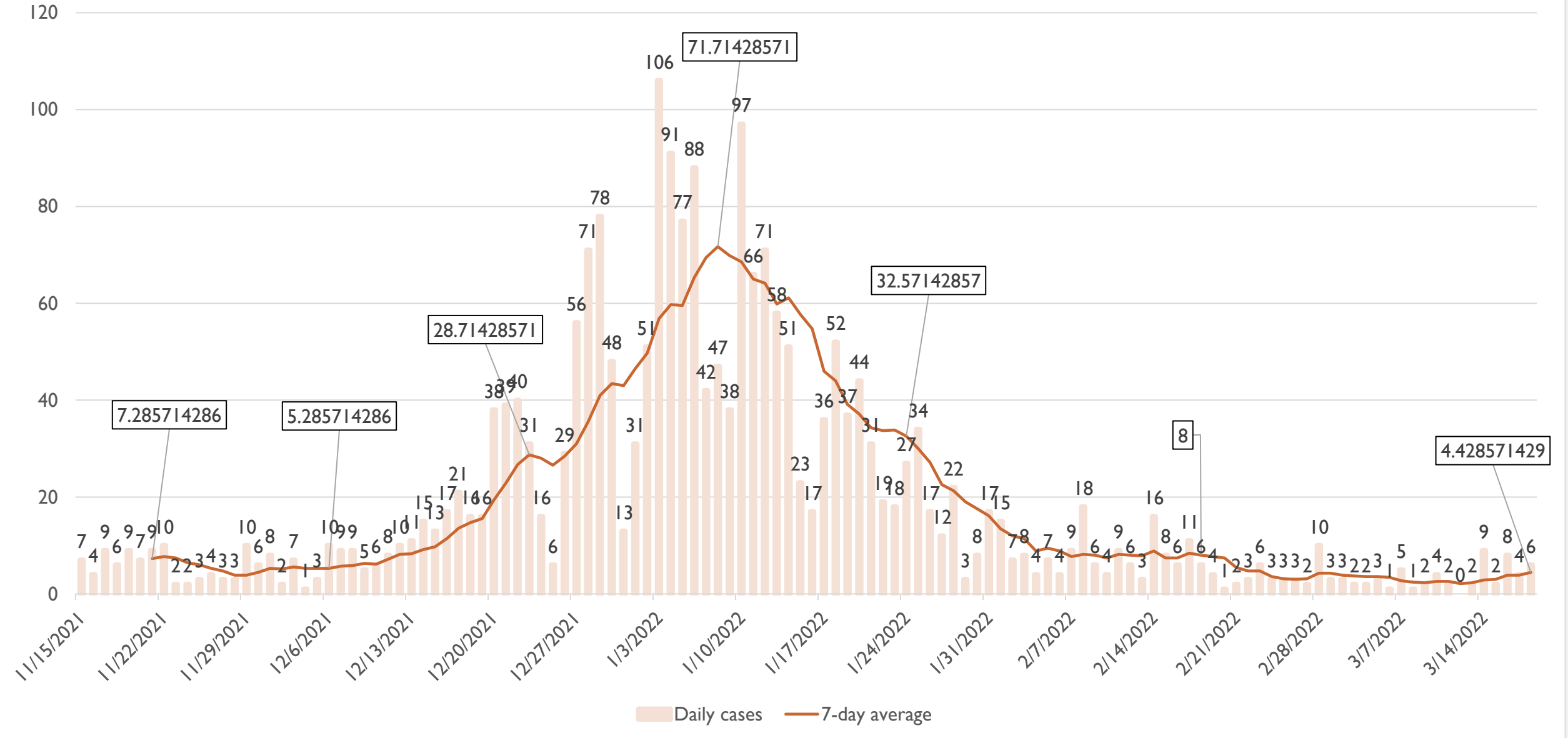
INCIDENCE RATE, PERCENT POSITIVITY, VACCINATION RATES

Percent Positivity



City/Town/County	Avg. Daily Incidence Rate per 100K (last 14 days)	Percent Positive Tests (last 14 days)	Fully vaccinated individuals per capita	Individuals with booster doses per capita
Massachusetts	9.7 ↘	1.64% ↘	-	-
Needham	9.8 ↘	1.6 % ↘	>95%	65%
Middlesex County	13.1 ↘	1.71% ↘	-	-
Newton	14.3 ↘	2.04% ↘	88%	58%
Norfolk County	7.9 ↘	1.71% ↘	-	-
Dedham	8.6 ↗	2.07% ↗	74%	45%
Norwood	5.9 ↘	1.85 % ↘	81%	46%
Wellesley	14.4 ↘	1.44% ↘	77%	50%
Westwood	10.2 ↗	2.4 % ↗	93%	60%
Suffolk County	12.1 ↘	1.38% ↘	-	-
Boston	12.9 ↘	1.36% ↘	71%	37%

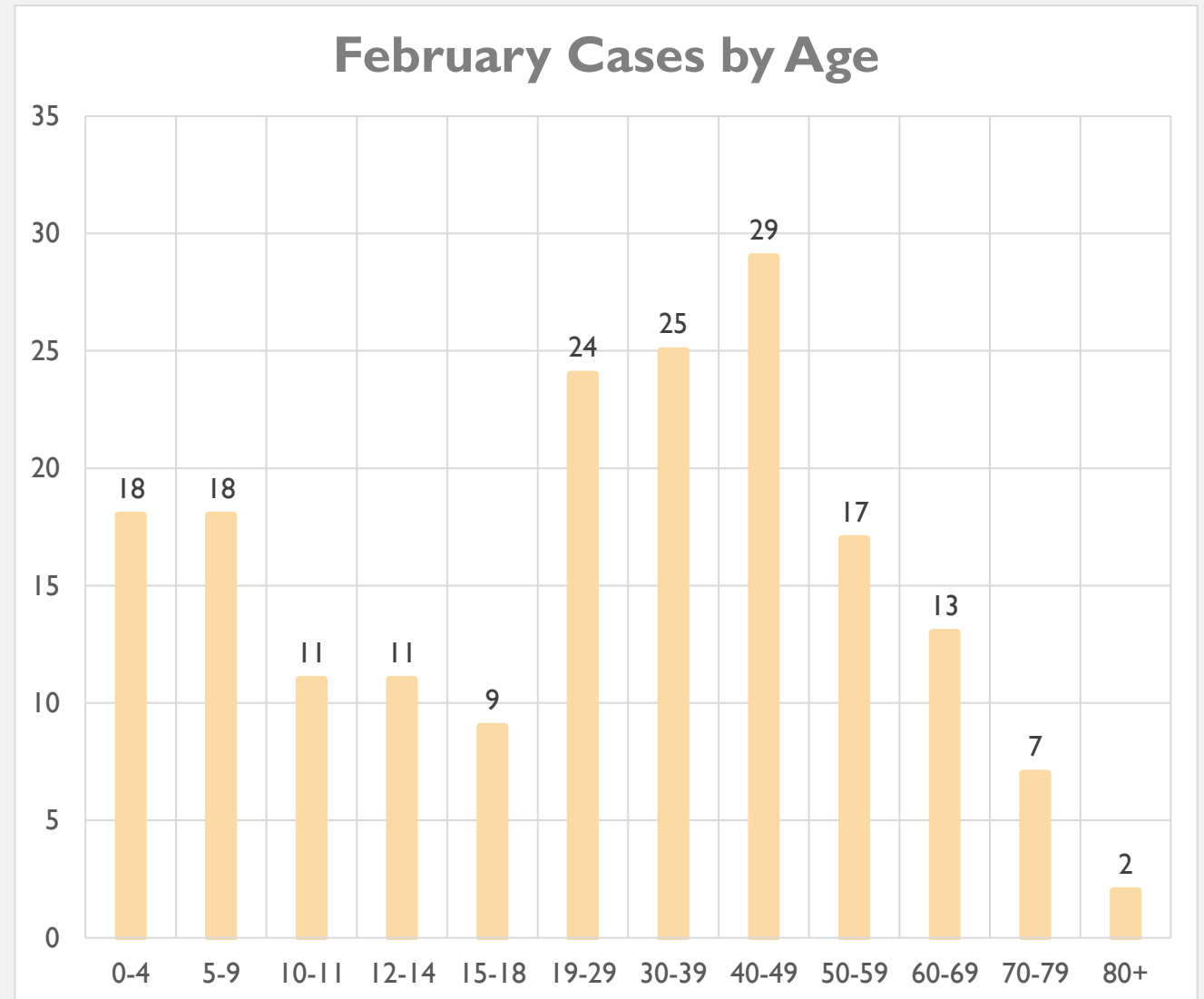
Needham Daily Cases 11/15/21-3/18/22



• NOTE: Does NOT include at-home tests

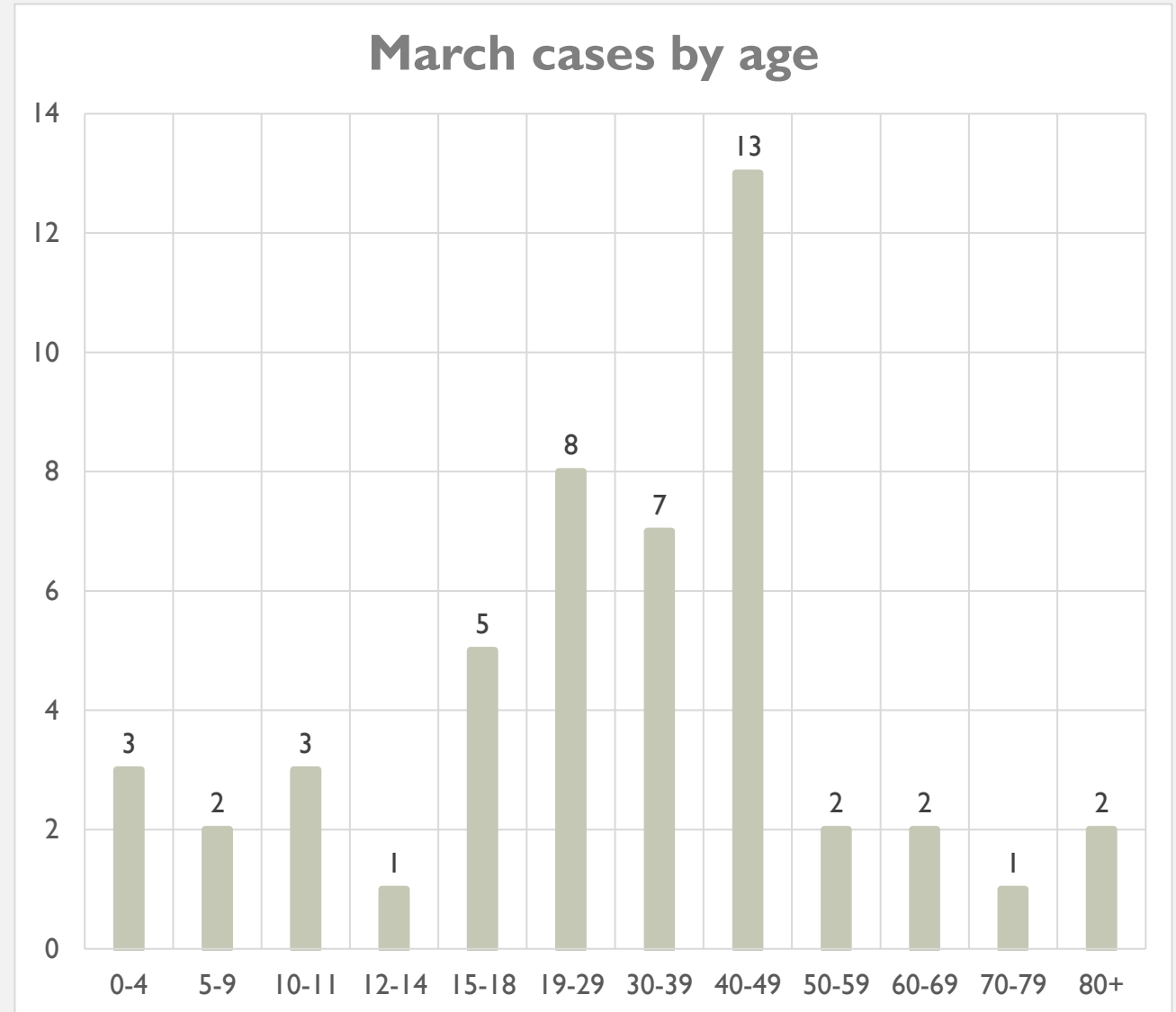
NEEDHAM: FEBRUARY CASES BY AGE

184 cases in February
Average Age: **31.41** years



NEEDHAM: MARCH CASES BY AGE

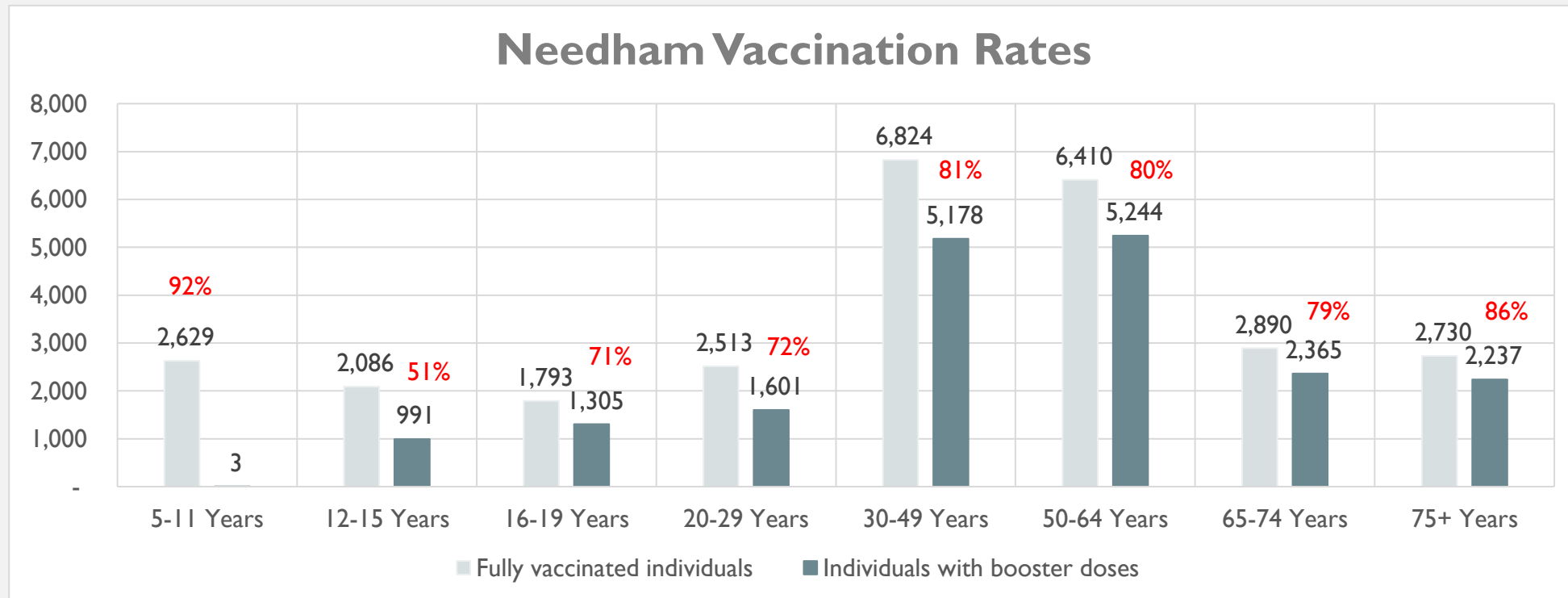
49 cases in first half of March (March 1-16)
Average Age: **34.77** years



NEEDHAM VACCINATION AND BOOSTER RATE

>95% fully vaccinated in ages 12 and up

>95% of Needham residents are fully vaccinated; 65% have received booster doses



STATE TRENDS IN CASES AND HOSPITALIZATIONS

MA DATA UPDATE- COVID DEATHS

- On March 14th, MA DPH updated COVID-19 death data in MAVEN and adopted surveillance definition recommended by the Council of State and Territorial Epidemiologists, developed with input from CDC and multiple states.
- MA death data has been updated, as initial surveillance definition of COVID associated deaths in MA was unusually expansive and resulted in an overcount of deaths, especially during second wave.
- 4,081 deaths in MA being recategorized as stemming from other causes; 400 being newly labelled as COVID deaths
- Needham total changed from 123 confirmed and 3 probable to **91 confirmed and 5 probable COVID deaths**
- Numbers of deaths and death demographics on Needham Dashboard have been updated to reflect new definition

CRITERIA FOR USE WITH CONFIRMED CASES:

1. The case meets **the confirmed COVID-19 surveillance case definition**, AND at least ONE of the following criteria is met:
 - a. A case investigation determined that COVID-19 was the cause of death or contributed to the death.
 - b. The death certificate indicates COVID-19 or an equivalent term as one of the causes of death, regardless of the time elapsed since specimen collection of the confirmatory laboratory test used to define the case.
 - c. The death occurred within (and including) 30 days of specimen collection for the confirmatory laboratory test used to define the case and was due to natural causes (e.g., the Manner of Death is coded as "natural" on the death certificate.)

CRITERIA FOR USE WITH PROBABLE CASES:

1. The case meets the **probable COVID-19 case definition** AND a case investigation determined that COVID-19 was the cause of death or contributed to the death.

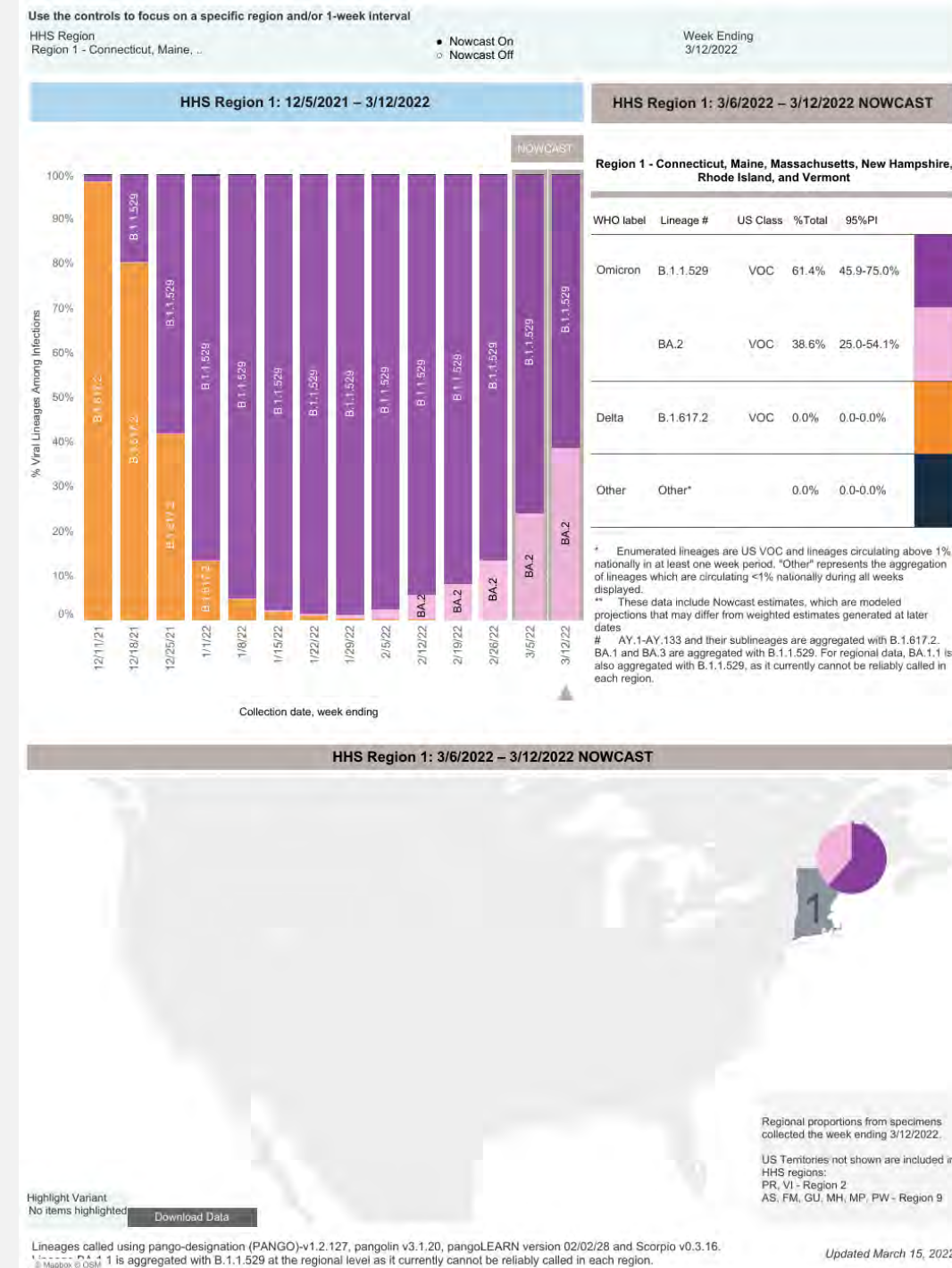
OR
2. The case meets the **probable COVID-19 surveillance case definition based on presumptive laboratory evidence** AND death occurred within (and including) 30 days of specimen collection and was due to natural causes (e.g., the Manner of Death is coded as "natural" on the death certificate.)

OR
3. The case meets the **probable COVID-19 surveillance case definition based on epidemiologic linkage and meeting clinical criteria**, AND death occurred within (and including) 30 days of symptom onset and was due to natural causes (e.g., the Manner of Death is coded as "natural" on the death certificate.)

OR
4. The case meets the **probable COVID-19 surveillance case definition based only on vital records criteria** (i.e. a death certificate that lists COVID-19 disease or SARS-CoV-2 or an equivalent term as an underlying cause of death or a significant condition contributing to death and there is no confirmatory or presumptive laboratory evidence.)

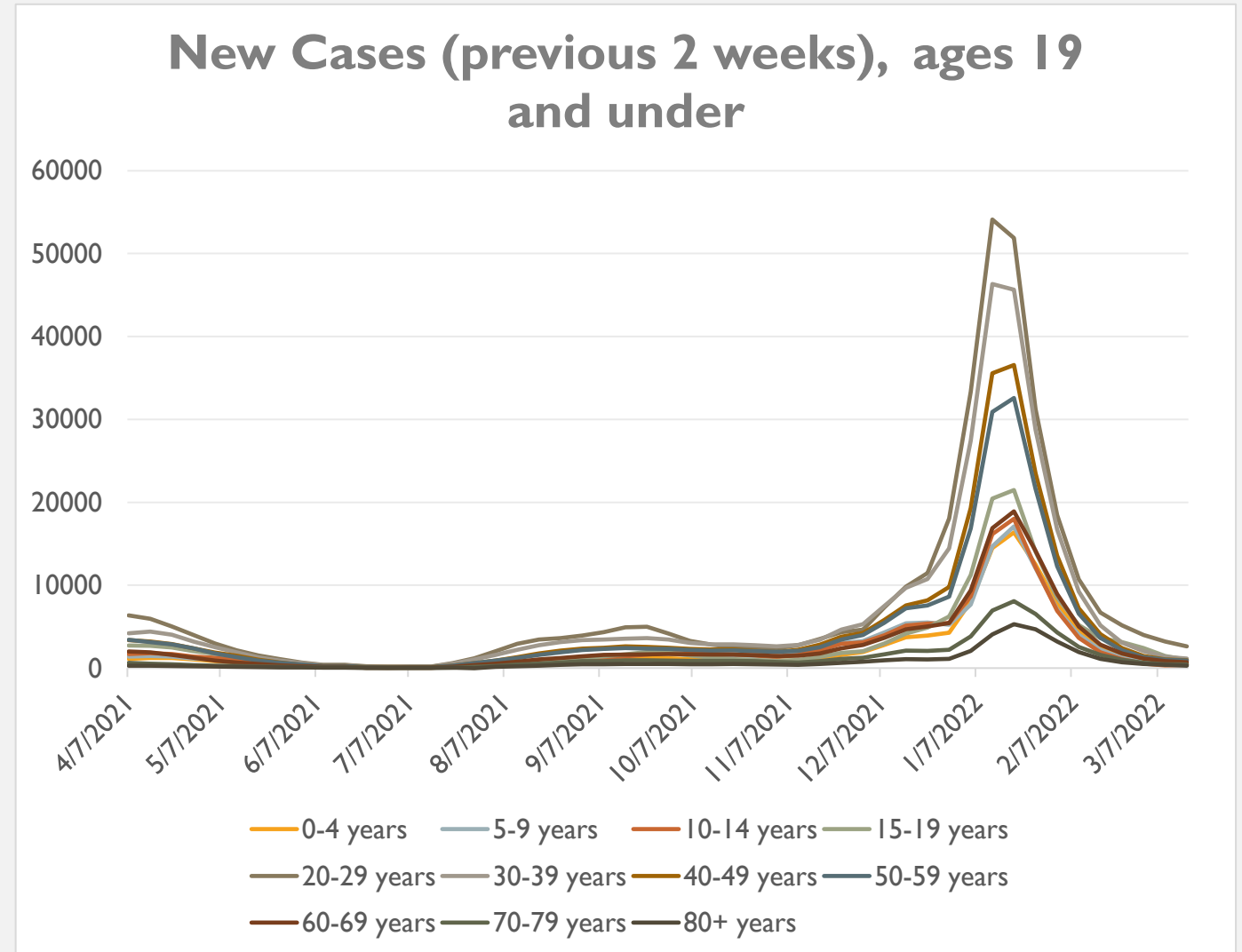
MONITORING BA.2 VARIANT

- BA.2 may be more transmissible than BA.1, but does not appear to cause more severe disease
- In US, BA.2 is 23.1% of Covid-19 cases (as of 3/12/22)
- In Northeast, BA.2 is 38.6% of cases (as of 3/12/22)
- Needham has had 6 sequenced samples (out of 63 sequenced samples since Feb 1) which were BA.2
 - 5 in February
 - 1 in March (lags due to sequencing time means we would only see some results for very early March)



MA NEW CONFIRMED CASES BY AGE

Age Group	# cases <u>current</u> reporting period (2/27-3/12/22)	# cases <u>previous</u> reporting period (2/20-3/5/22)	# cases <u>1 year ago</u> (2/28-3/13/21)
0-4	505	575	4,722*
5-9	413	434	
10-14	386	343	
15-19	1,004	1,476	
20-29	2,636	3,199	3,795
30-39	1,168	1,356	2,988
40-49	940	1,039	2,419
50-59	920	1,031	2,487
60-69	725	845	1,594
70-79	442	488	666
80+	288	388	336

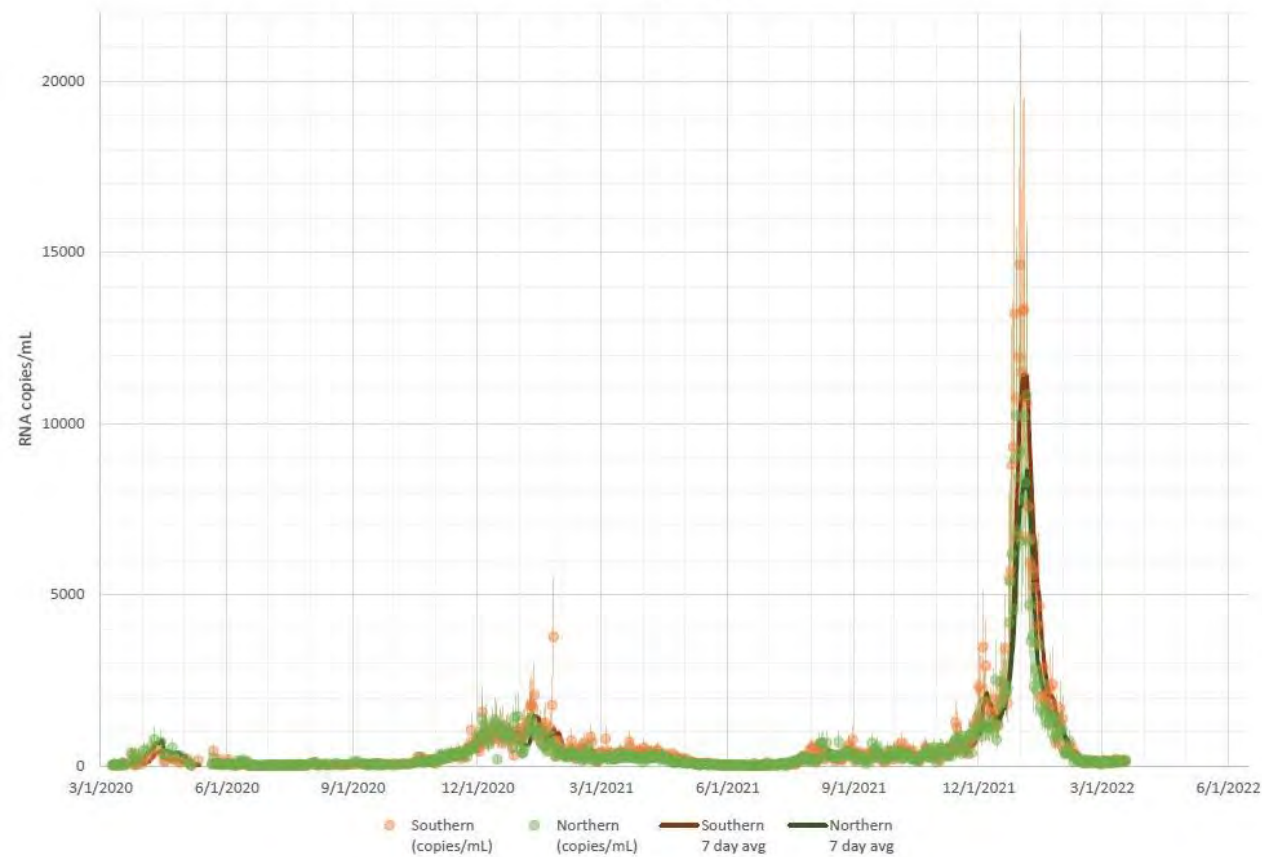


*all cases 0-19 years included together

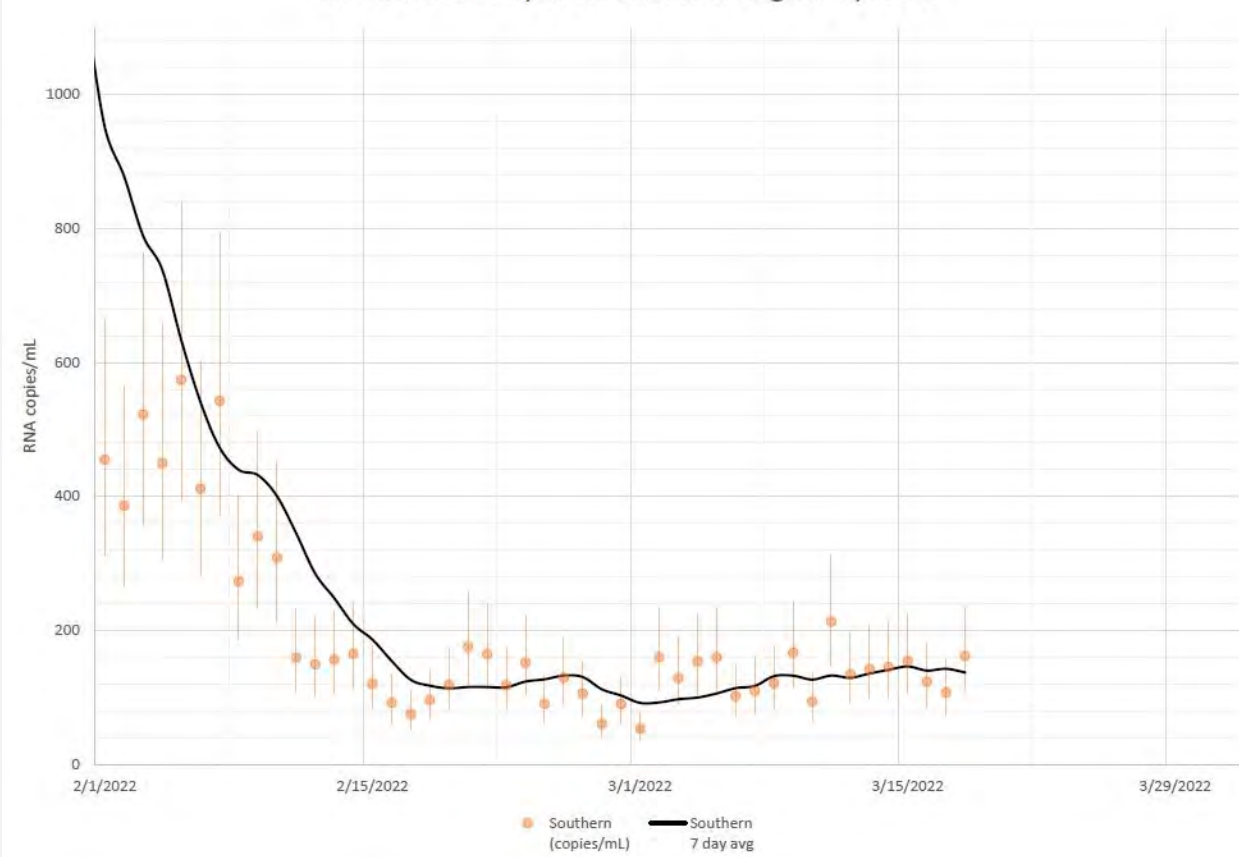
Data as of 3/17/22

MWRA WASTEWATER MONITORING

DITP Viral RNA Signal by Date

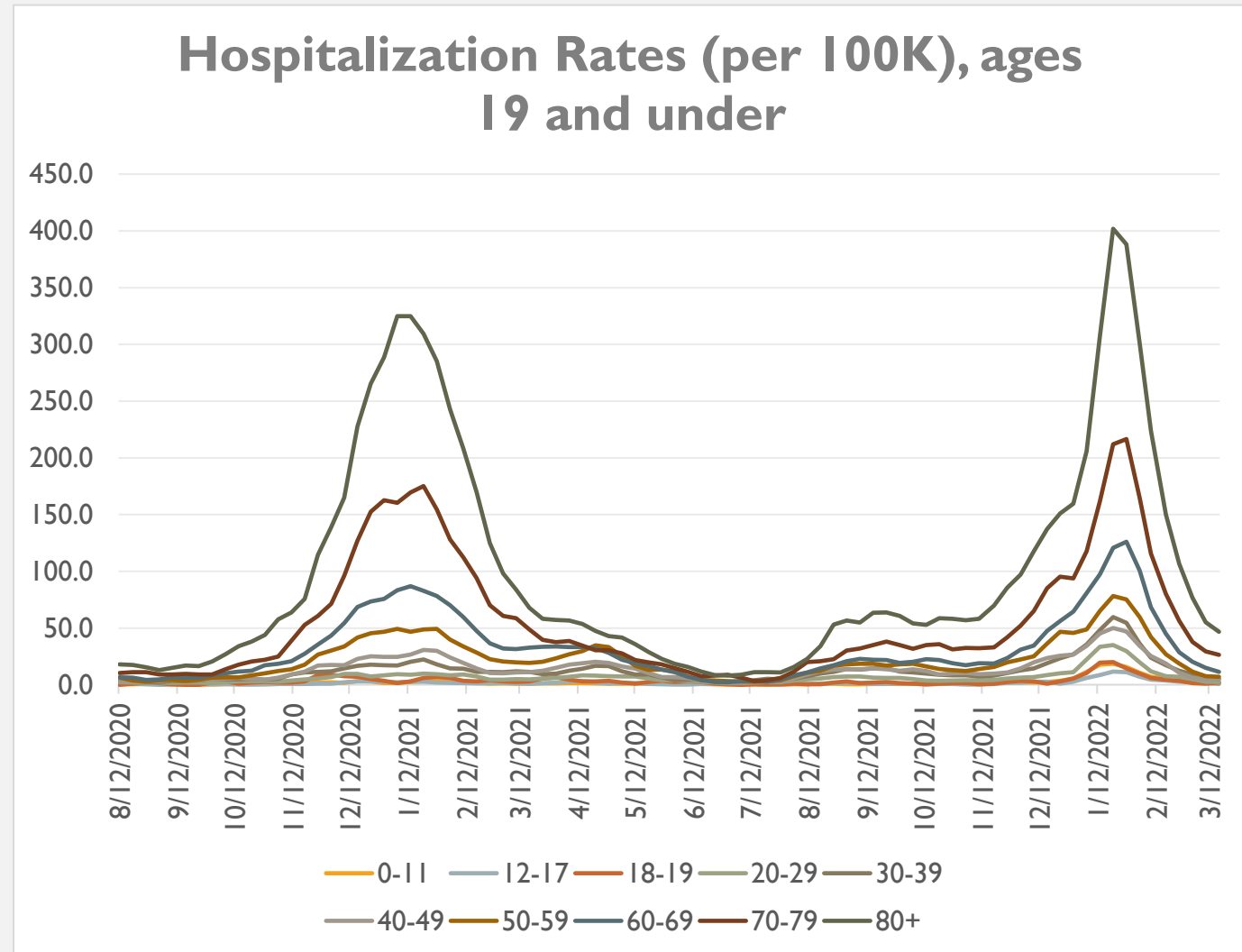


Recent South System Viral RNA Signal by Date

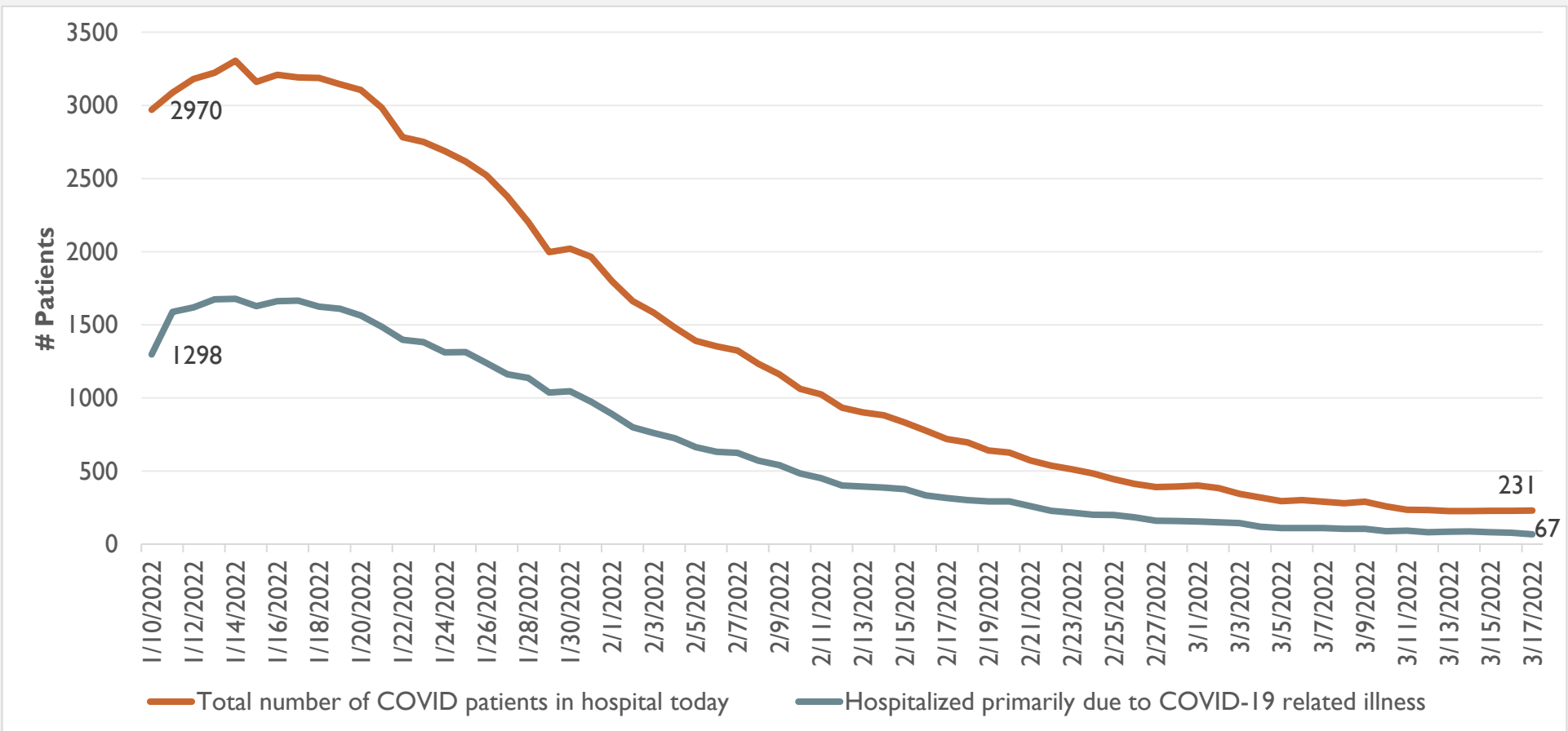


HOSPITALIZATION RATES (PER 100K), 19 AND UNDER

Age Group	Hosp. rate <u>current</u> reporting period (2/27-3/12/22)	Hosp. rate <u>previous</u> reporting period (2/20-3/5/22)	Hosp. rate <u>1 year ago</u> (2/2/-3/13/21)
0-11	1.1	2.4	1.0
12-17	0.6	1.4	1.0
18-19	2.0	1.0	3.0
20-29	2.6	2.8	4.8
30-39	5.0	6.9	11.5
40-49	5.0	4.6	11.2
50-59	7.0	7.6	19.3
60-69	11.5	14.9	32.8
70-79	26.3	29.5	48.8
80+	46.7	55.2	67.8



TOTAL COVID PATIENTS IN HOSPITAL VS HOSPITALIZED PRIMARILY DUE TO COVID





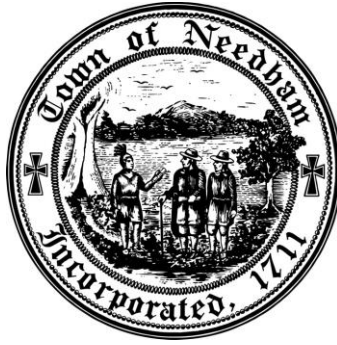
**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	#1688 Central Avenue and Licensed Site Professional Scope of Work
Presenter	Timothy McDonald, Director of Health & Human Services Tara Gurge, Assistant Public Health Director

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Mr. McDonald will provide an update about the 1688 Central Avenue development. Topic continued from discussion at BOH meeting on 2/10/2022. This is likely to be a brief update with limited or no public discussion due to pending litigation. Previous packet is attached along with updated legal filing.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
No vote is required.	
3.	BACK UP INFORMATION ATTACHED:
Finalized Scope of Work for Licensed Site Professional, and Legal Filing re: Planning Board Decision.	



Scope of Services

Name/Title: Licensed Site Professional Plan Review for the
Needham Board of Health

Timeline of Work: February 25, 2022 to May 25, 2022

Contract Number: 22HEA224G

Scope of Services

The Town of Needham's Public Health Division, acting on behalf of the Needham Board of Health, will retain an expert—a Licensed Site Professional who has a current and valid license from the Board of Registration of Hazardous Waste Site Cleanup Professionals—to review and assess proposed development and environmental remediation plans for the property at #1688 Central Avenue, Needham, MA 02492.

The Licensed Site Professional (LSP) may, if authorized, assess the physical location of the property and may review test results for soil testing at the property, if provided. Before assessing the proposed development and environmental remediation plans for the property at #1688 Central Avenue, the LSP shall review the historical documentation and come up with an initial recommendation for required and appropriate environmental remediation. After completing their personal recommendation, the LSP will review the applicant's proposal, and will prepare a full written assessment report, a brief executive summary document with recommendations, and at least two presentations/slide decks outlining the LSP's work process and recommendations.

Deliverables & Project Activities

- Complete review of existing documentation in Town and state records;
- Develop and produce a written assessment and brief recommendation as to appropriate and required environmental remediation;

- Complete review of materials provided by the applicant proposing development of the property at #1688 Central Avenue;
- If authorized, conduct a physical site review at the property location;
- Develop and produce a comprehensive written report on the proposed development, any associated environmental remediation currently planned, and the LSP's assessment of the sufficiency or lack thereof of the proposed remediation activities;
- Develop and produce an executive summary document of the above report with recommendations for the Board of Health's consideration;
- Develop and produce at least two presentations/slide decks, one of which shall outline the LSP's proposed work process and the other of which will detail his/her/their final report and recommendations; and
- Using the slide decks and other written material note above, present at no more than two Board of Health meetings about this project. Please note that all Board of Health meetings are open to the public and are recorded.

Invoicing

The consultant shall submit at least two invoices with a detailed accounting of expenditures, receipts, and a *brief narrative accompaniment (approximately one to two paragraphs in length) specific to the activities conducted during the period for which reimbursement is requested.* The invoice and brief narrative shall be submitted by March 15, 2022, April 15, 2022, and, if needed, by May 15, 2022. It is anticipated that the work on this project will take no more than 60 days from contract start, although approximately 90 days are included in the contract period as a safeguard against possible delays.

Invoicing shall be processed for payment immediately following receipt, review, and approval of all expenses documented. Payments may not exceed the total Agreement amount, including reimbursable expenses. Payments may not be made in advance. Payments are subject to appropriation.

With any invoice, the consultant shall submit evidence satisfactory to the Town that the work has been completed and that all payrolls, material bills and other indebtedness connected with the work has been paid.

Acceptance by the consultant of any payment or partial payment, without any written objection by the consultant, shall in each instance operate as a release and discharge of the Town from all claims, liabilities or other obligations relating to the performance of a Contract.

If for any reason the Town makes a payment under this Agreement in error, the Town may recover the amount overpaid or, if applicable, may apply any overpayment to a future installment payment.

Invoicing submitted by the consultant shall include:

1. A cover letter (or invoice top sheet) on letterhead that includes, among other things...
 - the purchase order or contract number,
 - the billing period (monthly),
 - the Needham Point of Contact (Assistant PH Director Tara Gurge),
 - the point of contact for the consultant or consulting organization,
 - the signature of the official authorizing the invoice and attesting to its validity.
2. An invoice top sheet/summary that details costs by budget area (where appropriate).
 - Personnel Costs
 - Non-Personnel Costs, including equipment, supplies, and contracted services
 - Other Expenses, including travel and ancillary expenses
3. A breakdown table or chart for each of the budget areas above (for example, instead of saying Salaries = \$X, it would say Jane Jones = \$X, Seth Smith = \$Y, etc.)

Price Quote

Submission Due: February 21, 2022 by 1:00 p.m. to
healthdepartment@needhamma.gov

Timeline of Work: February 25, 2022 to May 25, 2022

I, _____, acting as the authorized representative of _____, do confirm that my organization will complete all aspects of the Scope of Work and will conduct the *Licensed Site Professional Plan Review for Needham Board of Health* project for the Town of Needham. I/my organization shall adhere to the reporting and invoicing requirements outlined above, and will complete all of the work in a timely manner for a price not to exceed _____.

Required Documents to be included with Price Quote Submission

- Brief Budget Narrative
- Monthly Budget Spreadsheet
- Workplan/Timeline
- Statement of Qualifications, including resume(s)
- List of no fewer than two references (including contact information)
with which the consulting company or individual consultant has
conducted business

NORFOLK, ss.

LAND COURT DEPT.
OF THE TRIAL COURT
MISC. Docket No.

NEEDHAM ENTERPRISES, LLC.

Plaintiff,

v.

NEEDHAM PLANNING BOARD,

And

PAUL ALPERT, ADAM BLOCK,
MARTIN JACOBS, JEANNE McKNIGHT,
And NATASHA ESPADA,
in their capacity as members of the
NEEDHAM PLANNING BOARD

Defendants.

COMPLAINT PURSUANT TO M.G.L. c. 40A, SECTIONS 3, 9, AND 17

The plaintiff in this action, Needham Enterprises LLC, by and through its undersigned counsel, hereby appeals the Decision of the Needham Planning Board dated March 3, 2022 regarding certain property located at 1688 Central Avenue, Needham, as described in greater detail below.

PARTIES

1. The plaintiff, Needham Enterprises LLC, is a Massachusetts limited liability corporation with a principal address of 105 Chestnut Street, Suite 28, Needham, Massachusetts.

2. The defendant Needham Planning Board is a duly established Board of the Town of Needham, legally mandated to carry out certain statutory responsibilities on behalf of the Town of Needham, including certain responsibilities under M.G.L. c. 40A.

3. The defendant Paul Alpert is an individual residing at 116 Pine Street, Needham, MA. Mr. Alpert is a member of the defendant Needham Planning Board and is named as a party to this action solely in his capacity as a member of that Board, and not individually.

4. The defendant Adam Block is an individual residing at 103 High Rock Street, Needham, MA. Mr. Block is a member of the defendant Needham Planning Board and is named as a party to this action solely in his capacity as a member of that Board, and not individually.

5. The defendant Martin Jacobs is an individual residing at 36 Mayo Avenue, Needham, MA. Mr. Jacobs is a member of the defendant Needham Planning Board and is named as a party to this action solely in his capacity as a member of that Board, and not individually.

6. The defendant Jeanne McKnight is an individual residing at 100 Rosemary Way, Unit 336, Needham, MA. Ms. McKnight is a member of the defendant Needham Planning Board and is named as a party to this action solely in her capacity as a member of that Board, and not individually.

7. The defendant Natasha Espada is an individual residing at 1681 Central Ave, Needham, MA. Ms. Espada is a member of the defendant Needham Planning Board, but recused herself from the hearing and deliberations on this matter and did not sign the decision appealed hereby. Ms. Espada is named as a party to this action solely in her capacity as a member of that Board, and not individually, and solely in the event that, notwithstanding her non-participation in

the decision being appealed, she is required to be named as a defendant by virtue of her status as a member of the Needham Planning Board.

JURISDICTION AND VENUE

8. This Court has jurisdiction over this matter and venue is proper pursuant to M.G.L. c. 40A, § 17.

FACTS

9. Needham Enterprises is the owner of a certain parcel of land located at 1688 Central Avenue in Needham (the "Property"). The Property, which at present comprises approximately 3.3 acres, is located in a zoning district identified in Needham's Zoning Bylaws as "Single Residence A" ("SRA"). Currently located on the Property are a house, a barn (the "Barn"), and another outbuilding sometimes referred to as the garage.

10. Needham Enterprises intends to demolish the house and garage, and to build a facility of approximately 10,000 square feet on the Property, to house a child care facility, a use that is allowed by right not only by M.G.L. c. 40A § 3, the so-called "Dover Amendment," but also by the Town's own bylaws, in every zoning district in Town, including the SRA district.

11. The proposed building exceeds by a wide margin every minimum dimensional requirement (such as front, side and rear setbacks) and is less than (again, by a wide margin) every maximum allowable dimensional requirement set forth in the Town's Bylaws. The proposed parking exceeds the Town's requirements for parking for a child care facility of this size.

12. The design of the building has been arrived at collaboratively with the anticipated tenant, Needham Children's Center (NCC), with extra space (and spaces) to enhance the

children's experiences there, and to facilitate early childhood programs that are important to NCC, rather than cramming the children into the minimum square footage required by state law.

13. NCC has been a highly regarded and responsible corporate citizen of Needham for over 40 years, and is accredited by the National Association for the Education of Young Children (NAEYC), consistently meeting or exceeding the national standard of child care excellence set by that organization

14. As part of this project, Needham Enterprises intends to build a site access driveway, including a dedicated pick-up and drop-off lane; a pick-up and drop-off area adjacent to the main entrance to the building (which is at the end of the building furthest from Central Avenue); parking areas that include a total of 30 parking spaces; and a large fenced outdoor play area.

15. Needham Enterprises intends and proposes to leave in place the Barn, which was built in the late 1980s, to be used by NCC for storage. At its current location, NCC is using approximately 1,850 s.f. of space for storage of equipment, materials, and supplies used in the operation of its child care facility.

16. All of these aspects of the project are shown on plans submitted to the Needham Planning Board, prepared by Needham Enterprises' engineering firm, Glossa Engineering, Inc., originally dated June 22, 2020, and most recently revised on November 8, 2021. These plans (which are collectively referred to herein as the "Plans") include an extensive landscaping plan that was modified at the request of, and subsequently approved by, the Needham Design Review Board.

17. Unlike some other towns in the MetroWest area, Needham's zoning bylaws do not include provisions specifically addressed to projects, buildings, or uses covered by the Dover Amendment.

18. Instead, the Needham zoning bylaws require something called a "Major Project Site Plan Review Special Permit," to be issued by the Planning Board after a public hearing process, for any project which (among other possible triggering criteria) involves 10,000 or more square feet of new construction, or the creation of 25 or more new off-street parking spaces. The Needham zoning bylaws specify various criteria that the Planning Board is to consider in determining whether to issue a Major Project SPR Special Permit, and what, if any, conditions to impose on an approved project.

19. But for the existence of the Dover Amendment, M.G.L. c. 40A, § 3, the project and Plans proposed by Needham Enterprises would fall under the Town's requirements for a Major Project SPR Special Permit. However, M.G.L. c. 40A, § 3 provides in relevant part:

No zoning ordinance or bylaw in any city or town shall prohibit, or require a special permit for, the use of land or structures, or the expansion of existing structures, for the primary, accessory or incidental purpose of operating a child care facility; provided, however, that such land or structures may be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements.

20. In light of this language, it has consistently been Needham Enterprises' position that the Town, and more particularly the Planning Board, cannot require a Major Project SPR Special Permit for the project and the Plans, particularly with respect to the Barn, which was permitted by the Town as an accessory structure in 1989. Instead, because this project and the Plans fall under the portion of the Dover Amendment quoted above, it was and remains Needham Enterprises' position that the project and the Plans are subject to review and approval by the Planning Board "subject to reasonable regulations concerning the bulk and height of structures

and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements,” (rather than whatever regulations or conditions the Planning Board sees fit to impose under the Major Project SPR criteria).

21. Nevertheless, the Town insisted that the only path to approval of the project and the Plans was through the Major Project SPR Special Permit process. Accordingly, on or about May 20, 2021, Needham Enterprises submitted an application to the Planning Board for a Major Project SPR Special Permit for the project and Plans.

22. The application was scheduled for a public hearing on Monday, June 14, 2021. No testimony was taken at that hearing. Thereafter the public hearing was continued to and (except where specified below), evidence was taken on the following dates: Tuesday, July 20, 2021; Tuesday, August 17, 2021 (no testimony taken); Wednesday September 8, 2021; Tuesday, October 5, 2021; Tuesday, October 19, 2021 (no testimony taken), Tuesday, November 2, 2021; Tuesday, November 16, 2021; and Wednesday December 8, 2021.

23. As noted above, at the start of the process Planning Board member Natasha Espada recused herself on the grounds of conflict of interest, as she resides at 1681 Central Avenue, almost directly across the street from the Property. This recusal left four Board members apparently able to participate in the public hearing process, and deliberate and vote on Needham Enterprises’ application for a Major Project SPR Special Permit.

24. No testimony was taken at the October 19, 2021 hearing because, upon information and belief, shortly before that hearing, the Planning Board received a communication from a resident of Needham asserting that one of the four remaining members, Paul Alpert (who is the chair of the Planning Board) also had a conflict of interest. Mr. Alpert

announced at the meeting that the hearing would be continued to allow time to consult with Town Counsel as to how to proceed.

25. At the next hearing, on November 2, Mr. Alpert stated that after consultation with Town Counsel it had been determined that he should recuse himself due to this conflict, but that doing so would leave only three members of the Planning Board able to vote on the application, which would not meet the statutory requirement of four votes of a five-member board. Therefore, it was determined that the Town would invoke the so-called “rule of necessity” and that Mr. Alpert would remain on the Board for the remainder of the hearing, deliberation and vote on Needham Enterprises’ application, although for the purposes of this application, he would tender chairmanship of the Planning Board to the vice-chair, Adam Block, for the remainder of the hearing.

26. An enormous amount of material -- some 252 documents in total -- was submitted to the Planning Board during the hearing process. Although a detailed review of the relevant documentation is not possible or appropriate in this Complaint, excerpts from three of those documents have a direct bearing on the issues raised by this appeal:

- a. A May 6, 2021 inter-departmental communication from John J. Schlittler, Chief of the Needham Police Department, to the Planning Board, in which Chief Schlittler states, in part: “the center [NCC] will be staggering drop-off and pick-up times as they currently do and will continue post covid . . . The change to 30 parking spaces will alleviate any concern of adequate parking or vehicles stacking within the lot during drop-off and pick-up” and concludes: **“If the facility continues to stagger drop-offs and manages the internal parking circulation, I feel the traffic will be manageable and not a safety concern.”** (emphasis added)
- b. A November 16, 2021 letter from the Town’s own traffic and engineering consultant, John Diaz of Greenman Pederson, Inc. (“GPI”), who was hired by the Town (at Needham Enterprises’ expense) to act as peer reviewer of Needham Enterprises’ traffic and engineering submissions and analyses. In that letter, Mr. Diaz states, as one of his recommendations: “The proponent should commit to provide police details during the peak morning and afternoon hours of arrivals and dismissals. **The detail should remain in place, until the Police Chief believes**

the site is operating without significantly impacting operations along Central Ave. (emphasis added)

- c. A December 7, 2021 letter from the Needham Building Commissioner, David Roche, to the Planning Board, in which Commissioner Roche discusses the definitions of “Accessory Building “ and “Accessory Use” under the Needham zoning bylaw in the context of M.G.L. c. 40A, § and concludes: **“Based on the definitions in the Bylaw and the section from 40A I believe that the use of the barn if used specifically by the child care facility would be a permitted use and not a violation of zoning.”** (emphasis added)

27. As can be seen from the language of certain sections enumerated below, including sections 2.1(d), 3.14(a), 3.14(c), 3.15, 3.16, and 3.17, when it issued its decision that is the subject of this appeal (hereinafter referred to as the “Decision,” a copy of which is attached hereto as Exhibit 1), the Planning Board ignored the advice and opinions of the Needham Police Chief; the Needham Building Commissioner, and the Planning Board’s own peer reviewer, John Diaz. In important respects discussed below, the Planning Board also ignored the advice of Town Counsel.

28. Following the public hearings listed in paragraph 22, above, on December 8, 2021, the Planning Board closed the public hearing, and thereafter conducted several public meetings in which it deliberated as to what conditions should be included in the Decision. Ultimately, on March 3, 2022, the Planning Board signed the Decision , and filed it with the Needham Town Clerk. Although it purports to “approve” a Major Project Site Plan Review Special Permit for the project, the Decision includes the following provisions, conditions, and required material modifications to the project and the Plans, among others:

- a. “Modifications” Section 2.0: The Plan shall be modified to include the requirements and recommendations of the Department of Public Works as set forth below. The modified plans shall be submitted to the Department of Public Works for review and comment, and to the Board for approval and endorsement. All requirements and recommendations of the Department of Public Works, set forth below, shall be met by the Petitioner. . . .(a) the plan shall be revised to show an ADA-compliant sidewalk along the entire frontage of the property.

- b. "Modifications" Section 2.1 (d): The Plan shall be revised to demolish or remove from the property the barn and to relocate the proposed building and associated fencing another 56 feet back from Central Avenue to a minimum front yard setback of 120 feet in accordance with the sketch plan shown as Exhibit 252.
- c. "Modifications" Section 2.2: The plan shall be revised to show all trees having a caliper of greater than 6 inches located within the area of disturbance that will not be retained during the construction process. Said trees shall be replaced at a 2 to 1 ratio with the location, size, and species to be reflected on a revised landscaping plan submitted to and approved by the Director of Parks and Forestry.
- d. Condition 3.4: The maximum number of children present at the child-care facility at any given time shall not exceed 115. The maximum number of child-care employees or staff inclusive of teachers, instructors and administrators present at any given time shall not exceed 18.
- e. Condition 3.8: Any change to the property shall require an amendment of the site plan approval.
- f. Condition 3.13: If the Petitioner is notified by the Planning Board, based on reliable observations reported to the Planning Board, of frequent or chronic backup of vehicles onto Central Avenue from the child-care facility, it shall promptly propose, in writing to the Planning Board, a plan to remedy the situation and following Board approval shall execute the approved plan without delay.
- g. Condition 3.14 (a) (and Section 1.17 (a)): A police detail shall be provided at the site driveway during the peak morning and afternoon hours of arrivals and dismissals. The detail will remain in place for a minimum of 45 days, commencing on or after the opening of the child-care facility. The detail may be discontinued thereafter upon request of the Petitioner and a finding by the Board (following such notice and hearing, if any, as the Board, in its sole and exclusive discretion, shall deem due and sufficient) that the site is operating without significantly impacting operations along Central Avenue."
- h. Condition 3.14 (c) (and Section 1.17(c)): The Petitioner shall complete a follow-up traffic study using the methodologies and presenting conclusions consistent with the traffic studies presented to the Planning Board in this application after the site is open and operational to at least 80% of student capacity.
- i. Condition 3.15: The Petitioner shall not exceed the Maximum Trip Count as follows: The total Maximum Trip Count for the child-care facility is 110 trips during the weekday morning peak hour and 112 trips during the weekday evening peak hour. The Petitioner shall prepare, submit and implement a Transportation Demand Management Work Plan (the "TDM Work Plan"), that includes strategies and measures necessary to comply with the Maximum Trip Count. The TDM

Work Plan shall be submitted to the Board for review and approval prior to the issuance of the building permit.

- j. Condition 3.16: The Petitioner shall be responsible for verifying compliance with the Maximum Trip Count, if so requested by the Board. Such trip counts shall be conducted by a qualified professional in accordance with standard engineering methodology. The Petitioner shall be responsible for the cost of all trip counts, surveys, and required analysis. If the Maximum Trip Count is exceeded, the Petitioner shall submit a revised TDM Work Plan to the Planning Board for review and approval.
- k. Condition 3.17: In the event that traffic or parking problems caused by the use of the property develop that are inconsistent with what was represented to the Board at the hearing and that adversely affect the neighbors on Central Ave, the Board may modify this decision by imposing impose additional conditions.
- l. Condition 3.18: The Petitioner shall be responsible for implementing and complying with the requirements of the Board of Health as detailed in . . . Section 1.24 of this Decision, and all other requirements of the Board of Health as the Board of Health shall determine based on the report of the licensed site professional as set forth in section 1.24. The petitioner shall provide access to the property by the licensed site professional retained by the Board of Health for the purpose of completing the tasks set forth in Section 1.24.
- m. Section 1.24 of the Decision provides: The Board of Health will engage an independent third party, licensed site professional to conduct an independent environmental evaluation of the property. The licensed site professional will oversee the project and shall confirm that the soil testing work, along with the proposed capping work to be conducted, meets all local, state and federal requirements. The licensed site professional will conduct a complete site assessment, provide their recommendations on whether soil testing is required and what types of testing needs to be conducted due to the history of this site. This licensed site professional will also: (a) determine whether and what type of barrier or capping measures may be necessary on this site; (b) offer guidance on what mitigations are necessary in the event the soil is found to be contaminated; (c) offer guidance on what mitigations to the new building will be required to ensure the building air quality is adequate and safe; and (d) offer their guidance on what will be required going forward to ensure the site is deemed safe for the children at this new child-care facility.
- n. Condition 4.44 (presumably s/b 3.44): Violation of any of the conditions of this Decision shall be grounds for revocation of this Decision, or of any building permit or certificate of occupancy granted hereunder. In the case of violation of the continuing obligations of this decision, the Town will notify the owner of such violation and give the owner reasonable time, not to exceed thirty (30) days, to cure the violation. If, at the end of said thirty (30) day period, the Owner has not cured the violation, or in the case of violations requiring more than thirty (30)

days to cure, has not commenced the cure and prosecuted the cure continuously, the permit granting authority may, after notice to the Owner, conduct a hearing in order to determine whether the failure to abide by the conditions contained herein should result in revocation of this Decision.

29. For the reasons set forth below, all of these conditions are void, because (a) they require further determinations of substance by the Planning Board, the Board of Health, and the town's Director of Parks and Forestry, which means that the Planning Board has not issued a final decision within the time required by M.G.L. c. 40A § 9; and/or (b) in the case of the Barn, they constitute an explicit denial of the proposal to use the Barn as a storage facility for the NCC child care facility, a result which is prohibited by M.G.L. c. 40A, § 3; and/or (c) the conditions and required modifications of the Plans exceed the Planning Board's authority to impose "reasonable regulations" pursuant to M.G.L. c. 40A, § 3 and the applicable case law thereunder; and in some cases are void for vagueness; and/or (d) they collectively represent such a material change to, and increase in the cost of, the project and the Plans as to constitute a *de facto* denial of the project and the Plans as proposed by Needham Enterprises, which is prohibited by M.G.L. c. 40A, § 3 and the Town's zoning bylaws.

COUNT I
CONSTRUCTIVE GRANT OF PLAINTIFF'S
APPLICATION FOR MAJOR PROJECT SITE PLAN SPECIAL PERMIT
(M.G.L. c. 40A, § 9)

30. Plaintiff incorporates the allegations of paragraphs 1- 29, above, with the same force and effect as if set forth in full.

31. As noted above, the public hearing on this matter was closed on December 8, 2021.

31. M.G.L. c. 40A, § 9 states in part that "The decision of the special permit granting authority shall be made within ninety days following the date of such public hearing." This

language has been interpreted to mean that a final decision must be made no later than 90 days from the close of the public hearing (and possibly earlier).

32. It is well established under Massachusetts law that a decision of a municipal permit granting authority requiring “further determinations of substance” is not a final decision, particularly when those determinations are to be made based on facts and evidence that is not yet before the permit granting authority. In fact, during the January 4, 2022 deliberations of the Planning Board, the Board was advised by Town Counsel, Christopher Heep, that “you cant . . . require the applicant to take your site plan approval decision and come back to you in three months for a new hearing and another level of review . . . any condition that requires the applicant to come back to the Planning Board three months from now or six months from now for a public hearing or any kind of discretionary review is going to be vulnerable to attack on appeal . . . the key element here is that all of the discretionary review needs to be done when you issue your decision.”

33. The March 3, 2022 Decision requires further determinations of substance by the defendants (or in instances specified below, by the Board of Health or the Town Director of Parks and Forestry) on the following topics. All of these determinations of substance are to be based on facts, information, and evidence that is not yet before the Planning Board:

- a. Whether “**reliable evidence**” has been reported to the Planning Board that there are “**frequent or chronic backup of vehicles onto Central Avenue**” (Condition 3.13, emphasis added); if this is found to be the case, then after being so notified, Needham Enterprises must submit for Planning Board approval a plan to remedy the situation.
- b. Whether “**the site is operating without significantly impacting operations along Central Avenue;**” (Condition 3.14, emphasis added), and, before the daily morning and afternoon peak hour police detail required by Condition 3.14 can be discontinued, this “standard,” whatever it might mean to the Planning Board, must be met after a hearing conducted “in the sole and exclusive discretion of the Planning Board.”

- c. Whether the “follow-up traffic study” required by Condition 3.14 presents **“conclusions consistent with the traffic studies presented to the Planning Board during the application process”** (emphasis added) and if not, what additional conditions the Board may impose.
- d. Whether to approve a “Transportation Demand Management Work Plan” (“TDM Work Plan”) required to be submitted by Needham Enterprises, which must be approved even before a building permit can be issued (Condition 3.15)
- e. Whether to approve a revised TDM Work Plan required by Condition 3.16 if the maximum trip count specified in Condition 3.15 is exceeded.
- f. Whether **“traffic or parking problems caused by the use of the property develop that are inconsistent with what was represented to the Board at the hearing and that adversely affect the neighbors on Central Ave.”** and if so, what additional conditions to impose (Condition 3.17, emphasis added).
- g. The nature, extent, and physical scope of the soil testing that will be required at the property; the nature and extent of barriers or capping that will be required; the type and extent of mitigation that will be required in the event any soil is found to be “contaminated;” the nature and extent of “mitigation to the new building” that will be required “to ensure the building air quality is adequate and safe;” and the nature and extent of “what will be required going forward to ensure the site is deemed safe for the children at this new child-care facility;” all to be determined at some future date by the Board of Health (Condition 3.18).
- h. Whether the Director of Parks and Forestry will approve the to-be-created, Board-imposed tree replacement plan and revised landscaping plan as required by Modification 2.2 of the Decision.

34. Because all these provisions require further determinations of substance by the defendants, the Board of Health, and/or the Director of Parks and Forestry, the defendants have in effect failed to make a final decision within 90 days of the close of the public hearing.

35. It is well-established under Massachusetts law that the failure of a municipal permitting authority to take final action on an application within 90 days of the close of the hearing results in a constructive grant, without conditions, of the application as submitted by the applicant.

36. As a result, Needham Enterprises' application for a Major Project SPR Special Permit has been constructively granted by the defendants; all conditions and plan modifications imposed by the March 3, 2022 Decision are void and of no force or effect; and Needham Enterprises is entitled to a building permit to proceed with the project as specified in the Plans.

WHEREFORE, Needham Enterprises requests that the Court enter judgment as set forth below.

COUNT II
IMPOSITION OF CONDITIONS IN THE SPECIAL PERMIT THAT
EXCEED THE DEFENDANTS' AUTHORITY AND/OR ARE
OTHERWISE PROHIBITED BY APPLICABLE LAW
(M.G.L. c. 40A, § 17)

37. Plaintiff incorporates the allegations of paragraphs 1-36, above, with the same force and effect as if set forth in full.

38. As noted above, the Decision includes a requirement that the Barn be demolished. This requirement is clearly prohibited by the language of M.G.L. c. 40A, § 3 which states in relevant part that "No zoning ordinance or bylaw in any city or town shall prohibit, or require a special permit for, the use of land or structures, or the expansion of existing structures, for the primary, accessory or incidental purpose of operating a child care facility . . ." Inasmuch as the Barn is proposed to be used for storage purposes solely by NCC, it clearly is a "structure" to be used for an "accessory or incidental purpose of operating a child care facility." Prohibiting its use for this purpose is therefore proscribed by M.G.L. c. 40A § 3. Consistent with this clear and unambiguous language, the Planning Board was advised by Town Counsel during its January 4, 2022, deliberations that in his opinion "the barn is likely entitled to protection of the Dover Amendment to the extent it is being used for childcare facility purposes."

39. The Planning Board offers three rationales for requiring the demolition of the Barn, none of which has merit. First, the Decision asserts that the Barn is prohibited by the provision of the Needham zoning bylaw that prohibits more than one non-residential use or structure on a lot in this zoning district. *See* Decision Section 1.18(a). Relevant case law explicitly rejects this argument in Dover Amendment cases. Indeed, immediately adjacent to this Property, in the same zoning district, is the Temple Aliyah which is also operating a child care facility on its property, i.e., operating more than one non-residential use on the same lot in the SRA zoning district. Obviously, the Temple is not operating an illegal child care facility; it is legally operating a child care facility in apparent violation of the language of the bylaw because of the protection afforded to child care facilities (and religious institutions) by the Dover Amendment.

40. Second, defendants assert in the Decision that the barn does not qualify as an “accessory structure,” relying on the definition of “Accessory Structure” in the zoning bylaw: “a building devoted exclusively to a use subordinate to and customarily incidental to the principal use.” *See* Decision Section 1.18(b). Defendants argue that it is not customary for a child care facility to have an accessory structure of this size (4800 s.f. on a footprint of 2400 s.f. which is *less than half the size of the proposed building* that will be housing NCC) and misread the definition to mean that the Barn therefore does not qualify as an accessory structure under the bylaw.

41. The bylaw definition of accessory structure clearly states that it is the use of the structure (in this case, storage) that must be “customarily incidental” to the principal use (in this case, child care facility). Nowhere does the definition state that the size of the structure must be “customary.” Indeed, this Barn *was permitted by the Town as an accessory structure* in 1989, at

a time when it exceeded by a considerable margin the square footage of the principle structure (the house, 1663 s.f.) on the Property. In fact, the Barn, permitted by the Town as an accessory structure, is approximately *three times the size of the house* that it was accessory to.

42. Moreover, as noted in paragraph 26(c), above, the Needham Building Commissioner (who is the Town official responsible for enforcing the zoning bylaws) has stated, in writing, that in light of the definitions of “accessory structure” and “accessory use” in the zoning bylaw, and the protection afforded by the Dover Amendment for “structures” used “for the primary, accessory or incidental purpose of operating a child care facility,” that “based on the definitions in the Bylaw and the section from 40A . . . the use of the barn if used specifically by the child care facility would be a permitted use and not a violation of zoning.”

43. Lastly, defendants assert that it is not unreasonable to require that the Barn be demolished because initially Needham Enterprises did not propose that the barn would be used for storage for NCC, and therefore, by implication, NCC does not actually need the Barn for storage. Decision Section 1.22. This justification for requiring the demolition of the Barn is factually false.

44. As noted above, the first hearing on this matter at which evidence was presented was July 20, 2021. During the hearing, counsel for Needham Enterprises advised the Planning Board that although there was no lease yet between Needham Enterprises and NCC, there was an understanding between those entities that NCC would have the right to use the Barn for storage. At subsequent hearings the owner and principal of NCC, Patricia Day, provided testimony that at its current location, NCC is using approximately 1,850 s.f. of space for storage, and there is no dispute that the building shown on the Plans does not provide for anywhere near that amount of storage space. Moreover, at the later hearings Needham Enterprises repeatedly stated its

intention that the Barn would be used for storage exclusively by NCC, and this was confirmed by letters from Needham Enterprises' counsel to the Planning Board dated September 30, 2021, and January 31, 2022.

45. In addition to the reasons set forth above demonstrating that the requirement that the Barn be demolished is precluded by the Dover Amendment, case law decided thereunder, and the Town's own bylaws, the provisions of the Decision requiring that the Barn be demolished are not a "reasonable regulation" of this project, which is the standard defining the limit of what the Board is permitted to impose in a Dover Amendment case. The cost of demolishing the Barn, the loss of the storage capabilities, and the resulting *de facto* requirement that another storage facility be built at some yet-to-be-approved location on the Property (or that the design and footprint of the building be significantly enlarged to provide the lost storage space inside the footprint of the building) will all impose real and substantial costs on Needham Enterprises (and if the storage capability is not replicated elsewhere, on NCC). And imposing these costs on Needham Enterprises achieves no real benefit to the Town, particularly since, as noted above, the barn was built in the late 1980s and has been part of the neighborhood and its character since that time.

46. Indeed, it is apparent that the real reason the Planning Board is requiring that the Barn be demolished is to permit the imposition of additional front setback for the building, from the 64-foot front setback proposed by Needham Enterprises in the Plans, to 120 feet as required by the Decision. The location of the Barn is such that if the Barn remains standing, it is not physically possible to construct the building with a 120-foot front setback while maintaining the

design of the pick-up-and drop-off area at the rear of the building, which even the Planning Board recognizes is well-designed.¹

47. Again, the basis for this requirement is factually flawed and an unreasonable regulation of the project. Defendants assert that “abutting residential properties along Central Avenue show a 65-foot front yard setback for one property with the remainder [sic] ten properties presenting front yard setbacks in the range of 103 to 117 feet.” Decision Section 1.21. The data relied on for this statement was provided by opponents of the project; but this statement ignores data provided by Needham Enterprises during the public hearing process which shows that on the east side of Central Avenue (the same side of Central Ave as the Property), of the nine closest neighbors to the Property (five to the north and four to the south), five have front setbacks from Central Ave of 70, 70, 65, 55, and 40 feet. In light of this, the front setback of 64 feet proposed in the Plans is entirely in keeping with other front setbacks on that side and stretch of Central Avenue.

48. In addition, the front setback required by the Town’s zoning bylaws for this type of structure in this district is *thirty-five* feet. Needham Enterprises’ Plans propose a front setback that is almost twice the setback required by the Town’s bylaws.

49. The defendants are apparently of the view that they have the authority to require a front setback greater than that imposed by the Town’s bylaws. There is not a single published decision in the Commonwealth upholding a municipality’s imposition of a setback greater than that required by the applicable bylaws in a Dover Amendment case.

50. But even if the defendants do have that authority, the exercise of that authority must be *reasonable* under the Dover Amendment, a determination that typically requires

¹ The Decision requires that the building be moved to a setback of 120 feet, while maintaining the pick-up and drop off area exactly as proposed by the Plans in relation to the relocated building. Decision, Section 2.1(d).

balancing the municipal interest served by the restriction or regulation against the cost to the applicant, in this case, Needham Enterprises. Needham Enterprises presented evidence at the hearing in the form of a stamped letter from Glossa Engineering regarding the approximate additional costs if Needham Enterprises is required to demolish the barn and move the building further back from Central Avenue. These costs will be substantial.

51. The imposition of those costs must be reasonable in light of the municipal benefit to be achieved; in this case, an additional 56 feet of setback from Central Ave. The municipal benefit is nominal. The landscaping plan, when mature, will include (but is not limited to) significant vegetative screening along both side boundaries of the project area, extending almost all the way to Central Avenue, which will substantially screen the view of the building (with the front setback of 64 feet as proposed in the Plans) as one drives north and south on Central Avenue. The additional setback required by the Decision will not achieve a meaningful reduction in the visibility of the building as seen from Central Avenue.

52. It bears repeating that, in addition to being unreasonable, the 120-foot front setback required by the Decision will become moot if the Court agrees that Needham Enterprises is entitled to leave the Barn standing, to be used for storage and possibly other ancillary purposes related to NCC's child care operations. If the Barn remains, the 120-foot setback cannot be achieved with the current pick-up, drop-off, and traffic circulation for the site as shown on the Plans.

53. The Decision also requires that the number of children at the facility at any one time be capped at 115, and the number of staff on site at any one time be capped at 18. This is a condition that the Planning Board does not have the authority to impose under the Dover Amendment; relevant case law from this Court has explicitly held that the maximum number of

children at a given child care facility, and the attendant staff, is determined by the Massachusetts Department of Early Education and Care, and imposing a limit on the number of children and staff is not a permissible method for a municipal permit granting authority to attempt to address concerns about traffic.

54. It is true that initially Needham Enterprises and NCC had stated that they would agree to caps of 115 and 18 on the number of children and staff, respectively. However, the offer to agree to a cap was based on the assumption that the Planning Board would approve the major other elements of the Plans as proposed, including leaving the Barn intact (to be used for storage and other purposes ancillary to the child care facility), and leaving the front setback at 64 feet, as proposed.

55. Once the Planning Board had circulated a proposed draft Decision in January 2022 and it became clear that, all arguments and authority to the contrary notwithstanding, the Planning Board intended to require the demolition of the Barn and the imposition of additional front setback, Needham Enterprises advised the Planning Board, by letter dated January 31, 2022, that if those conditions were included in the final decision, Needham Enterprises would appeal those and other conditions, including the cap on the number of children and staff.

56. The Property comprises approximately 3.3 acres, and the project as shown on the plans will occupy only a portion of the entire Property. The Decision includes Condition 3.8, which states that “any change to the property shall require an amendment of the site plan approval.” In the first draft of the Decision circulated in January 2022, this condition was originally written to state: “All buildings and land constituting the property shall remain under a single ownership and the property shall not be further subdivided.” Upon information and belief, the Planning Board was advised that it did not have the authority to impose such a condition, so

the current phrasing of Condition 3.8 is what ended up in the Decision. However, it was clear from the Planning Board discussion of this condition that the intent of the revised language is the same as that of the condition as originally drafted.

57. This condition amounts to a requirement that the lot size be fixed at the current 3.3 acres. While the Dover Amendment does allow a town to impose “reasonable regulations” with respect to, among other things, lot size, this is not a reasonable regulation and will impose a very substantial economic burden on Needham Enterprises.

58. The Decision also requires that Needham Enterprises construct an ADA-compliant sidewalk along entire 250 feet of frontage of the Property. The sidewalk in question is not even located on Needham Enterprises’ Property, but instead on land owned by the Town. In short, the Planning Board is demanding an improvement to Town-owned land as a condition of granting approval for this project to move forward.

59. This requirement is particularly unreasonable as it will be a “sidewalk to nowhere;” there are no real sidewalks, much less ADA-compliant sidewalks, in front of any of the properties along this stretch of Central Avenue. Furthermore, construction of this sidewalk will not be a minor expense, particularly given that the current “sidewalk” is, in some places, several feet below the grade of Central Avenue, and (among other things) the grade will have to be raised for the sidewalk to be ADA-compliant.

60. Nevertheless, during the hearing process Needham Enterprises did indicate, in an effort to reach agreement with the Planning Board on other disputed issues, that it would be willing to install an ADA-compliant sidewalk at the Property. Again, this willingness was premised on the assumption that the Planning Board would not do what it has now done, namely, imposed a variety of conditions that are unreasonable, excessive, and beyond the scope of the

Board's authority in Dover Amendment cases, and which individually (and certainly collectively) will be extremely expensive to implement.

61. As noted above, another condition in the Decision requires a police detail on Central Avenue at the Property driveway entrance during morning and afternoon peak hours. While the Decision states that the initial duration of the police detail will be a minimum of 45 days, it also states that it can only be discontinued upon approval of the Board, after notice and hearing. During the deliberations on the wording of this condition (after the close of the public hearing), one Board member stated during that, depending on the effect of the police detail on traffic flow along Central Avenue during peak hours, they might decide after a public hearing to require that the detail be maintained "in perpetuity," which is a possibility under the Decision as currently drafted.²

62. In the discussion of this condition in the Decision, the Planning Board asserts that this condition, among others, was included on the recommendation of the Town's peer reviewer, John Diaz of GPI. This is partially true but materially misstates the actual recommendation of Mr. Diaz on this topic. As set forth in paragraph 26(b), above, Mr. Diaz's *actual* recommendation was that the police detail should remain in place "until the Police Chief believes that the site is operating without significantly impacting operations along Central Avenue." In other words' Mr. Diaz recommended that it should be the Police Chief, not the Planning Board (after another public hearing) who decides when the police detail is terminated.

² During the Planning Board's January 4, 2022 deliberations, Town counsel advised the Board that "along the lines of eliminating discretionary decisions down the road in what really is an approval of a by right use, to the extent you want the applicant to come back after two months of police details to ask the board's permission to lift that requirement going forward, we ought to articulate a standard as to what will entitle the applicant to that relief at that point."

63. Because the Needham Police Department requires a minimum 4-hour shift for any police detail, this condition will require Needham Enterprises to pay for two four-hour shifts per day, at a cost of approximately \$480 per day. If this requirement is left in place “in perpetuity,” as one Board member suggested it might be, it will cost approximately \$86,000 per 180-day school year. This is patently unreasonable and exceeds the Planning Board’s authority, particularly in a Dover Amendment case.

64. As noted above, the decision also requires a that Needham Enterprises perform a follow-up traffic study, to be conducted once the child care facility reaches 80% of the maximum permitted number of children. The Decision gives little to specificity as to the parameters of the study, and no guidance whatsoever as to what is an acceptable outcome of the study, and what the Planning Board can do if it decides that the traffic study shows an unsatisfactory level of traffic. This condition is thus unreasonable and exceeds the Board’s authority in a Dover Amendment case. It is also void for vagueness, as it would be even if the Board’s authority were not limited by the Dover Amendment.

65. As noted above, the Decision also requires Needham Enterprises to provide a Transportation Demand Management Work Plan (TDM Work Plan) to be approved by the Planning Board prior to the issuance of a building permit, and NCC must comply with what was projected by Needham Enterprises’ traffic engineer, and approved by Mr. Diaz, as the anticipated maximum vehicle trip count during peak morning and afternoon hours. There is no specificity in this condition as to what will constitute an acceptable TDM Work Plan, nor as to what consequences the Planning Board can or will impose if the projected maximum trip count is exceeded, even by one vehicle. The condition is impermissibly vague, unreasonable, and exceeds the Planning Board’s authority.

66. The Decision also includes Condition 3.17, which states: "In the event that traffic or parking problems caused by the use of the property develop that are inconsistent with what was represented to the Board at the hearing and that adversely affect the neighbors on Central Ave, the Board may impose additional conditions." Again, this condition provides no specificity as to what constitutes "traffic or parking problems," what sort of "problem" would rise to the level of an "adverse effect" on the neighbors, and what the Planning Board can or will do about any such "problems."

67. At the hearing, during a discussion of the wording of this condition, one Board member stated that depending on what the "problem" is, those conditions could include a further reduction in the number of children. As noted above, the Planning Board does not even have the authority in a Dover Amendment case to put a limit on the number of children at a child care facility, much less impose a limit and then later make the limit even lower, to some unspecified number in response to unspecified "problems." This condition is clearly void for vagueness, is unreasonable, and exceeds the Board's authority.

68. The Decision also requires, for all trees greater than six inches in trunk diameter that will be taken down during construction, replacement at a 2 to 1 ratio. This requirement is in addition to the previously-approved landscaping plan. This is entirely new and was added at the last minute, apparently in an effort to control the landscaping of the area on the Property that will be vacated as a result of moving the building and parking areas back another 56 feet. Nothing in the Dover Amendment, or the case law decided thereunder, gives the Planning Board the right to impose this condition; it is unreasonable and exceeds the Board's authority.

69. As set forth above, the Decision also includes conditions requiring that Needham Enterprises comply with a program of soil testing, capping, remediation, "mitigation to the new

building” in order “to ensure the building air quality is adequate and safe;” and whatever other conditions the Board of Health deems necessary “to ensure the site is deemed safe for the children at this new child-care facility.” All of these requirements will be determined at some future date by the Board of Health.

70. Although there was material presented to the Planning Board about activities that took place at the Property in the past, and speculation that those activities could have led to leaks, spills, or other contamination of the property, there is no evidence whatsoever in the record before the Planning Board of any actual spill of or contamination from toxic or hazardous materials at the Property. Nevertheless, Needham Enterprises did retain a licensed environmental consultant; has proposed; and will implement a reasonable soil testing plan and capping program for all areas that children (and adults) will have access to.

71. In light of this, this condition as written is manifestly unreasonable and exceeds the authority of the Planning Board. It is also void for vagueness. There is no way of telling what these requirements will ultimately entail, whether they will actually be necessary to protect the health of persons at the property, and how much they will cost.

72. As noted above, Condition 4.44 (which presumably should be 3.44) states that violation of any condition of the Decision is grounds for revocation of the Decision, or of any building permit or certificate of occupancy issued pursuant to the Decision. This condition also states, in part, that **“the permit granting authority may, after notice to the Owner, conduct a hearing in order to determine whether the failure to abide by the conditions contained herein should result in revocation of this Decision.”** (emphasis added).

73. This condition is unreasonable and exceeds the authority of the Planning Board, particularly in a Dover Amendment case. And the clearest evidence that this condition is

unreasonable is that while this language was often found in older Planning Board Decisions, the Planning Board itself no longer uses this language in its “standard” conditions. Instead, the analogous condition in current planning Board Decisions now typically reads:

Violation of any of the conditions of this decision shall be grounds for revocation of any building permit or certificate of occupancy granted hereunder as follows: In the case of violation of any conditions of this decision, the Town will notify the owner of such violation and give the owner reasonable time, not to exceed thirty (30) days, to cure the violation. If, at the end of said thirty (30) day period, the Petitioner has not cured the violation, or in the case of violations requiring more than thirty (30) days to cure, has not commenced the cure and prosecuted the cure continuously, the permit granting authority may, after notice to the Petitioner, conduct a hearing **in order to determine whether the failure to abide by the conditions contained herein should result in a recommendation to the Building Inspector to revoke any building permit or certificate of occupancy granted hereunder.** (emphasis added)

74. As can be seen from a comparison of these two versions of this “standard” condition, in its current decisions (other than the Decision in this case), the Planning Board no longer reserves the right to revoke the decision itself (as opposed to revoking the building permit or certificate of occupancy), and defers to the Building Commissioner the decision as to whether, where an ongoing violation of the Decision is occurring, to revoke a building permit or certificate of occupancy. The inclusion of the outdated version of this condition in the Decision is particularly inappropriate in a Dover Amendment case, which makes it clear that the Planning Board cannot prohibit the operation of a child care facility at the Property, and therefore could not revoke the Decision.

75. The imposition of each of the conditions discussed above, (as well as others not specifically enumerated above) is unreasonable, in some cases impermissibly vague, contrary to applicable law, and exceeds the Planning Board’s authority in this case.

WHEREFORE, Needham Enterprises requests that the Court enter judgment as set forth below.

COUNT III
DE FACTO DENIAL OF APPLICATION FOR
SITE PLAN APPROVAL SPECIAL PERMIT
IN VIOLATION OF M.G.L. c. 40A, § 3

76. Plaintiff incorporates the allegations of paragraphs 1- 75, above, with the same force and effect as if set forth in full.

77. Although the Decision purports to “approve” the project and the Plans, the collective effect of the conditions set forth above is the approve a project that is substantially and materially different from the project and Plans as proposed by Needham Enterprises, and that will be far more expensive to build and operate.

78. In this case, the conditions that have this collective effect include but are not limited to (a) demolition of the barn, with no allowance for another storage facility elsewhere on the property³; (b) an additional 56 feet of setback of the entire project, including the location of building, as well as the driveway, pick-up and drop-off areas, parking areas, and site circulation design; (c) an ADA-compliant sidewalk along the entire front of the property; (d) a two-for-one tree replacement plan in addition to the landscaping plan that has already been approved by the Design Review Board; (e) an as-yet undefined and potentially extensive soil sampling, capping, and remediation plan to be imposed by the Board of Health; and (f) various poorly defined or entirely open-ended and undefined “traffic mitigation measures” that may result in very substantial ongoing costs, as well as the possible imposition of additional conditions that will have an adverse effect on the operation of the child care facility.

³ Once it became clear that the Planning Board intended to require demolition of the barn, Needham Enterprises requested that the Decision be revised to include a provision that Needham Enterprises be permitted to construct an accessory storage facility of no more than 2000 s.f., and no more than 15 feet in height. The Planning Board rejected this request.

79. Courts of the Commonwealth recognize the principle that conditions imposed during the permitting process can be so onerous that at some point what appears to be an “approval with conditions” in reality becomes a *de facto* denial of a project, particularly where the conditions render the project uneconomic.

80. That is the case here. If these conditions remain in the Decision as currently drafted, the project will become uneconomic, with a substantial likelihood that the project and the child care facility will not be built at all. In effect, the Decision represents a *de facto* denial of the project and Plans as proposed by Needham Enterprises, a result which is prohibited by the Dover Amendment and the Town’s own bylaws for this as-of-right use.

WHEREFORE, plaintiff requests that the Court:

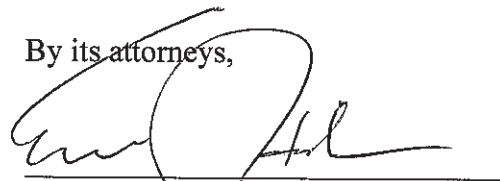
1. Enter judgment for the plaintiff under Count I, ruling that the defendants have failed to make a final decision within 90 days of the close of the hearing as required by M.G.L. c. 40A, § 9; that none of the conditions in the Decision are therefore valid or applicable; that the plaintiffs’ project and Plans as most recently submitted to the Planning Board are therefore approved; and that the plaintiff is entitled to a building permit on the basis of those Plans;
2. In the alternative, under Count II, with respect to those conditions in the Decision discussed above (or such subset of those conditions as the Court deems proper), enter an order that those conditions are void as violative of applicable law; impermissibly vague; and/or unreasonable and in excess of the defendants’ authority;
3. In the alternative, under Count III, enter an order that the Decision represents a *de facto* denial of the project and the Plans, which is prohibited by M.G.L. c. 40A, § 3 and the Town of Needham Bylaws, that as a result none of the conditions in the

Decision are valid or applicable; that the plaintiffs' project and Plans as most recently submitted to the Planning Board are therefore approved; and that the plaintiff is entitled to a building permit on the basis of those Plans;

4. Award plaintiff its costs incurred in prosecuting this action as allowed by statute; and
5. Enter such other and further orders as the Court deems just and proper.

Respectfully Submitted,
Needham Enterprises, LLC.

By its attorneys,

A handwritten signature in black ink, appearing to read 'Evans Huber', is written over a horizontal line.

Evans Huber, Esq.
BBO # 542133
Frieze Cramer Rosen & Huber LLP
60 Walnut Street
Wellesley, MA 02481
(781) 943-4000

Dated: March 23, 2022



TOWN OF NEEDHAM, MA

PLANNING AND COMMUNITY
DEVELOPMENT DEPARTMENT

500 Dedham Ave
Needham, MA 02492
781-455-7550

PLANNING

DECISION
March 1, 2022

MAJOR PROJECT SITE PLAN REVIEW DECISION

Needham Enterprises, LLC
1688 Central Avenue, Needham, MA
Application No. 2021-02

(Filed during the Municipal Relief Legislation, Chapter 53 of the Acts of 2020)

2022-03-01 PM 2:55

DECISION of the Planning Board (hereinafter referred to as the "Board") on the application of Needham Enterprises, LLC, 105 Chestnut Street, Suite 28, Needham, MA, (to be referred to hereinafter as the "Petitioner") for property located at 1688 Central Avenue, Needham, Massachusetts (hereinafter referred to as the "property"). The property is shown on Needham Assessor's Plan No. 199 as Parcel 213 containing a total of 3.352 acres and is located in the Single Residence A District.

This decision is in response to an application submitted to the Board on May 20, 2021, by the Petitioner for a Major Project Site Plan Review under Section 7.4 of the Needham Zoning By-Law (hereinafter the By-Law).

The requested Major Project Site Plan Review relates to, and allows the Planning Board to impose restrictions upon, the Petitioner building a new child-care facility that will house an existing Needham child-care business, Needham Children's Center, Inc., a Massachusetts Corporation (hereinafter "NCC"). The property is presently improved by a two-story residential building (single-family dwelling comprising 1,663 square feet), two smaller out-buildings (garage comprising 400 square feet and second garage comprising 600 square feet) and a barn comprising 4,800 square feet. The proposed project is to demolish the single-family dwelling and the two garages at the property. A new one-story building of 10,034 square feet will be constructed, to house the child-care facility. Pursuant to the proposed project, the existing 4,800 square foot barn at the property would be retained and used for accessory storage by the child-care facility. A new parking area that includes 30 off-street surface parking spaces will also be constructed.

After causing notice of the time and place of the public hearing and of the subject matter thereof to be published, posted, and mailed to the Petitioner, abutters, and other parties in interest, as required by law, the hearing was called to order by the Chairman, Paul S. Alpert, on Monday, June 14, 2021, at 7:20 p.m. via remote meeting using Zoom ID 826-5899-3198. No testimony was taken at the June 14, 2021, public hearing and the public hearing was continued to Tuesday, July 20, 2021, meeting held via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, August 17, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Wednesday September 8, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, October 5, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, October 19, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, November 2, 2021, via remote meeting using Zoom ID 826-5899-3198. The public hearing was continued to Tuesday, November 16, 2021, via remote

A True Copy

Attest:

Theresa K. Egan
Town Clerk of Needham, MA

- Exhibit 8 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, dated March 2021.

- Exhibit 9 - Stormwater Report prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, dated June 22, 2020, stamped January 26, 2021.

- Exhibit 10 - Traffic Impact Assessment, prepared by Gillon Associates, Traffic and Parking Specialists, revised March 2021.

- Exhibit 11 - Memo prepared by John T. Gillon, Gillon Associates, Traffic and Parking Specialists, dated April 5, 2021.

- Exhibit 12 - Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021; Sheet 7, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, **all plans stamped April 15, 2021.**

- Exhibit 13 - Architectural plans entitled "Needham Enterprises, Daycare Center, 1688 central Avenue," prepared by Mark Gluesing Architect, 48 Mackintosh Avenue, Needham, MA, consisting of 2 sheets: Sheet 1, Sheet A3-0, showing "North Elevation," "West Elevation," "East Elevation," and "South Elevation," dated March 8, 2021, revised March 30, 2021; Sheet 2, Sheet A1-0, entitled "1st Floor Plan, dated March 8, 2021, revised March 30, 2021.

- Exhibit 14 - Letter from Attorney Evans Huber, dated April 16, 2021.

- Exhibit 15 - Letter from Attorney Evans Huber, dated April 21, 2021.

- Exhibit 16 - Memorandum from Attorney Evans Huber, dated May 5, 2021.

- Exhibit 17 - Letter from Attorney Evans Huber, dated May 14, 2021.

- Exhibit 18 - Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021 and June 2, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15,

- Exhibit 27 - Memo prepared by John T. Gillon, Gillon Associates, Traffic and Parking Specialists, dated August 21, 2021, transmitting Response to Greenman-Pedersen, Inc. peer review.
- Exhibit 28 - Technical Memorandum, from John Gillon, prepared by Gillon Associates, Traffic and Parking Specialists, dated September 2, 2021.
- Exhibit 29 - Letter from Attorney Evans Huber, dated September 30, 2021.
- Exhibit 30 - Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 5, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 7, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 8, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021; Sheet 9, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021 and September 28, 2021, **all plans stamped September 29, 2021.**
- Exhibit 31 - Plan entitled "Appendix, Photometric and Site Lighting Plan, 1688 Central Ave in Needham," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, and September 28, 2021.
- Exhibit 32 - Memorandum from Attorney Evans Huber, dated October 13, 2021.
- Exhibit 33 - Email from Evans Huber, dated October 14, 2021 with two attachments: Vehicle Count for September 2019 and Vehicle Count for February 2020.
- Exhibit 34 - Memorandum from Attorney Evans Huber, dated October 28, 2021.
- Exhibit 35 - Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021 and October 28, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021, June 2,

April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021 and November 8, 2021, **all plans stamped November 8, 2021.**

- Exhibit 41 - Plan entitled "1688 Central Turning Radius," consisting of 3 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032: sheet 1, showing "20' Delivery Van," dated October 6, 2021; Sheet 2, showing "30' Trash Truck," dated October 6, 2021; sheet 3, showing "30' Trash Truck," dated October 6, 2021.
- Exhibit 42 - Email from Evans Huber, dated November 11, 2021, regarding "Traffic Peer Review: 1688 Central Avenue."
- Exhibit 43 - Letter from Attorney Evans Huber, dated December 2, 2021, with attached minutes from Canton Zoning Board of Appeals from March 25, 2021.
- Exhibit 44 - Memorandum from Attorney Evans Huber, dated December 2, 2021.
- Exhibit 45 - Plans entitled "Site Development Plans, Daycare, 1688 Central Avenue, Needham, MA," consisting of 9 sheets, prepared by Glossa Engineering, Inc., 46 East Street, East Walpole, MA, 02032, Sheet 1, Cover Sheet, dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 2, entitled "Existing Conditions Plan of Land in Needham, MA," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 3, entitled "Site Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 4, entitled "Grading and Utilities Plan of Land," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 5, entitled "Landscaping Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 6, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 7, entitled "Construction Details," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 8, entitled "Sewer Extension Plan and Profile," dated November 19, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 9, entitled "Construction Period Plan," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021; Sheet 10, entitled "Appendix, Photometric and Site Lighting Plan, 1688 Central Ave in Needham," dated June 22, 2020, revised April 15, 2021, June 2, 2021, July 28, 2021, September 28, 2021, October 28, 2021, November 8, 2021 and November 22, 2021, **all plans stamped November 22, 2021.**
- Exhibit 46 - Letter from Attorney Evans Huber, dated December 16, 2021, with two attachments: (1) Letter from Attorney Evans Huber dated September 30, 2021;

- Exhibit 61 - IDC to the Board from Chief John J. Schlittler, Police Department, dated May 6, 2021.
- Exhibit 62 - IDC to the Board from Thomas Ryder, Assistant Town Engineer, dated March 31, 2021, May 12, 2021, August 12, 2021, September 2, 2021, November 16, 2021, December 6, 2021, and January 3, 2022.

Abutter Comments

- Exhibit 63 - Neighborhood Petition Regarding Development of 1688 Central Avenue in Needham, submitted by email from Holly Clarke, dated March 22, 2021, with excel spreadsheet of signatories.
- Exhibit 64 - Email from Robert J. Onofrey, 49 Pine Street, Needham, MA, dated March 26, 2021.
- Exhibit 65 - Email from Norman MacLeod, Pine Street, dated March 31, 2021.
- Exhibit 66 - Letter from Holly Clarke, 1652 Central Avenue, Needham, MA, dated April 3, 2021, transmitting "Comments of Neighbors of 1688 Central Avenue for Consideration During the Planning Board's Site Review Process for that Location," with 3 attachments.
- Exhibit 67 - Email from Meredith Fried, dated Sunday April 4, 2021.
- Exhibit 68 - Letter from Michaela A. Fanning, 853 Great Plain Avenue, Needham, MA, dated April 5, 2021.
- Exhibit 69 - Email from Maggie Abruzese, dated April 5, 2021.
- Exhibit 70 - Letter from Sharon Cohen Gold and Evan Gold, dated April 5, 2021.
- Exhibit 71 - Email from Matthew Heidman, dated May 10, 2021.
- Exhibit 72 - Email from Matthew Heidman, dated May 11, 2021 with attachment Letter directed to members of the Design Review Board, from Members of the Neighborhood of 1688 Central Avenue, undated.
- Exhibit 73 - Email from Rob DiMase, sated May 12, 2021.
- Exhibit 74 - Email from Eileen Sullivan, dated May 12, 2021.
- Exhibit 75 - Two emails from Eric Sockol, dated May 11 and May 12.
- Exhibit 76 - Email from Rob DiMase, sated May 13, 2021.
- Exhibit 77 - Email from Sally McKechnie, dated May 13, 2021.
- Exhibit 78 - Letter from Holly Clarke, dated May 13, 2021, transmitting "Response of Abutters and Neighbors of 1688 Central Avenue Project to the Proponent's Letter of April 16, 2021," with Attachment 1.

- Exhibit 96 - Email from Leon Shaigorodsky, Bridle Trail Road, dated April 4, 2021, forwarded from Holly Clarke on June 14, 2021.
- Exhibit 97 - Letter from Peter F. Durning, Mackie, Shae, Durning, Counselors at Law, dated June 11, 2021.
- Exhibit 98 - Revised list of signatories to earlier submitted petition, received on June 11, 2021.
- Exhibit 99 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 11, 2021.
- Exhibit 100 - Email from Karen and Alan Langsner, Windsor Road, dated June 13, 2021.
- Exhibit 101 - Email from Stanley Keller, 325 Country Way, dated June 13, 2021. Email from Sean and Marina Morris, 48 Scott Road, dated June 14, 2021.
- Exhibit 102 - Letter from Holly Clarke, dated June 14, 2021, transmitting "Comments of Neighbors of 1688 Central Avenue for Consideration During the Planning Board's Site Review Process for that Location Concerning the Traffic Impact Assessment Reports."
- Exhibit 103 - Email from Pete Lyons, 1689 Central Avenue, dated June 14, 2021.
- Exhibit 104 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated June 14, 2021.
- Exhibit 105 - Email from Ian Michelow, Charles River Street, dated June 13, 2021.
- Exhibit 106 - Email from Nikki and Greg Cavanagh, dated June 14, 2021.
- Exhibit 107 - Email from Patricia Falcao, 19 Pine Street, dated June 14, 2021.
- Exhibit 108 - Email from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 6, 2021.
- Exhibit 109 - Email from David Lazarus, Oxbow Road, dated July 12, 2021.
- Exhibit 110 - Email from Maggie Abruzese, dated July 12, 2021.
- Exhibit 111 - Letter directed to Marianne Cooley, Select Board, and Attorney Christopher Heep, from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated July 12, 2021.
- Exhibit 112 - Email from Barbara and Peter Hauschka, 105 Walker Lane, dated July 13, 2021.
- Exhibit 113 - Email from Rob DiMase, dated July 14, 2021.
- Exhibit 114 - Email from Lee Newman, Director of Planning and Community Development, dated July 14, 2021, replying to email from Maggie Abruzese, dated July 14, 2021.
- Exhibit 115 - Email from Leon Shaigorodsky, dated July 17, 2021.

- Exhibit 133 - Email from Emily Pugach, 42 Gayland Road, dated September 29, 2021.
- Exhibit 134 - Email from Robin L. Sherwood, dated September 29, 2021.
- Exhibit 135 - Email from Sarah Solomon, 21 Otis Street, dated September 29, 2021.
- Exhibit 136 - Email from Lee Ownbey, 27 Powderhouse Circle, dated September 29, 2021.
- Exhibit 137 - Email from Emily Tow, dated September 29, 2021.
- Exhibit 138 - Email from Leah Caruso, dated September 29, 2021.
- Exhibit 139 - Email from Jennifer Woodman, dated September 29, 2021.
- Exhibit 140 - Email from Nancy and Chet Yablonski, dated September 29, 2021.
- Exhibit 141 - Email from Pamela and Andrew Freedman, 17 Wilshire Park, dated September 29, 2021.
- Exhibit 142 - Email from Dr. Jennifer Lucarelli, 58 Avalon Rd, dated September 29, 2021.
- Exhibit 143 - Email from Maija Tiplady, dated September 30, 2021.
- Exhibit 144 - Email from Ashley Schell, dated September 30, 2021.
- Exhibit 145 - Email from Kristin Kearney, 11 Paul Revere Rd, dated September 30, 2021.
- Exhibit 146 - Email from Dave Renninger, dated September 30, 2021.
- Exhibit 147 - Letter from Brad and Rebecca Lacouture, dated September 30, 2021.
- Exhibit 148 - Email from Kerry Cervas, 259 Hillcrest Road, dated September 30, 2021.
- Exhibit 149 - Letter from Holly Clarke, dated October 1, 2021, transmitting "The Past Use of the Property for Automobile Repairs and Other Non-Residential Purposes Merit Environmental Precautions to Insure the Safe Development and Use of the Property."
- Exhibit 150 - Email from Carolyn Walsh, 202 Greendale Avenue, dated September 30, 2021.
- Exhibit 151 - Email from Robert DiMase, 1681 Central Avenue, dated October 6, 2021.
- Exhibit 152 - Email from Elyse Park, dated October 6, 2021.
- Exhibit 153 - Email from R.M. Connelly, dated October 6, 2021.
- Exhibit 154 - Email from Eric Sockol, 324 Country Way, undated, received October 6, 2021.
- Exhibit 155 - Email from R.M. Connelly, dated October 9, 2021.

- Exhibit 172 - Email directed to the Planning Board from Maggie and Joe Abruzese, 30 Bridle Trail Road, dated December 6, 2021, transmitting "Parking Requirements of Needham Zoning Bylaw."
- Exhibit 173 - Letter from Pat Falcao, 19 Pine Street, received December 7, 2021.
- Exhibit 174 - Email from Rick Hardy, 1347 South Street, dated December 8, 2021.
- Exhibit 175 - Email from Laurie and Steve Spitz, dated December 7, 2021, transmitting video of traffic on Central Avenue.
- Exhibit 176 - Letter from Joe Abruzese, dated December 12, 2021, regarding his presentation from December 8, 2021 public hearing.
- Exhibit 177 - Email from Maggie Abruzese, dated December 12, 2021, transmitting the following as discussed at the December 8, 2021 public hearing:
 - a. "Lighting at 1688 Central Avenue" with Exhibits
 - b. Talking Points from December 8, 2021 hearing.
- Exhibit 178 - Letter from M. Patrick Moore Jr., and Johanna W. Schneider, Hemenway & Barnes, LLP, dated December 20, 2021.
- Exhibit 179 - Letter from Holly Clarke, dated December 18, 2021, transmitting comments from neighbors.

Miscellaneous

- Exhibit 180 - Email from Attorney Christopher H. Heep, dated June 9, 2021.
- Exhibit 181 - Two Emails from Attorney Christopher Heep, dated July 16, 2021.
- Exhibit 182 - Letter from Attorney Christopher H. Heep, dated September 2, 2021.
- Exhibit 183 - Letter from Attorney Christopher H. Heep, dated September 8, 2021.
- Exhibit 184 - Letter from Stephen J. Buchbinder, Schlesinger and Buchbinder, LLP, dated October 1, 2021.
- Exhibit 185 - Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated September 30, 2021.
- Exhibit 186 - Email from Evans Huber, dated October 7, 2021.
- Exhibit 187 - Email from Lee Newman directed to Evans Huber, dated October 8, 2021.
- Exhibit 188 - Letter from Eve Slattery, General Counsel, Commonwealth of Massachusetts, State Ethics Commission, dated October 4, 2021.
- Exhibit 189 - Email from Lee Newman directed to and replying to R.M. Connelly, dated October 19, 2021.

- Exhibit 208 - Email from David Lazarus, Oxbow Road, dated February 10, 2022.
- Exhibit 209 - Email from Stanley Keller, 325 Country Way, dated February 10, 2022.
- Exhibit 210 - Email from Brian O'Neill, 149 Charles River Street, dated February 15, 2022.
- Exhibit 211 - Email from Carla and Alexis Kopikis, dated February 15, 2022.
- Exhibit 212 - Email from Sharon Gillespie, Stratford Road, dated February 15, 2022.
- Exhibit 213 - Email from Kevin Jay, 14 Heather Lane, dated February 15, 2022.
- Exhibit 214 - Email from Rick Hardy, 1347 South Street, dated February 15, 2022.
- Exhibit 215 - Email from Lois Merrill, 31 Bridle Trail Road, dated February 15, 2022.
- Exhibit 216 - Email from Henry Ragin and Laura Rosen, 25 Bennington Street, dated February 15, 2022.
- Exhibit 217 - Email from Cynthia Frost, 543 Chestnut Street, dated February 15, 2022.
- Exhibit 218 - Email from Ronit and David Klein, 335 Hunnewell Street, dated February 15, 2022.
- Exhibit 219 - Email from Jennifer Bannon, Jarvis Circle, dated February 15, 2022.
- Exhibit 220 - Email from Leon Shaigorodsky, Bridle Trail Road, dated February 15, 2022.
- Exhibit 221 - Email from Kenneth Bassett, South Street, dated February 15, 2022.
- Exhibit 222 - Email from Rob DiMase, dated February 15, 2022.
- Exhibit 223 - Email from Mary Buffinger, dated February 15, 2022.
- Exhibit 224 - Email from MarySue Cotton, dated February 15, 2022.
- Exhibit 225 - Email from Ricki and Mark Nickel, 191 Stratford Road, dated February 15, 2022.
- Exhibit 226 - Email from Patricia Falcao, 19 Pine Street, dated February 15, 2022.
- Exhibit 227 - Email from Helen and Paul Cantor, Locust Lane, dated February 15, 2022.
- Exhibit 228 - Email from Jonathan Bracken, 921 South Street, dated February 15, 2022.
- Exhibit 229 - Email from Jonathan Shaer, 242 Bridle Trail Road, dated February 15, 2022.
- Exhibit 230 - Email from Norman MacLeod, 41 Pine Street, dated February 15, 2022.
- Exhibit 231 - Email from Robert Onofrey, 49 Pine Street, dated February 16, 2022.

Exhibit 252 - Sketch plan showing the barn demolished and proposed building relocated to a front yard setback of 135 with parking reconfigured to its rear. Drawing presented at the January 6, 2022 Planning Board meeting.

Exhibits 1, 2, 8, 9, 10, 11, 19, 20, 23, 26, 27, 28, 37, 41, and 45 are referred to hereinafter as the Plan.

FINDINGS AND CONCLUSIONS

Based upon its review of the Exhibits and the record of the proceedings, the Board found and concluded that:

- 1.1 The subject property is located in the Single Residence A District at 1688 Central Avenue, Needham, Massachusetts, and is shown on Needham Assessor's Plan No. 199 as Parcel 213 containing 3.352 acres.
- 1.2 The subject property is presently improved by a single-family dwelling comprising 1,663 square feet, two smaller out-buildings, garage comprising 400 square feet and second garage comprising 600 square feet, and a barn comprising 4,800 square feet. The proposed project has evolved through a long series of changes to have the following key elements: demolish the single-family dwelling and the two garages at the property, construct a new one-story building of 10,034 square feet to house a child-care facility and retain the existing two-story 4,800 square foot barn to be used for accessory storage by the child-care facility, with a new parking area that includes the construction of 30 off-street surface parking spaces.
- 1.3 The proposed project provides access to the child-care facility at 1688 Central Avenue by using a 200-plus foot-long, 30-foot-wide access drive to Central Avenue, consisting of three lanes, an 8-foot-wide queueing lane that can accommodate ten waiting vehicles and which provides access to a drop-off and pick-up area, an 11-foot-wide entrance lane providing unimpeded access to the rear parking areas, and an 11-foot-wide exit lane.
- 1.4 The proposed project provides that the child-care facility will house an existing Needham child-care business, namely the NCC. No written lease, memorandum of understanding, or any other type of written agreement between the Petitioner and NCC has been provided to the Board.
- 1.5 The NCC preschool/daycare program will operate Monday through Friday, between the hours of 7:30 a.m. and 6:00 p.m., with a maximum of 115 children on the property at any one time.
- 1.6 The maximum number of NCC staff on site at any one time will be 18 broken down as follows. The projected total staff on peak days (Tuesdays-Thursday) will be 18 (16 staff and 2 administrators). The projected total staff on Monday will be 17 (15 staff and 2 administrators). The projected total staff on Friday will be 15 (13 staff and 2 administrators). At all times the child-care business will maintain compliance with any staffing standards or requirements determined by the relevant Commonwealth agency regulating such uses.
- 1.7 The By-Law does not contain a specific parking requirement for a child-care use. In cases where the By-Law does not provide a specific requirement, the required number of

approximately 112 new evening peak hour trips with 53 inbound and 59 outbound. The directional distribution of trips reflects the existing Central Avenue directional split of the Gan Aliyah Pre-School next door to the site at Temple Aliyah. The entering project traffic is distributed for 80% of the traffic to enter from the north (left turn in) and 20% of traffic to enter from the south (right turn in).

- 1.10 The level of service analysis conducted at the Central Avenue intersection at the site driveway shows a calculated "A" level of service for all north bound movements in the morning and evening peak periods and a calculated "B" level of service for all south bound movements in the morning and evening peak periods, both of which are acceptable for this type of facility. The site driveway itself will have an acceptable "E" level of service with average delay during the morning peak period and a "C" level during the evening peak period. The Central Avenue/Charles River Street intersection will continue to operate at an overall "F" level of service with an overall increase in delay of five seconds.
- 1.11 The Petitioner further reviewed the Central Avenue/Charles River Street intersection for the morning peak hour (7:15 a.m. to 8:15 a.m.) and for the evening peak hour (5:00 p.m. to 6:00 p.m.) to see if adjustments to signal timing at this location would lead to an improved level of service. For this analysis, supplemental counts were collected by the Petitioner on Wednesday, October 13, 2021, with those counts increased by 30.4% as evidenced by MassDOT Station ID #6161 to identify 2021 roadway network volumes at the intersection assuming Covid-19 had not occurred. These adjusted volumes were further inflated by one percent per year over seven years to account for normal growth between 2021 and 2028.
- 1.12 The following overall levels of service for the existing, base and build conditions for the studied signal optimization timing adjustments at the Central Avenue/Charles River Street intersection are detailed below. These conclusions assume the roadway network volumes have been adjusted upwards as described in 1.11 above. For the existing Covid-19-affected 2021 signal timing optimization condition, the Central Avenue/Charles River Street intersection operates at overall levels of service of "E" during the morning peak hour (7:15 a.m. to 8:15 a.m.) and "D" during the evening peak hour (5:00 p.m. to 6:00 p.m.). For the base 2028 signal optimization condition (2028 with no development at 1688 Central Avenue), the Central Avenue/Charles River Street intersection operates at overall levels of service of "F" during the morning peak hour (7:15 a.m. to 8:15 a.m.) and "E" during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show the overall levels of service will worsen somewhat compared to current conditions assuming there is no development at 1688 Central Avenue. For the build condition where signal timing optimization is not implemented, the Central Avenue/Charles River Street intersection operates at overall levels of service of "F" during the morning peak hour (7:15 a.m. to 8:15 a.m.) and "F" during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show that development of 1688 Central will have essentially no impact on Central Avenue levels of service during peak hours and will have only a modest impact on Central Avenue southbound during those hours. The only significant impact is projected to be from Central Avenue southbound during the evening peak hour. Lastly, for the build condition where signal timing is optimized, the Central Avenue/Charles River Street intersection operates at overall levels of service "E" during the morning peak hour (7:15 a.m. to 8:15 a.m.) and "C" during the evening peak hour (5:00 p.m. to 6:00 p.m.). These values show that under the signal timing optimization condition studied, the overall levels of service (and delays) on Central Avenue during peak hours will become

approximately 30 will be siblings, meaning these 30 children will arrive in 15 vehicles. The other 25 children will arrive in one vehicle per child. Lastly, the morning staff will either have arrived prior to the beginning of drop-off, or, if they arrive during the peak period, they will proceed directly to the rear parking area, will not be in the drop lane, and thus do not need to be considered in the queuing analysis.

The analysis included the following assumptions: (a) random arrivals during the peak drop-off period; (b) a drop-off period of 80 minutes; (c) 40 parent vehicles arriving during the 80-minute period; and (d) 60-second drop-off window. The evaluation concluded based on 40 peak hour arrivals that there would be no more than 7 vehicles in the drop-off lane. With the proposed driveway plan showing a dedicated queue/drop-off lane, there is storage for approximately 10 vehicles before queues would impact Central Avenue. Furthermore, the queue lane has been separated from the travel lane, allowing vehicles to bypass the queue in the event it approaches Central Avenue.

In addition to the above scenario, a second more conservative analysis was run using the Poisson distribution methodology for a maximum of 58 vehicle arrivals during the peak period. This analysis found that the maximum queue would be approximately 13 vehicles under this unlikely condition and that even at 58 vehicles, 99% of the time the queue would be less than 10 vehicles.

- 1.16 The Traffic Impact Assessment submitted by the Petitioner has identified existing traffic operating parameters on Central Avenue and at the Central Avenue/Charles River Street intersection, estimated the anticipated traffic volume increase as a result of the proposed project, analyzed the project's traffic-related impacts, evaluated access and egress requirements, and recommended site access and intersection improvement measures to improve traffic operations and safety conditions in the area. The Town's traffic consultant, John W. Diaz of Greenman-Pedersen, Inc., GPI has reviewed the individual traffic reports submitted and has advised the Board that the traffic reports submitted by the Petitioner and as subsequently revised during the traffic peer review process demonstrate a project that will minimize traffic delays in the area and will provide adequate access and egress operational conditions at the site driveway.
- 1.17 To minimize traffic delays in the area, the following study recommendations have been recommended by the Town's traffic consultant, John W. Diaz of Greenman-Pedersen, Inc., GPI and have been incorporated into the Plan and will be implemented by the Petitioner: (a) A police detail shall be provided at the site driveway during the peak morning and afternoon hours of arrivals and dismissals. The detail will remain in place for a minimum of 45 days, commencing on or after the opening of the child-care facility. The detail may be discontinued thereafter upon request of the Petitioner and a finding by the Board (following such notice and hearing, if any, as the Board, in its sole and exclusive discretion, shall deem due and sufficient) that the site is operating without significantly impacting operations along Central Avenue. (b) Prior to building permit issuance, the Petitioner shall provide detailed traffic signal timing plans for optimized operations at the Central Avenue/Charles River Street intersection for the morning and evening peak hours. The Petitioner shall further coordinate with the Town Engineer on how to implement the revised signal times. The Petitioner shall be responsible for implementing any approved signal timing adjustments approved by the Town Engineer prior to building occupancy. (c) The Petitioner shall complete a follow-up traffic study using the methodologies and presenting conclusions consistent with the traffic studies presented to the Planning Board in this application after the site is open and operational

makes clear that it is not customary for these facilities to have accessory buildings. The twenty programs considered include the five Needham programs comparably sized to that of the NCC, even if not situated in stand-alone commercial space, and fifteen child-care programs located in nearby towns. Each of these facilities was located through online mapping services to determine building arrangements. All these programs operate in a single building. None have accessory buildings much less one two stories high with a total of 4,800 square feet. Finally, the Massachusetts building requirements for child-care facilities do not call for such accessory buildings (See: 606 CMR 7.07).

- 1.19 As indicated in the Zoning Table shown on the Plan, the lot conforms to zoning requirements as to area and frontage of the Single Residence A District. As indicated in the Zoning Table shown on the Plan, the proposed building will comply with all applicable dimensional and density requirements of the Single Residence A District for an institutional use, namely, front, side and rear setback, maximum building height, maximum number of stories, maximum lot coverage, and maximum floor area ratio.

- 1.20 In addition to the above-noted minimum dimensional and density requirements of the Single Residence A District for an institutional use as detailed in Section 1.18, the project must also meet the site plan review criteria of the By-Law set forth in Section 7.4.6. The project before the Board shows deficiencies in two review categories namely Section 7.4.6(a) and Section 7.4.6(e) of the By-Law which provides that in conducting site plan review the Planning Board shall consider the following matters as follows:

“7.4.6(a) Protection of adjoining premises against seriously detrimental uses by provision of surface water drainage, sound and sight buffers and preservation of views light and air; and

7.4.6(e) Relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area and compliance with other requirements of the By-Law.”

- 1.21 The Petitioner seeks approval to place a large institutional building of 10,034 square feet 64 feet from Central Avenue and to raise the property's grade by six feet. The Board finds placement of a large institutional building closer to the street than other buildings in the neighborhood is out of character with the surrounding neighborhood and conflicts with the Town's interest in preserving the relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area and compliance with other requirements of this By-Law.

The proposed building is significantly larger than surrounding homes; it is closer to the street than any other building on this section of Central Avenue, and its grade is higher. In this residential area, no residential building is set back less than 65 feet from Central Avenue, and the clear pattern is for structures to be set back much further. A comparison of 11 abutting residential properties along Central Avenue shows a 65-foot front yard setback for one residential property with the remainder ten properties presenting with front yard setbacks in the range of 103 feet to 117 feet (See Exhibit 176). For the one institutional use in the neighborhood, namely, Temple Aliyah, which abuts the subject property, a front yard setback of 213 feet is provided. Further, the Design Review Board's comments on the project call for the building to be re-sited farther back from Central Avenue consistent with the neighborhood context, either by reconfiguring it or by removing the barn.

new building; (ii) irrespective of the By-Law provisions that preclude the new structure and barn on the same parcel; and (iii) then claim that the cost of removing the barn and redesigning the Plan is an unreasonable impediment, when that cost derives from the Petitioner's own initial planning choices.

1.23 The Board of Health reviewed the subject application and has noted its intent to impose the following conditions on the project:

- a. Prior to demolition, submittal by Petitioner of an online Demolition permit form along with required supplemental demolition reports, including septic system abandonment form and final pump report.
- b. Engagement by the Petitioner of a licensed pest control service company to conduct routine site visits to the site, first initially to bait the interior/exterior of each structure to be raised prior to demolition, and to continue to make routine site visits (to re-bait/set traps) throughout the duration of the construction project. Pest reports to be submitted to the Health Division on an on-going basis for review.
- c. If the project triggers the addition of any food to be served or prepped on site at the facility, a food establishment permit is required to include a review of proposed kitchen layout plans, with equipment and hand sinks noted, along with any proposed seating layout plans where applicable.
- d. Petitioner to ensure that sufficient exterior space is provided to accommodate an easily accessible Trash Dumpster and a separate Recycling Dumpster, per Needham Board of Health Waste Hauler regulation requirements. These covered waste containers must be kept clean and maintained and shall be placed on a sufficient service schedule to contain all waste produced on site. These containers may not cause any potential public health and safety concerns with attraction of pest activity due to improper cleaning and maintenance.
- e. As noted in the proposal, the Petitioner is required to connect to the municipal sewer line, once it is brought up to the property, prior to building occupancy. A copy of the completed signed/dated Sewer Connection application, which shows that the sewer connection fee was paid, shall be forwarded to the Public Health Division.
- f. No public health nuisance issues (i.e., odors, noise, light migration, standing water/improper on-site drainage, etc.), to neighboring properties, shall develop on site during or after construction.
- g. The lighting on site shall not cause a public health nuisance, with light trespassing on to other abutting properties. If complaints are received, lighting shall be adjusted so it will not cause a public health nuisance.
- h. The Petitioner shall meet current interior/exterior COVID-19 federal, state and local requirements for spacing of seating, HVAC/ventilation, face covering requirements, sanitation requirements and occupancy limit requirements, etc.
- i. The Petitioner shall ensure that the property is safe, which includes conducting proper soil testing of the site prior to construction, and also follow through with any necessary mitigation measures as found to be necessary, as part of this project approval.

1.24 The Board of Health will engage an independent third party, licensed site professional to conduct an independent environmental evaluation of the property. The licensed site professional will oversee the project and shall confirm that the soil testing work, along with the proposed capping work to be conducted, meets all local, state and federal requirements. The licensed site professional will conduct a complete site assessment, provide their recommendations on whether soil testing is required and what types of testing needs to be conducted due to the history of this site. This licensed site

number of children and staff members. The required parking calculation is based on a formula the Town uses for this type of use, which is 8 spaces, plus 1 space for each 40 children, plus one space per staff member. Applying this formula leads to a calculated parking requirement of 29 spaces.

- 1.29 Adequate methods for disposal of refuse and waste will be provided. The project is not a major generator of refuse or other wastes. The project's waste system is connected to the municipal sewerage system. The site has been designed such that adequate methods of disposal of refuse resulting from the proposed use has been assured. A dumpster will be located at the far (eastern) end of the parking area and will be enclosed with fencing. Refuse will be regularly removed from the site by a licensed hauler.
- 1.30 The relationship of structures and open spaces to the natural landscape, existing buildings and other community assets in the area follow the requirements of the By-Law. The Board in Sections 2.0 and 2.1 of this Decision has requested modification of the Plan to address the zoning deficiencies detailed in Sections 1.17, 1.19, 1.20 and 1.21 above. The matters to be considered by this Board in connection with relationship of structures and open spaces to the natural landscape, existing buildings, and other community assets in the area, have been addressed with the Plan modifications detailed in Sections 2.0 and 2.1, and the project complies with all other requirements of the Town By-Law. The gross floor area of the building is 10,034 square feet on one floor and is smaller than what would be allowed by the applicable maximum lot coverage (15%) and the applicable FAR (.30) for the Single Residence A District. In addition, this building is considerably smaller than the abutting Temple Aliyah. Further, the parking will be in the rear of the building.
- 1.31 The proposed project will not have any adverse impact on the Town's resources, including the effect on the Town's water supply and distribution system, sewer collection and treatment, fire protection and streets. The proposed use will not result in an increased demand or adverse impact on the Town's resources. The Petitioner will connect to the Town's sewer system by running, at the Petitioner's expense, a sewer main from its current closest point on Country Way, up Central Avenue to the site. Neighboring properties will have the option of connecting, at their expense, to this sewer line. The project will connect to the Town's water supply system which has adequate capacity to service the development. The Petitioner has engaged a traffic engineer to study this site and will implement the traffic mitigations measures detailed in Section 1.16.
- 1.32 The Board finds the Plan, as modified, conditioned and limited by this Decision, the Traffic and Parking Report, and the other documents submitted in connection with the application, supports Major Project Site Plan approval under By-Law Section 7.4.
- 1.33 Under Section 7.4 of the By-Law, a Major Project Site Plan Decision may be granted within the Single Residence A District provided the Board finds that the proposed use of the property by the Petitioner meets the standards and criteria set forth in the provisions of the By-Law. Based on the above findings and conclusions the Board finds the proposed Plan, as modified, conditioned and limited herein, for the site plan review, to be in harmony with the purposes and intent of the By-Law and Town Master plans, to comply with all applicable By-Law requirements, to have minimized adverse impact, and to have promoted a development which is harmonious with the surrounding area.

turnaround immediately beside the rear of the building are to retain their current design and placement beside the rear of the relocated building. The remainder 25 parking spaces may be reconfigured behind the relocated building. Parking on the property shall respect a 35-foot minimum setback distance along the southern property line. Parking on the property shall not be located less than 265 feet from the property's front yard lot line on Central Avenue. All parking shall be located behind the building. The Petitioner shall have the discretion to increase the parking spaces available on the property from 30 spaces up to a maximum of 41 spaces by increasing the 25-space parking area to 36 spaces as shown on Exhibit 252. The drainage plan and storm water report shall be updated to reflect the above-noted modifications.

- 2.2 The Plans shall be modified to include the requirements and recommendations of the Board as set forth below. All requirements and recommendations of the Board, set forth below, shall be met by the Petitioner.
- a. The plan shall be revised to show all trees having a caliper of greater than 6 inches DBH (diameter at breast height) located within the proposed area of disturbance that will not be retained during the construction process. Said trees shall be replaced at a 2 to 1 ratio with the location, size and species selected to be reflected on a revised landscaping plan submitted to and approved by the Director of Parks and Forestry. Replanting required because of this condition shall be focused within the required front yard setback area.

CONDITIONS

The following conditions of this approval shall be strictly adhered to. Failure to adhere to these conditions or to comply with all applicable laws and permit conditions shall give the Board the rights and remedies set forth in Section 3.44 hereof.

- 3.1 The Board approves the Plan, as modified by this Decision, submitted by the Petitioner and authorizes the use of the property for one child-care facility at the premises with a maximum number of children of 115.
- 3.2 The operation of the proposed child-care facility at 1688 Central Avenue, Needham, Massachusetts, shall be as described in Sections 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, and 1.17 of this decision and as further described under the support materials provided under Exhibits 1, 2, 8, 9, 10, 11, 19, 20, 23, 26, 27, 28, 37, 41, and 45 of this decision. Any changes of such above-described use shall be permitted only by amendment of this approval by the Board.
- 3.3 The hours of operation of the child-care facility shall be limited to 7:00 am to 6:00 pm Monday through Friday. No child-care operations shall be allowed on Saturday or Sunday. Notwithstanding the above, the childcare facility may be used on weekdays until 8 p.m. and on Saturdays and Sundays for administrative purposes, meetings with staff, and small meetings with parents and guardians provided all other conditions of this Decision including, but not limited, to parking requirements are not violated.
- 3.4 The maximum number of children present at the child-care facility at any given time shall not exceed 115. The maximum number of child-care employees or staff inclusive of teachers, instructors and administrators present at any given time shall not exceed 18.

- 3.14 As detailed in Section 1.17 of this Decision, the Petitioner shall implement the following traffic mitigation measures: (a) The Petitioner shall be responsible for securing and paying for a police detail for traffic control at the site driveway during the morning hours of 7:30 a.m. to 9:30 a.m. and the afternoon hours of 3:30 p.m. to 6:00 p.m. The detail shall remain in place for a minimum of 45 days. The detail may be discontinued thereafter upon request of the Petitioner and a finding by the Board (following such notice and hearing, if any, as the Board, in its sole and exclusive discretion, shall deem due and sufficient) that the site is operating without significantly impacting operations along Central Avenue. (b) Prior to building permit issuance, the Petitioner shall provide detailed traffic signal timing plans to the Department of Public Works (DPW) for optimized operations at the Central Avenue/Charles River Street intersection for the morning and evening peak hours. The Petitioner shall further coordinate with the Town Engineer on how to implement the revised signal timings. The Petitioner shall be responsible for implementing and paying for any approved signal timing adjustments approved by the Town Engineer prior to building occupancy. (c) The Petitioner shall complete a follow-up traffic study after the site is open and operational to at least 80% of student capacity. The Petitioner shall further pay the reasonable fees of any consultants/peer reviews required for review or implementation of the above noted items.
- 3.15 The Petitioner shall not exceed the Maximum Trip Count as follows: The total Maximum Trip Count for the child-care facility is 110 trips during the weekday morning peak hour and 112 trips during the weekday evening peak hour. The Petitioner shall prepare, submit and implement a Transportation Demand Management Work Plan (the "TDM Work Plan"), that includes strategies and measures necessary to comply with the Maximum Trip Count. The TDM Work Plan shall be submitted to the Board for review and approval prior to the issuance of the building permit.
- 3.16 The Petitioner shall be responsible for verifying compliance with the Maximum Trip Count, if so requested by the Board. Such trip counts shall be conducted by a qualified professional in accordance with standard engineering methodology. The Petitioner shall be responsible for the cost of all trip counts, surveys, and required analysis. If the Maximum Trip Count is exceeded, the Petitioner shall submit a revised TDM Work Plan to the Planning Board for review and approval that shall include a narrative of how the changes to the TDM Work Plan will reduce the number of vehicular trips during peak hours and a detailed proposal of how current operations will be adjusted to secure compliance with the Maximum Trip Count standard. The Petitioner shall pay the reasonable fees of any consultants/peer reviews as are necessary for the Board to review and analyze any submitted TDM Work Plans or TDM Monitoring Reports.
- 3.17 In the event that traffic or parking problems caused by the use of the property develop that are inconsistent with what was represented to the Board at the hearing and that adversely affect the neighbors on Central Avenue, the Board may modify this Decision by imposing additional conditions in accordance with the provisions of Section 4.2.
- 3.18 The Petitioner shall be responsible for implementing and complying with the requirements of the Board of Health as detailed in Section 1.23 and Section 1.24 of this Decision, and all other requirements of the Board of Health as the Board of Health shall determine based on the report of the licensed site professional as set forth in Section 1.24. The Petitioner shall provide access to the property by the licensed site professional retained by the Board of Health for the purpose of completing the tasks set forth in

measures will be completed.

- 3.30 All solid waste shall be removed from the site by a private contractor. The Petitioner shall obtain the necessary snow removal services to keep the parking lot, handicapped space, driveway, and circular drive passable by vehicles and safe. All snow shall be removed or plowed such that the total number and size of parking spaces are not reduced, and any on-site snow piles shall not infiltrate an abutting property as such snow piles melt.
- 3.31 All deliveries and trash dumpster pick up shall occur only between the hours of 9:30 a.m. and 4:00 p.m., Monday through Friday, not at all on Saturdays, Sundays and holidays. The dumpster shall be screened with a wooden fence, which shall be maintained in good condition. The dumpster shall be emptied, cleaned and maintained to meet Board of Health standards.
- 3.32 All lights shall be shielded and adjusted during the evening hours to prevent any annoyance or trespass to the neighbors. The Petitioner shall adjust its driveway and parking lot lights during the night and early morning. By 8:30 p.m., the Petitioner shall shut off the driveway and parking lot lights using the lights on the building to shine down and provide basic security. The building lights shall be set at a low light level to prevent any annoyance to the neighbors.
- 3.33 An ADA- compliant sidewalk shall be installed along the entire frontage of the property with the final design approved by the Town Engineer.
- 3.34 In constructing and operating the proposed building on the locus pursuant to this Decision, due diligence shall be exercised, and reasonable efforts shall be made at all times to avoid damage to the surrounding areas or adverse impact on the environment.
- 3.35 Excavation material and debris, other than rock used for walls and ornamental purposes and fill suitable for placement elsewhere on the site, shall be removed from the site.
- 3.36 All construction staging shall be on-site. Construction parking shall be all on site or a combination of on-site and off-site parking at locations in which the Petitioner can make suitable arrangements. Construction staging plans shall be included in the final construction documents prior to the filing of a Building Permit and shall be subject to the review and approval of the Building Commissioner. No construction parking shall be on public streets.
- 3.37 The following interim safeguards shall be implemented during construction:
 - a. The hours of construction shall be 7:00 a.m. to 5:00 p.m. Monday through Saturday.
 - b. The Petitioner's contractor shall provide temporary security chain-link or similar type fencing around the portions of the project site that require excavation or otherwise pose a danger to public safety.
 - c. The Petitioner's contractor shall designate a person who shall be responsible for the construction process. That person shall be identified to the Police Department, the Department of Public Works, the Building Commissioner and the abutters and shall be contacted if problems arise during the construction process. The designee shall

the standards of the Town of Needham Department of Public Works and in accordance with the approved Plan.

- c. There shall be filed with the Board and Building Commissioner a Certificate of Compliance signed by a registered architect upon completion of construction.
 - d. There shall be filed with the Board and Building Commissioner an as-built Landscaping Plan showing the final location, number and type of plant material, final landscape features, parking areas, and lighting installations. Said plan shall be prepared by the landscape architect of record and shall include a certification that such improvements were completed according to the approved documents.
 - e. There shall be filed with the Board a statement by the Engineering Division of DPW that the Petitioner has implemented the Town approved signal timing adjustments at the Central Avenue/Charles River Street intersection as detailed in Section 3.14.
 - f. There shall be filed with the Building Commissioner a statement by the Board approving the final off-site traffic improvements.
 - g. The Petitioner shall have submitted a copy of the lease agreement between the Petitioner and the NCC which confirms the initial operator of the child-care facility at 1688 Central Avenue to be the NCC as outlined in Section 3.19 of this decision.
 - h. There shall be filed with the Board a statement by the Engineering Division of DPW that the Petitioner has met the NPDES requirement as detailed in Section 3.29 of this decision.
 - i. The ADA- compliant sidewalk shall have been installed along the entire frontage of the property as detailed in Section 3.33 of this decision.
 - j. Notwithstanding the provisions of Sections a, b, and d hereof, the Building Commissioner may issue one or more certificates for temporary occupancy of all or portions of the buildings prior to the installation of final landscaping and other site features, provided that the Petitioner shall have first filed with the Board in an amount not less than 135% of the value of the aforementioned remaining landscaping or other work to secure installation of such landscaping and other site and construction features.
- 3.40 In addition to the provisions of this approval, the Petitioner must comply with all requirements of all state, federal, and local boards, commissions or other agencies, including, but not limited to, the Select Board, Building Commissioner, Fire Department, Department of Public Works, Conservation Commission, Police Department, and Board of Health, and the Massachusetts Department of Early Education and Care.
- 3.41 Any blasting conducted at the property shall require approval by the Needham Fire Department in accordance with Massachusetts Comprehensive Fire Safety Code, 527 CMR 1.00.
- 3.42 No building or structure authorized for construction by this Decision shall be occupied or used, and no activity except the construction activity authorized by this Decision shall be

time limits set forth herein must be in writing to the Board at least 30 days prior to March 1, 2024. The Board herein reserves its rights and powers to grant or deny such extension without a public hearing. The Board, however, shall not grant an extension as herein provided unless it finds that the use of the property in question or the construction of the site has not begun for good cause.

- 4.8 This Decision shall be recorded in the Norfolk District Registry of Deeds and shall not become effective until the Petitioner has delivered a certified copy of the document to the Board. In accordance with G.L. Chapter 40A, Section 11, this Major Site Plan Review Decision shall not take effect until a copy of this decision bearing the certification of the Town Clerk that twenty (20) days have elapsed after the decision has been filed in the office of the Town Clerk and either that no appeal has been filed or the appeal has been filed within such time is recorded in the Norfolk District Registry of Deeds and is indexed in the grantor index under the name of the owner of record or is recorded and noted on the owner's certificate of title. The person exercising rights under a duly appealed Decision does so at the risk that a court will reverse the Decision and that any construction performed under the Decision may be ordered undone.

The provisions of this Decision shall be binding upon every owner or owner of the lots and the executors, administrators, heirs, successors and assigns of such owners, and the obligations and restrictions herein set forth shall run with the land, as shown of the Plan, as modified by this decision, in full force and effect for the benefit of and enforceable by the Town of Needham.

Any person aggrieved by this decision may appeal pursuant to General Laws, Chapter 40A, Section 17, within twenty (20) days after filing of this decision with the Needham Town Clerk.



**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Synthetic Field Turf Testing & Results
Presenter(s)	Tara Gurge, Assistant Public Health Director Timothy McDonald, HHS Director

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	Continue to discuss recent testing results for crumb rubber grab samples that were taken from three turf fields – 2 turf fields at DeFazio Park and 1 turf field at Memorial Park.
2.	VOTE REQUIRED BY BOARD OF HEALTH
	Vote is not required, nor is one requested.
3.	BACK UP INFORMATION:
	- See follow-up email from Fuss & O'Neill with answers to your inquiries in red font. - Included copy of recent Synthetic Turf Testing report from Fuss & O'Neill for your reference. (Dec. 2021) - Included the previous sampling report for your reference (Aug. 2020)

Tara Gurge

Subject: FW: Status of Contract for Needham Crumb Rubber Testing for FY22 - Attached report

From: Wendy Tram <wtram@fando.com>
Sent: Wednesday, February 23, 2022 3:49 PM
To: Tara Gurge <TGurge@needhamma.gov>
Cc: Dan LaFrance <DLaFrance@fando.com>
Subject: RE: [External] FW: Status of Contract for Needham Crumb Rubber Testing for FY22 - Attached report

Tara,
Long awaited, but please see our responses below.
We hope these answers provide you the information you seek.
Thank you,

Wendy Tram, EIT
Environmental Engineer
Fuss & O'Neill, Inc. | 108 Myrtle Street, Suite 502 | Quincy, MA 02171
617.282.4675 x4725 | wtram@fando.com
www.fando.com | [twitter](#) | [facebook](#) | [linkedin](#)

From: Tara Gurge
Sent: Wednesday, February 16, 2022 12:13 PM
To: Wendy Tram <wtram@fando.com>
Cc: Daniel LaFrance <DLaFrance@fando.com>
Subject: RE: Status of Contract for Needham Crumb Rubber Testing for FY22 - Attached report
Importance: High

Hello Wendy –

Thanks again for taking my call last week to discuss this recent Crumb Rubber Testing report for Needham, which I was able to present your follow-up to the Board of Health at our meeting that evening. (See attached recent report.) So the BOH had a few follow-up inquiries that I was hoping you may be able to offer your continued guidance on. See inquires below:

- The BOH wanted to know if this Acetone compound, along with the other two elevated compounds noted in the recent report, should be re-tested again in the summer or fall? And if so, they wanted to know if they should just run another sample and just check for those 3 compounds, or would it be similar in cost to run the entire test for all compounds? Please advise.
 - o We don't think resampling is warranted for these reasons:
 - Acetone is a common laboratory artifact, supported by our experience and past sample data indicating that acetone was either not detected (aka below laboratory reporting limits) or below the risk-based value (RBV)
 - As you are aware, there is RBV for compounds in synthetic material crumb rubber. The RBV that is being used for comparison is based on residential exposure in soil and indoors. Therefore, the RBL for acetone (and other three compounds) is conservative given our sample is collected outdoors and the matrix is crumb rubber, and given that acetone and the three other compounds don't typically come up at quantifiable detections.

- We collected the samples between multiple rain events. The samples were moist, and we saw generally higher reporting limits than during previous events (conducted in dry weather). To reduce laboratory adjustments/interferences, we should strive to collect the sample during a dry period.
 - The compounds of interest would require us to run VOC and SVOC analysis, and the lab cost is generally the same (or close to it) whether running a subset or the entire list. It costs the same on the lab's end to prepare and run the test based on the method requirements.
- We wanted to know if a Blank was typically included in your testing, and if not, could a Blank be added for all future testing?
 - The lab internally runs a method blank (included in their report), which assesses for laboratory sources of contamination. Note that acetone nor any other compound were detected in the method blank. Although acetone was not detected in the method blank, it doesn't rule out laboratory sources altogether (there are other ways of assessing lab contamination – see next bullets). Acetone is a common laboratory reagent.
 - We could add a Trip Blank in the future, which assesses for potential cross-contamination during transport/shipping of samples, including laboratory sources of contamination. Trip blanks would be run for VOCs, at an additional cost.
 - We could add an Equipment Blank in the future, which assesses field and laboratory sources of contamination. We would pour deionized water (provided by the lab) over our sample tools and containerize the water in a bottle and have it analyzed as an additional sample, also at an additional cost.

I've also attached the previous Crumb Rubber testing report results for your reference.

Please let me know if it's easier to just have a quick follow-up call to discuss. Also – An option came up on whether one of our BOH members and I can just set up a brief Zoom call with you to discuss these inquiries as well. Let me know what would work best for you!

Thanks,



TARA E. GURGE, R.S., C.E.H.T., M.S. (she/her/hers)
ASSISTANT PUBLIC HEALTH DIRECTOR
 Needham Public Health Division
 Health and Human Services Department
 178 Rosemary Street
 Needham, MA 02494
 Ph- (781) 455-7940; Ext. 211/Fax- (781) 455-7922
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 Email - tgurge@needhamma.gov
 Web- www.needhamma.gov/health



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From: Wendy Tram <wtram@fando.com>

Sent: Friday, December 17, 2021 2:47 PM

To: Tara Gurge <TGurge@needhamma.gov>

Cc: Daniel LaFrance <DLaFrance@fando.com>

Subject: RE: [External] RE: Status of Contract for Needham Crumb Rubber Testing for FY22 - Attached report

Tara,

Attached is our report for this year's crumb rubber testing.

I would like to point out that acetone was the only compound reported above the MassDEP screening value. We don't believe the concentration to be of concern for several reasons. First being that it was an estimated value, so it could be biased high or low (most likely biased high). Acetone is a common laboratory reagent and it can show up as a detection. Acetone was not detected or detected below the screening value in past sampling events. If you have any questions regarding our conclusions, feel free to reach out.

Thanks,

Wendy Tram

Environmental Engineer

Fuss & O'Neill, Inc. | 108 Myrtle Street, Suite 502 | Quincy, MA 02171

617.282.4675 x4725 | wtram@fando.com

www.fando.com | [twitter](#) | [facebook](#) | [linkedin](#)

Crumb Rubber Monitoring Results

**Memorial Park & DeFazio Park
Needham, Massachusetts**

Needham Health Department

Needham, Massachusetts

December 2021



FUSS & O'NEILL

Fuss & O'Neill, Inc.
108 Myrtle Street, Suite 502
Quincy, MA 02171



December 17, 2021

Mr. Timothy McDonald
Director of Public Health
Needham Health Department
1471 Highland Avenue
Needham, MA 02492

RE: **Crumb Rubber Monitoring Results – November 2021**
Memorial and DeFazio Parks
Needham, Massachusetts
Fuss & O'Neill Project No. 20081266.B20

Dear Mr. McDonald:

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 November 2021.

If you should have any questions regarding the contents of this report, please do not hesitate to contact me at (860) 646-2469 ext. 4538. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Daniel LaFrance, PE, LSP
Project Manager

108 Myrtle Street
Suite 502
Quincy, MA
02171
t 617.282.4675
800.286.2469
f 617.481.5885

wt/dl/bs

Enclosure

www.fando.com

California
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\\Private\DFS\ProjectData\P2008\1266\B20\Deliverables\Report\dcl_CrumbRubberSampling_2021_1116.docx

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2	Methodology and Scope of Testing.....	1
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End of Report

1. Summary of Crumb Rubber Monitoring Results
2. Real-Time Measurements

Figures

End of Report

1. Site Plan – Memorial Park
2. Site Plan – DeFazio Park

Appendices

End of Report

- APPENDIX A - LABORATORY ANALYTICAL REPORTS & CHAIN-OF-CUSTODY FORMS
APPENDIX B - SAMPLING EQUIPMENT
APPENDIX C - FIELD DATA SHEETS

1 Introduction and Background

Fuss & O'Neill, Inc. (Fuss & O'Neill) was retained by the Needham Health Department 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) to evaluate potential health-related impacts.

On November 1, 2021, Ms. Wendy Tram of Fuss & O'Neill performed the crumb rubber sampling for the Needham Health Department (the "Client") in accordance with our proposal dated August 17, 2021.

2 Methodology and Scope of Testing

On November 1, 2021, Fuss & O'Neill and Client personnel accessed 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 a trowel. The composite samples were comprised of crumb rubber collected from the two ends and the middle of each artificial turf athletic field. Diagrams depicting sample locations are included as *Figure 1* (Memorial Park) and *Figure 2* (DeFazio Park). Samples were collected from the Needham High School Field in Memorial Park, and from Founders Field and Brock Field in DeFazio Park.

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 6010/7471 (inductively coupled plasma atomic emission spectrometry [ICP-AES] and mercury by manual cold-vapor technique, respectively); semi-volatile organic compounds (SVOCs) by EPA Method 8270; and volatile organic compounds (VOCs) by EPA Method TO-15. 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 "tentatively identified compound" (TIC) search was performed in connection with the analytical data.

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

- Ethanol
- Isopropyl alcohol
- Acetone
- Butanone (methyl ethyl ketone; MEK)
- Methyl isobutyl ketone (MIBK)
- Methylene chloride
- Tertiary butyl alcohol (TBA)

Furthermore, 2-methyl propene and carbonyl sulfide were identified as TICs in the analyses.

Iron, lead, manganese, and zinc were each detected in all three samples, while chromium was detected in the sample collected from Brock Field. Mercury, arsenic, cadmium, and selenium were not detected in any sample.

Three to four SVOCs were identified in each of the rubber samples. The SVOCs were all within the class of “polycyclic aromatic hydrocarbons” (PAHs). While only three to four SVOCs were identified in each sample, *Table 1* includes the EPA-designated “Priority Pollutant” PAHs, which include multiple similar compounds.

VOCs were recorded at concentrations at or below 0.8 parts per million by volume (ppmv) in ambient air. Readings less than 1.0 ppmv may occur as a result of moisture in ambient air. The ambient relative humidity at the time of sampling was between 31.5 and 63.3 percent, within a 58.1- to 66.3-degree Fahrenheit environment.

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-available.¹ MassDEP generally establishes these standards based on four criteria:

- 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 levels (PQLs), i.e. levels which analytical laboratories can reliably quantify.

¹ MassDEP, December 2017, “MCP Numerical Standards.” <https://www.mass.gov/doc/mcp-numerical-standards-derivation/download>, accessed June 2020.

In its toxicity calculations for S-1 soil (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). These values are included on *Table 1*. Where MassDEP has not published toxicity values, Fuss & O'Neill consulted the EPA "regional screening levels," (RSLs) which consist of similarly-derived guidance values for a range of compounds used for screening contaminant concentrations on sites evaluated under the Superfund program.² 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.

With the exceptions of carbonyl sulfide, ethanol, and 2-methyl propene, MassDEP and/or EPA values were available for all detected compounds. The 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.

As noted on *Table 1*, acetone was detected in one sample at a concentration greater than the MassDEP screening value, while the remaining concentrations were less than the respective screening levels. The acetone value was reported by the laboratory as an estimated concentration that exceeded the upper calibration value. The estimated value was yielded due to the inability to meet certain laboratory conditions during the time of extraction. The estimated concentration may be biased high. Note that acetone was either not detected or detected below the respective MassDEP screening value during previous years. Acetone is frequently used as a laboratory reagent, and the VOC methodology involved the laboratory handling the sample to perform the headspace extraction. Therefore, the presence of acetone vapors in the sample may be unrelated to the crumb rubber and related to the laboratory conditions.

With the exception of three compounds (arsenic, and PAH compounds dibenz[a,h]anthracene and benzo[a]pyrene) whose laboratory reporting limits exceeded threshold values, the remaining detections for metals, VOCs, and SVOCs were less than the threshold values. Note that PAHs have historically been detected. Arsenic has not been detected in the past, and the published laboratory reporting limit for arsenic is a conservative value relative to the risk-based level. All of the respective reporting limits were only slightly greater than the respective threshold concentrations.

5 Conclusions

Fuss & O'Neill collected field and analytical data to characterize the crumb rubber at three fields in Needham, Massachusetts in November, 2021. The analytical results were compared to MassDEP and EPA risk-based guidance levels for soil, to evaluate potential health risks associated with the use of the crumb rubber media on these athletic fields. The estimated concentration of acetone in one of three samples exceeded the MassDEP threshold toxicity value, which is a noncancer risk-based concentration

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

used to develop single chemical threshold values in residential settings.. As noted above, acetone may be present in the sample as a result of laboratory technique. With the exception of three compounds (arsenic, and PAH compounds dibenz[a,h]anthracene and benzo[a]pyrene) whose laboratory reporting limits exceeded threshold values, the remaining detections for metals, VOCs, and SVOCs were less than the threshold values. Note that PAHs have historically been detected. Arsenic has not been detected in the past, and the published laboratory reporting limit for arsenic is a conservative value relative to the risk-based level. All of the respective reporting limits were only slightly greater than the respective threshold concentrations.

Tables

Table 1
Summary of Crumb Rubber Monitoring Results – November 1, 2021

Analyte	Analytical Results			Risk-Based Levels
	Memorial Park	DeFazio Park		
	Needham High School 1609211101-03	Brock Field 1609211101-02	Founders Field 1609211101-01	
Polycyclic Aromatic Hydrocarbons** – dry weight (mg/kg) by method 3546/8270D				
2-Methylnaphthalene	ND <11	ND <11	ND <12	280
Acenaphthene	ND <1.1	ND <1.1	ND <1.2	4,300
Acenaphthylene	ND <1.1	ND <1.1	ND <1.2	2,100
Anthracene	ND <1.1	ND <1.1	ND <1.2	21,000
Benzo(a)anthracene	ND <1.1	ND <1.1	ND <1.2	7.2
Benzo(a)pyrene	ND <1.1	ND <1.1	ND <1.2	0.72
Benzo(b)fluoranthene	ND <1.1	ND <1.1	ND <1.2	7.2
Benzo(g,h,i)perylene	ND <1.1	ND <1.1	ND <1.2	2,100
Benzo(k)fluoranthene	ND <1.1	ND <1.1	ND <1.2	72
Chrysene	1.6	2.5	2.1	72
Dibenz(a,h)anthracene	ND <1.1	ND <1.1	ND <1.2	0.72
Fluoranthene	3.5	3.4	3.8	2,800
Fluorene	ND <1.1	ND <1.1	ND <1.2	2,800
Indeno(1,2,3-cd)pyrene	ND <1.1	ND <1.1	ND <1.2	72
Naphthalene	ND <1.1	ND <1.1	ND <1.2	1,400
Phenanthrene	ND <1.1	1.2	ND <1.2	2,100
Pyrene	9.0	9.0	9.6	2,100
Volatile organic compounds – vapor (mg/m³) Closed Container Test by method TO-15				
1-Propene, 2-Methyl-*	0.063	0.060	0.064	NE
Carbonyl Sulfide*	0.056	0.130	0.180	NE
Acetone	0.260	1.800	0.510	0.8
2-Butanone (MEK)	ND <0.015	0.200	ND <0.015	5.00
4-Methyl-2-Pentanone (MIBK)	0.060	0.053	0.038	3.00
Methylene Chloride	0.019	ND <0.017	ND <0.017	0.6
Tert-Butyl Alcohol	0.030	ND <0.015	ND <0.015	NE

* 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.

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

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

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 1
Summary of Crumb Rubber Monitoring Results – November 1, 2021

Analyte	Analytical Results			Risk-Based Levels
	<u>Memorial Park</u>	<u>DeFazio Park</u>		
	Needham High School 1609211101-03	Brock Field 1609211101-02	Founders Field 1609211101-01	
Total Metals – dry weight (mg/kg) by methods 6010D & 7471B				
Arsenic	ND <2.4	ND <2.7	ND <2.7	2.2
Cadmium	ND <0.61	ND <0.69	ND <0.67	71
Chromium	ND <2.4	10.2	ND <2.7	130
Iron	342	722	732	NE [55,000]
Lead	11.2	8.7	8.5	110
Manganese	4.1	5.8	6.1	NE [1,800]
Mercury	ND <0.031	ND <0.031	ND <0.034	18
Selenium	ND <2.4	ND <2.7	ND <2.7	380
Zinc	12,200	10,400	11,300	13,000

* 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.

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

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

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 – November 1, 2021

Location	VOC (ppm)	Temperature (°F)	RH (%)
Needham High School (HS)	0.4	64.5	31.5
Brock Field (D1)	0.7	66.3	55.8
Founders Field (D2)	0.8	58.1	63.3

°F: degrees Fahrenheit

RH: Relative Humidity

Figures



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



FUSS & O'NEILL

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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



MAP REFERENCE

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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
 617.282.4675
 www.fando.com

NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 DEFAZIO PARK
 380 DEDHAM ROAD

NEEDHAM

MASSACHUSETTS

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

FIGURE 2

Appendix A

Laboratory Analytical Reports & Chain of Custody Forms

**EMSL ANALYTICAL, INC.**

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

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Laboratory Report- Sample Summary

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
492100661-0001	1609211101-01	11/1/2021	9:45 AM
492100661-0002	1609211101-02	11/1/2021	10:30 AM
492100661-0003	1609211101-03	11/1/2021	11:15 AM
492100661-BCKG	Laboratory Background	11/15/2021	2:30 PM

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

Report Date	Report Revision	Revision Comments
11/16/2021	R0	Initial Report
12/13/2021	R1	Updated TVOC page

Owen McKenna, National Organics 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.

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Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Case Narrative

Method Reference

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

Column

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

Concentrator Traps:

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

Gas Standards:

Certified Gas standards were used for all analyses.

Sample Volumes:

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

Holding Times:

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

Sampling Pressures:

All samples were received at acceptable pressure/vacuum unless listed below.
Bulk samples for off gas analysis.

Sample Dilutions:

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

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

Initial Calibration

All Initial Calibration criteria met method specification.

Initial Calibration Verification Standard (ICVS)- Second Source

ICVS met method specification with 70-130% recovery for 100% of compounds.

Laboratory Control Sample (LCS)

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

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EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 11:15
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Analyzed: See Results
Reported: 12/13/2021

Case Narrative

Continuing Calibration Verification Standard (CCVS)

CCVS met method specification with all compounds within 30% deviation.

Ending Calibration Verification Standard (ECVS)

ECVS met method specification with all compounds within 30% deviation.

Method Blanks (MB)

Method Blank met method specification.

Reporting Limit Laboratory Control Samples (RLLCS)

RLLCS met method specification with 90% of compounds within the 60-140% recovery range. Individual compounds outside of the recovery range may be listed below.

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

The following data qualifiers that may have been reported with the data.

ND- Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.

U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.

J (Target)- Concentration estimated between Reporting Limit and MDL.

J- Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed

B- Compound found in associated method blank as well as in the sample.

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

D- Compound reported from additional diluted analysis.

N- indicates presumptive evidence of a compound based on library search match.

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

Owen McKenna, National Organics Manager
or other approved signatory

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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0001
CUSTOMER SAMPLE ID: 1609211101-01

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 09:45
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05120.D	JARL7	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.51	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	ND	5.0		ND	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	ND	5.0		ND	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	210	5.0		510	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.05	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.93	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.08	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.18	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.09	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.11	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.11	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.1	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.11	ND	5.0		ND	18	

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Email: dlafrance@fando.com

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0001
CUSTOMER SAMPLE ID: 1609211101-01

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 09:45
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05120.D	JARL7	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	9.2	5.0		38	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.2	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.9	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	5.0		ND	25	
Bromoform	75-25-2	252.7	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.6	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.2	ND	5.0		ND	26	
Total Target Compound Concentrations:			220	ppbv		550	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.3

Spike

10

Recovery

93%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

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EMSL SAMPLE ID: 492100661-0001

CUSTOMER SAMPLE ID: 1609211101-01

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Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 09:45
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05120.D	JARL7	25 cc	10

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

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EMSL SAMPLE ID: 492100661-0001
CUSTOMER SAMPLE ID: 1609211101-01

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 09:45
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05120.D	JARL7	25 cc	10

Total Volatile Organic Compounds (TVOC) Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Acetone	67-64-1	58.08	210	5.0		510	12	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	9.2	5.0		38	20	
Total Target Compound Concentrations:			220	ppbv		550	ug/m3	

Qualifier Definitions

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

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv		Q	Result ug/m3	Retention Time	Comments
Carbonyl sulfide	000463-58-1	60	72		JN	180	5.393	
1-Propene, 2-methyl-	000115-11-7	56	28		JN	64	6.21	
Total TIC Concentrations:			100	ppbv		240	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Total Volatile Organic Compounds (TVOCs): 320 ppbv 790 ug/m3

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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0002
CUSTOMER SAMPLE ID: 1609211101-02

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Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 10:30
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05121.D	JARI	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.51	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	ND	5.0		ND	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	ND	5.0		ND	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	780	5.0	E	1800	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.05	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.93	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.08	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.18	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.09	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.11	68	5.0		200	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.11	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.1	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.11	ND	5.0		ND	18	

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**EMSL ANALYTICAL, INC.**

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Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0002
CUSTOMER SAMPLE ID: 1609211101-02

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 10:30
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05121.D	JARI	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	13	5.0		53	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.2	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.9	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	5.0		ND	25	
Bromoform	75-25-2	252.7	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.6	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.2	ND	5.0		ND	26	
Total Target Compound Concentrations:			860	ppbv		2100	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.2

Spike

10

Recovery

92%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

EMSL ANALYTICAL, INC.

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EMSL ORDER ID: 492100661

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492100661-0002

CUSTOMER SAMPLE ID: 1609211101-02

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 10:30
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05121.D	JARI	25 cc	10

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

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Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0002
CUSTOMER SAMPLE ID: 1609211101-02

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 10:30
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05121.D	JARI	25 cc	10

Total Volatile Organic Compounds (TVOC) Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Acetone	67-64-1	58.08	780	5.0	E	1800	12	
2-Butanone(MEK)	78-93-3	72.11	68	5.0		200	15	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	13	5.0		53	20	
Total Target Compound Concentrations:			860	ppbv		2100	ug/m3	

Qualifier Definitions

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

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv		Q	Result ug/m3	Retention Time	Comments
Carbonyl sulfide	000463-58-1	60	53		JN	130	5.393	
1-Propene, 2-methyl-	000115-11-7	56	26		JN	60	6.21	
Total TIC Concentrations:			79	ppbv		190	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Total Volatile Organic Compounds (TVOCs): 940 ppbv 2300 ug/m3

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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0003
CUSTOMER SAMPLE ID: 1609211101-03

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05122.D	JARL5	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.51	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	ND	5.0		ND	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	ND	5.0		ND	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	110	5.0		260	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.05	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	10	5.0		30	15	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.93	5.5	5.0		19	17	
Acrylonitrile	107-13-1	53.08	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.18	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.09	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.11	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.11	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.1	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.11	ND	5.0		ND	18	

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**EMSL ANALYTICAL, INC.**

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Phone: 860-646-2469
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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0003
CUSTOMER SAMPLE ID: 1609211101-03

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05122.D	JARL5	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	15	5.0		60	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.2	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.9	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	5.0		ND	25	
Bromoform	75-25-2	252.7	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.6	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.2	ND	5.0		ND	26	
Total Target Compound Concentrations:			140	ppbv		370	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.0

Spike

10

Recovery

90%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

EMSL ANALYTICAL, INC.

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EMSL ORDER ID: 492100661

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492100661-0003

CUSTOMER SAMPLE ID: 1609211101-03

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05122.D	JARL5	25 cc	10

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
Carbonyl sulfide	000463-58-1	60	23	JN	56	5.388	
1-Propene, 2-methyl-	000115-11-7	56	27	JN	63	6.20	
Total TIC Concentrations:			50	ppbv	120	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

**EMSL ANALYTICAL, INC.**

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Attention: Dan LaFrance
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146 Hartford Road
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Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-0003
CUSTOMER SAMPLE ID: 1609211101-03

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected: 11/01/2021 11:15
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 12/13/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05122.D	JARL5	25 cc	10

Total Volatile Organic Compounds (TVOC) Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Acetone	67-64-1	58.08	110	5.0		260	12	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	10	5.0		30	15	
Methylene chloride	75-09-2	84.93	5.5	5.0		19	17	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	15	5.0		60	20	
Total Target Compound Concentrations:			140	ppbv		370	ug/m3	

Qualifier Definitions

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

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv		Q	Result ug/m3	Retention Time	Comments
Carbonyl sulfide	000463-58-1	60	23		JN	56	5.388	
1-Propene, 2-methyl-	000115-11-7	56	27		JN	63	6.2	
Total TIC Concentrations:			50	ppbv		120	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Total Volatile Organic Compounds (TVOCs): 190 ppbv 490 ug/m3

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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-BCKG
CUSTOMER SAMPLE ID: Lab Background

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected:
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05119.D	JARL6	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.51	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	100	5.0		190	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	34	5.0		84	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	8.5	5.0		20	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.05	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	109.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.52	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.93	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.08	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.18	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.09	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.11	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.11	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.1	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.11	ND	5.0		ND	18	

16 of 20

**EMSL ANALYTICAL, INC.**

200 Route 130 North
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Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492100661-BCKG
CUSTOMER SAMPLE ID: Lab Background

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected:
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05119.D	JARL6	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.2	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.9	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.2	ND	5.0		ND	25	
Bromoform	75-25-2	252.7	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.6	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.4	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.2	ND	5.0		ND	26	
Total Target Compound Concentrations:			140	ppbv		290	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

8.8

Spike

10

Recovery

88%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

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EMSL ORDER ID: 492100661

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492100661-BCKG

CUSTOMER SAMPLE ID: Lab Background

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected:
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05119.D	JARL6	25 cc	10

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

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EMSL ORDER ID: 492100661
EMSL CUSTOMER ID: ENVI54
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CUSTOMER SAMPLE ID: Lab Background

Customer PO: 20081266.B20
EMSL Project ID:
Project Name: Needham Crumb Rubber -- 20081266.B20

Collected:
Received: 11/02/2021 09:40
Analyzed: See Results
Reported: 11/16/2021

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	11/16/2021	KW	y05119.D	JARL6	25 cc	10

Total Volatile Organic Compounds (TVOC) Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Ethanol	64-17-5	46.07	100	5.0		190	9.4	
Isopropyl alcohol(2-Propanol)	67-63-0	60.09	34	5.0		84	12	
Acetone	67-64-1	58.08	8.5	5.0		20	12	
Total Target Compound Concentrations:			140	ppbv		290	ug/m3	

Qualifier Definitions

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

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv		Q	Result ug/m3	Retention Time	Comments
Total TIC Concentrations:			0.0	ppbv		0.0	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Total Volatile Organic Compounds (TVOCs): 140 ppbv 290 ug/m3



EMSL Analytical, Inc.

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Attn:

**Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040**

Phone: (860) 646-2469
Fax:

12/9/2021

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 11/2/2021. The results are tabulated on the attached data pages for the following client designated project:

Needham Crumb Rubber Needham, MA 20081266.B20

The reference number for these samples is EMSL Order #012112502. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The MS/MSD surrogate recoveries for Hexachlorocyclopentadiene and Benzidine fell outside control limits low. All other QC results met criteria.

Report amended 12/02/2021 12:09:28 Replaces initial report from 11/30/2021 17:41:14

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

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

EMSL Order: 012112502

CustomerID: ENVI54

CustomerPO:

ProjectID:

Attn: **Dan LaFrance**
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-01**Collected:** 11/1/2021
9:45:00 AM**Lab ID:** 012112502-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4-Trichlorobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,2-Dichlorobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,3-Dichlorobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,4-Dichlorobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4,5-Trichlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4,6-Trichlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4-Dichlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4-Dinitrotoluene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,6-Dichlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,6-Dinitrotoluene	ND D	24000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Chloronaphthalene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Chlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Methylnaphthalene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Methylphenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Nitroaniline	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2-Nitrophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	3,3'-Dichlorobenzidine	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	3-Nitroaniline	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	4,6-Dinitro-2-methylphenol	ND D	24000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	4-Bromophenyl-phenylether	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC

**EMSL Analytical, Inc.**

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EMSL Order: 012112502

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ProjectID:

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146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469

Fax:

Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-01**Collected:** 11/1/2021
9:45:00 AM**Lab ID:** 012112502-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	4-Chloro-3-methylphenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chloroaniline	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chlorophenyl-phenylether	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3&4-Methylphenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitroaniline	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitrophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthylene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Aniline	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Anthracene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzidine	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(a)anthracene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(a)pyrene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(b)fluoranthene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(g,h,i)perylene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(k)fluoranthene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzoic Acid	ND D	24000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzyl Alcohol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroethoxy)methane	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroethyl)ether	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroisopropyl)ether	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-01**Collected:** 11/1/2021
9:45:00 AM**Lab ID:** 012112502-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Bis(2-ethylhexyl)phthalate	ND D	37000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Butylbenzylphthalate	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Carbazole	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Chrysene	2100 D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Di-n-butylphthalate	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Di-n-octylphthalate	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dibenz(a,h)anthracene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dibenzofuran	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Diethylphthalate	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dimethylphthalate	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Fluoranthene	3800 D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Fluorene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorobutadiene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorocyclopentadiene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachloroethane	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Indeno(1,2,3-cd)pyrene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Isophorone	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitroso-di-n-propylamine	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitrosodimethylamine	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitrosodiphenylamine	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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EMSL Order: 012112502

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Attn: **Dan LaFrance**
Fuss & O'Neill, Inc.
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Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results**

Client Sample Description 1609211101-01 **Collected:** 11/1/2021 9:45:00 AM **Lab ID:** 012112502-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Naphthalene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Nitrobenzene	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Pentachlorophenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Phenanthrene	ND D	1200 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Phenol	ND D	12000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Pyrene	9600 D	1200 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC

SUBCONTRACT

Subcontract-Pace Analytical Services	See Attached	N/A
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Client Sample Description 1609211101-02 **Collected:** 11/1/2021 10:30:00 AM **Lab ID:** 012112502-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4-Trichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,2-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,3-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	1,4-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4,5-Trichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4,6-Trichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4-Dichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	2,4-Dinitrotoluene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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EMSL Order: 012112502

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ProjectID:

Attn: **Dan LaFrance**
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146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-02**Collected:** 11/1/2021
10:30:00 AM**Lab ID:** 012112502-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	2,6-Dichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,6-Dinitrotoluene	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Chloronaphthalene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Chlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Methylnaphthalene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Nitrophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3,3'-Dichlorobenzidine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4,6-Dinitro-2-methylphenol	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Bromophenyl-phenylether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chloro-3-methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chloroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chlorophenyl-phenylether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3&4-Methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitrophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthylene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Aniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-02**Collected:** 11/1/2021**Lab ID:** 012112502-0002

10:30:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzidine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzo(a)anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzo(a)pyrene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzo(b)fluoranthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzo(g,h,i)perylene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzo(k)fluoranthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzoic Acid	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Benzyl Alcohol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Bis(2-chloroethoxy)methane	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Bis(2-chloroethyl)ether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Bis(2-chloroisopropyl)ether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Bis(2-ethylhexyl)phthalate	ND D	33000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Butylbenzylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Carbazole	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Chrysene	2500 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Di-n-butylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Di-n-octylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Dibenz(a,h)anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Dibenzofuran	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Diethylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-02**Collected:** 11/1/2021
10:30:00 AM**Lab ID:** 012112502-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Dimethylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Fluoranthene	3400 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Fluorene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Hexachlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Hexachlorobutadiene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Hexachlorocyclopentadiene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Hexachloroethane	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Indeno(1,2,3-cd)pyrene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Isophorone	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	N-Nitroso-di-n-propylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	N-Nitrosodimethylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	N-Nitrosodiphenylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Naphthalene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Nitrobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Pentachlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Phenanthrene	1200 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Phenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
3546/8270D	Pyrene	9000 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 00:00 AC
SUBCONTRACT					
Subcontract-Pace Analytical Services	See Attached	N/A			

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Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-03**Collected:** 11/1/2021**Lab ID:** 012112502-0003

11:15:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4-Trichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	1,2-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	1,3-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	1,4-Dichlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,4,5-Trichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,4,6-Trichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,4-Dichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,4-Dinitrotoluene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,6-Dichlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2,6-Dinitrotoluene	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Chloronaphthalene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Chlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Methylnaphthalene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	2-Nitrophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3,3'-Dichlorobenzidine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4,6-Dinitro-2-methylphenol	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Bromophenyl-phenylether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-03**Collected:** 11/1/2021**Lab ID:** 012112502-0003

11:15:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	4-Chloro-3-methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chloroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Chlorophenyl-phenylether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	3&4-Methylphenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitroaniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	4-Nitrophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Acenaphthylene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Aniline	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzidine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(a)anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(a)pyrene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(b)fluoranthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(g,h,i)perylene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzo(k)fluoranthene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzoic Acid	ND D	22000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Benzyl Alcohol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroethoxy)methane	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroethyl)ether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Bis(2-chloroisopropyl)ether	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-03**Collected:** 11/1/2021**Lab ID:** 012112502-0003

11:15:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Bis(2-ethylhexyl)phthalate	ND D	33000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Butylbenzylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Carbazole	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Chrysene	1600 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Di-n-butylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Di-n-octylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dibenz(a,h)anthracene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dibenzofuran	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Diethylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Dimethylphthalate	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Fluoranthene	3500 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Fluorene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorobutadiene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachlorocyclopentadiene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Hexachloroethane	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Indeno(1,2,3-cd)pyrene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Isophorone	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitroso-di-n-propylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitrosodimethylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	N-Nitrosodiphenylamine	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00

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Fax:
Received: 11/2/2021 09:40 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B20****Analytical Results****Client Sample Description** 1609211101-03**Collected:** 11/1/2021
11:15:00 AM**Lab ID:** 012112502-0003

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Naphthalene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Nitrobenzene	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Pentachlorophenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Phenanthrene	ND D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Phenol	ND D	11000 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
3546/8270D	Pyrene	9000 D	1100 µg/Kg	11/5/2021 PG	11/15/2021 AC 00:00
SUBCONTRACT					
Subcontract-Pace Analytical Services	See Attached		N/A		

Definitions:

MDL - method detection limit

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

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

RL - Reporting Limit (Analytical)

D - Dilution Sample required a dilution which was used to calculate final results

November 10, 2021

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

RE: Project: 012112502
Pace Project No.: 70193281

Dear Debbie Kreider:

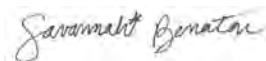
Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Savannah S. Benatar
savannah.benatar@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Travis Albert, EMSL Analytical, Inc., NJ



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 012112502

Pace Project No.: 70193281

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

Connecticut Certification #: PH-0435

Delaware Certification # NY 10478

Maryland Certification #: 208

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

New Jersey Certification #: NY158

New York Certification #: 10478 Primary Accrediting Body

Pennsylvania Certification #: 68-00350

Rhode Island Certification #: LAO00340

Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 012112502

Pace Project No.: 70193281

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70193281001	012112502-0001	Solid	11/01/21 09:45	11/03/21 10:00
70193281002	012112502-0002	Solid	11/01/21 10:30	11/03/21 10:00
70193281003	012112502-0003	Solid	11/01/21 11:15	11/03/21 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 012112502

Pace Project No.: 70193281

Lab ID	Sample ID	Method	Analysts	Analytes Reported
70193281001	012112502-0001	EPA 6010D	HMH	8
		EPA 7471B	JJS	1
		ASTM D2216-05M	CEA	1
70193281002	012112502-0002	EPA 6010D	HMH	8
		EPA 7471B	JJS	1
		ASTM D2216-05M	CEA	1
70193281003	012112502-0003	EPA 6010D	HMH	8
		EPA 7471B	JJS	1
		ASTM D2216-05M	CEA	1

PACE-MV = Pace Analytical Services - Melville

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 012112502

Pace Project No.: 70193281

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
70193281001	012112502-0001					
EPA 6010D	Iron	732	mg/kg	26.8	11/10/21 15:35	
EPA 6010D	Lead	8.5	mg/kg	1.3	11/10/21 15:35	
EPA 6010D	Manganese	6.1	mg/kg	4.0	11/10/21 15:35	
EPA 6010D	Zinc	11300	mg/kg	5.4	11/10/21 15:35	
ASTM D2216-05M	Percent Moisture	9.7	%	0.10	11/04/21 16:01	
70193281002	012112502-0002					
EPA 6010D	Chromium	10.2	mg/kg	2.7	11/10/21 15:27	
EPA 6010D	Iron	722	mg/kg	27.5	11/10/21 15:27	
EPA 6010D	Lead	8.7	mg/kg	1.4	11/10/21 15:27	
EPA 6010D	Manganese	5.8	mg/kg	4.1	11/10/21 15:27	
EPA 6010D	Zinc	10400	mg/kg	5.5	11/10/21 15:27	
ASTM D2216-05M	Percent Moisture	10.2	%	0.10	11/04/21 16:01	
70193281003	012112502-0003					
EPA 6010D	Iron	342	mg/kg	24.4	11/10/21 15:29	
EPA 6010D	Lead	11.2	mg/kg	1.2	11/10/21 15:29	
EPA 6010D	Manganese	4.1	mg/kg	3.7	11/10/21 15:29	
EPA 6010D	Zinc	12200	mg/kg	4.9	11/10/21 15:29	
ASTM D2216-05M	Percent Moisture	3.1	%	0.10	11/04/21 16:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 012112502

Pace Project No.: 70193281

Sample: 012112502-0001 **Lab ID: 70193281001** Collected: 11/01/21 09:45 Received: 11/03/21 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Melville									
Arsenic	<2.7	mg/kg	2.7	1.3	5	11/09/21 16:00	11/10/21 15:35	7440-38-2	
Cadmium	<0.67	mg/kg	0.67	0.076	5	11/09/21 16:00	11/10/21 15:35	7440-43-9	
Chromium	<2.7	mg/kg	2.7	1.1	5	11/09/21 16:00	11/10/21 15:35	7440-47-3	
Iron	732	mg/kg	26.8	4.5	5	11/09/21 16:00	11/10/21 15:35	7439-89-6	
Lead	8.5	mg/kg	1.3	0.69	5	11/09/21 16:00	11/10/21 15:35	7439-92-1	
Manganese	6.1	mg/kg	4.0	1.3	5	11/09/21 16:00	11/10/21 15:35	7439-96-5	
Selenium	<2.7	mg/kg	2.7	1.6	5	11/09/21 16:00	11/10/21 15:35	7782-49-2	
Zinc	11300	mg/kg	5.4	3.3	5	11/09/21 16:00	11/10/21 15:35	7440-66-6	
7471 Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Pace Analytical Services - Melville									
Mercury	<0.034	mg/kg	0.034	0.022	1	11/09/21 16:05	11/10/21 10:15	7439-97-6	
Percent Moisture									
Analytical Method: ASTM D2216-05M									
Pace Analytical Services - Melville									
Percent Moisture	9.7	%	0.10	0.10	1		11/04/21 16:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 012112502

Pace Project No.: 70193281

Sample: 012112502-0002 **Lab ID: 70193281002** Collected: 11/01/21 10:30 Received: 11/03/21 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Melville									
Arsenic	<2.7	mg/kg	2.7	1.3	5	11/09/21 16:00	11/10/21 15:27	7440-38-2	
Cadmium	<0.69	mg/kg	0.69	0.078	5	11/09/21 16:00	11/10/21 15:27	7440-43-9	
Chromium	10.2	mg/kg	2.7	1.1	5	11/09/21 16:00	11/10/21 15:27	7440-47-3	
Iron	722	mg/kg	27.5	4.6	5	11/09/21 16:00	11/10/21 15:27	7439-89-6	
Lead	8.7	mg/kg	1.4	0.71	5	11/09/21 16:00	11/10/21 15:27	7439-92-1	
Manganese	5.8	mg/kg	4.1	1.3	5	11/09/21 16:00	11/10/21 15:27	7439-96-5	
Selenium	<2.7	mg/kg	2.7	1.6	5	11/09/21 16:00	11/10/21 15:27	7782-49-2	
Zinc	10400	mg/kg	5.5	3.4	5	11/09/21 16:00	11/10/21 15:27	7440-66-6	
7471 Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Pace Analytical Services - Melville									
Mercury	<0.031	mg/kg	0.031	0.020	1	11/09/21 16:05	11/10/21 10:18	7439-97-6	
Percent Moisture									
Analytical Method: ASTM D2216-05M									
Pace Analytical Services - Melville									
Percent Moisture	10.2	%	0.10	0.10	1		11/04/21 16:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 012112502

Pace Project No.: 70193281

Sample: 012112502-0003 **Lab ID: 70193281003** Collected: 11/01/21 11:15 Received: 11/03/21 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Melville									
Arsenic	<2.4	mg/kg	2.4	1.2	5	11/09/21 16:00	11/10/21 15:29	7440-38-2	
Cadmium	<0.61	mg/kg	0.61	0.069	5	11/09/21 16:00	11/10/21 15:29	7440-43-9	
Chromium	<2.4	mg/kg	2.4	0.99	5	11/09/21 16:00	11/10/21 15:29	7440-47-3	
Iron	342	mg/kg	24.4	4.1	5	11/09/21 16:00	11/10/21 15:29	7439-89-6	
Lead	11.2	mg/kg	1.2	0.63	5	11/09/21 16:00	11/10/21 15:29	7439-92-1	
Manganese	4.1	mg/kg	3.7	1.2	5	11/09/21 16:00	11/10/21 15:29	7439-96-5	
Selenium	<2.4	mg/kg	2.4	1.4	5	11/09/21 16:00	11/10/21 15:29	7782-49-2	
Zinc	12200	mg/kg	4.9	3.0	5	11/09/21 16:00	11/10/21 15:29	7440-66-6	
7471 Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Pace Analytical Services - Melville									
Mercury	<0.031	mg/kg	0.031	0.020	1	11/09/21 16:05	11/10/21 10:19	7439-97-6	
Percent Moisture									
Analytical Method: ASTM D2216-05M									
Pace Analytical Services - Melville									
Percent Moisture	3.1	%	0.10	0.10	1		11/04/21 16:02		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 012112502

Pace Project No.: 70193281

QC Batch: 232505

Analysis Method: EPA 7471B

QC Batch Method: EPA 7471B

Analysis Description: 7471 Mercury

Laboratory:

Pace Analytical Services - Melville

Associated Lab Samples: 70193281001, 70193281002, 70193281003

METHOD BLANK: 1172808

Matrix: Solid

Associated Lab Samples: 70193281001, 70193281002, 70193281003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.029	0.029	0.019	11/10/21 10:12	

LABORATORY CONTROL SAMPLE: 1172809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.15	0.16	103	80-120	

MATRIX SPIKE SAMPLE: 1172810

Parameter	Units	70193281001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	<0.034	0.17	0.18	99	80-120	

SAMPLE DUPLICATE: 1172811

Parameter	Units	70193281001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/kg	<0.034	<0.033		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 012112502

Pace Project No.: 70193281

QC Batch: 232567

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050B

Analysis Description: 6010D MET

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70193281001, 70193281002, 70193281003

METHOD BLANK: 1173122

Matrix: Solid

Associated Lab Samples: 70193281001, 70193281002, 70193281003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<0.49	0.49	0.23	11/10/21 14:49	
Cadmium	mg/kg	<0.12	0.12	0.014	11/10/21 14:49	
Chromium	mg/kg	<0.49	0.49	0.20	11/10/21 14:49	
Iron	mg/kg	<4.9	4.9	0.82	11/10/21 14:49	
Lead	mg/kg	<0.24	0.24	0.13	11/10/21 14:49	
Manganese	mg/kg	<0.73	0.73	0.24	11/10/21 14:49	
Selenium	mg/kg	<0.49	0.49	0.29	11/10/21 14:49	
Zinc	mg/kg	<0.98	0.98	0.61	11/10/21 14:49	

LABORATORY CONTROL SAMPLE: 1173123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	157	126	80	73-105	
Cadmium	mg/kg	125	88.0	70	63-94	
Chromium	mg/kg	70.7	53.5	76	69-102	
Iron	mg/kg	15000	11600	78	54-130	
Lead	mg/kg	57.2	54.0	94	82-116	
Manganese	mg/kg	541	412	76	67-101	
Selenium	mg/kg	41.7	33.4	80	66-104	
Zinc	mg/kg	216	168	78	68-104	

MATRIX SPIKE SAMPLE: 1173125

Parameter	Units	70193277001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	<2.4	24.2	22.5	88	75-125	
Cadmium	mg/kg	<0.60	24.2	22.6	93	75-125	
Chromium	mg/kg	<2.4	24.2	23.0	95	75-125	
Iron	mg/kg	25.2	605	571	90	75-125	
Lead	mg/kg	7.0	24.2	27.3	84	75-125	
Manganese	mg/kg	<3.6	24.2	23.0	92	75-125	
Selenium	mg/kg	<2.4	24.2	23.3	92	75-125	
Zinc	mg/kg	22.7	24.2	31.9	38	75-125	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 012112502

Pace Project No.: 70193281

SAMPLE DUPLICATE: 1173124

Parameter	Units	70193277001 Result	Dup Result	RPD	Max RPD	Qualifiers
Arsenic	mg/kg	<2.4	<2.4		20	
Cadmium	mg/kg	<0.60	<0.61		20	
Chromium	mg/kg	<2.4	<2.4		20	
Iron	mg/kg	25.2	26.7	6	20	
Lead	mg/kg	7.0	6.1	15	20	
Manganese	mg/kg	<3.6	<3.6		20	
Selenium	mg/kg	<2.4	<2.4		20	
Zinc	mg/kg	22.7	43.0	62	20	D6

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QUALITY CONTROL DATA

Project: 012112502

Pace Project No.: 70193281

QC Batch: 232032

Analysis Method: ASTM D2216-05M

QC Batch Method: ASTM D2216-05M

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70193281001, 70193281002, 70193281003

SAMPLE DUPLICATE: 1170350

Parameter	Units	70192726001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	78.5	79.2	1	20	

SAMPLE DUPLICATE: 1170629

Parameter	Units	70192726002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.2	17.8	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 012112502
Pace Project No.: 70193281

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 012112502

Pace Project No.: 70193281

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70193281001	012112502-0001	EPA 3050B	232567	EPA 6010D	232669
70193281002	012112502-0002	EPA 3050B	232567	EPA 6010D	232669
70193281003	012112502-0003	EPA 3050B	232567	EPA 6010D	232669
70193281001	012112502-0001	EPA 7471B	232505	EPA 7471B	232733
70193281002	012112502-0002	EPA 7471B	232505	EPA 7471B	232733
70193281003	012112502-0003	EPA 7471B	232505	EPA 7471B	232733
70193281001	012112502-0001	ASTM D2216-05M	232032		
70193281002	012112502-0002	ASTM D2216-05M	232032		
70193281003	012112502-0003	ASTM D2216-05M	232032		

REPORT OF LABORATORY ANALYSIS

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EMSL Analytical, Inc. Environmental Chemistry Lab Service 200 Route 130 North, Cinnaminson, NJ 08077 TEL: (856) 858-4800 FAX: (856) 786-5974		Chain of Custody / Analysis Request Form Print ALL Information. Incomplete chain of custody could result in the delay of analysis.		EMSL Project # 012112502 Account Rep: ENVI54 Indicate State where samples were collected: <u>MA</u>															
REPORT RESULTS TO: Name: Debbie Kreider 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: dkreider@emsl.com talbert@emsl.com		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: <u>3</u>		Turnaround Time – 10 Business Days Pace-Long Island 575 Broadhollow Road Melville, NY 11747 PROJECT NAME: Date of Sample Shipment: 11/2/2021															
Sampled by: (Signature) _____		Matrix		Preservative		Sampling		List Method and Test Needed											
Lab Sample Number	Client Sample ID	Comp	Grab	WASTE WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO3	Na2S2O3	ICE	DATE	TIME	Metals by ICP				
1. 012112502-0001								X					11/1	09:45am	X				
2. 012112502-0002								X					11/1	10:30am	X				
3. 012112502-0003								X					11/1	11:15am	X				
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			
Released By Signature	Date & Time Released	Delivery Method		Received By Signature	Agency	Date & Time Received	Condition Noted												
Barbara Talbert	11/2/2021	FedEx		[Signature]	Free I.T.	11/2/21 10:00													
Please indicate reporting requirements: ☐ 1. Results Only ☒ 2. Results and QC ☐ 3. Reduced Deliverables ☐ 4. Disk Deliverable ☐ 5. Other _____																			
Comments: Please analyze for As, Cd, Cr, Pb, Fe, Mn, Se, Zn and Hg																			

WO#: 70193281



70193281

Pace Analytical®

Client Name:

Proje

PM: SSB

Due Date: 11/10/21

EMSL

CLIENT: EMSL-NJ

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 2856 4261 9601

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals intact: ☐ Yes ☒ No ☐ N/APacking Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ Ziploc ☐ None ☐ OtherThermometer Used: ~~TH091~~ TH176 Correction Factor: +0.1

Cooler Temperature(°C): 17.5 Cooler Temperature Corrected(°C): 17.6

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents: MW 11/3/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ NoDid samples originate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☒ Yes	☐ No		1.
Chain of Custody Filled Out:	☒ Yes	☐ No		2.
Chain of Custody Relinquished:	☒ Yes	☐ No		3.
Sampler Name & Signature on COC:	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☒ No		6.
Rush Turn Around Time Requested:	☐ Yes	☒ No		7.
Sufficient Volume: (Triple volume provided for I)	☒ Yes	☐ No		8.
Correct Containers Used:	☒ Yes	☐ No		9.
-Pace Containers Used:	☒ Yes	☐ No		
Containers Intact:	☒ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☒ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	☒ Yes	☐ No		12.
-Includes date/time/ID/ Matrix: SL-175 OIL				
All containers needing preservation have been checked?	☐ Yes	☐ No	☐ N/A	13. ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with method recommendation?				
(HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).				
Per Method, VOA pH is checked after analysis				
Samples checked for dechlorination:	☐ Yes	☐ No	☐ N/A	14. Initial when completed: Lot # of added preservative: Date/Time preservative added:
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
SM 4500 CN samples checked for sulfide?	☐ Yes	☐ No	☐ N/A	15. Positive for Sulfide? Y N
Lead Acetate Strips Lot #				
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☐ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☐ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:

012112502



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

CHAIN-OF-CUSTODY RECORD

41779

PROJECT NAME

PROJECT LOCATION

PROJECT NUMBER

LABORATORY

Needham Crumb Rubber Needham, MA

2008 1266.B20

EMSL (NJ)

REPORT TO: Daniel Lafrance (dlafrance@fando.com)

INVOICE TO: "

P.O. NO.: 160920081266.B20

Sampler's Signature: *[Signature]* Date: 11/01/21

Source Codes: MW=Monitoring Well PW=Portable Water T=Treatment Facility S=Soil B=Sediment
SW=Surface Water ST=Stormwater W=Waste A=Air C=Concrete

X=Other Crumb rubber

Item No.	Transfer Check	Sample Number	Source Code	Date Sampled	Time Sampled
1	1	1609211101-01	X	11/01/21	09:45
2	2	1609211101-02	X	11/01/21	10:30
3	3	1609211101-03	X	11/01/21	11:15

Analysis Request	Full VOC list by TO-15	Full SVOC list by 8270 and 625	Metals (As, Cd, Cr, Pb, Fe, Mn, Hg, Se, Zn) by 6010/7470
Soil VOA Vial, □ methanol	□ Na ₂ SO ₄	□ HCl	□ H ₂ SO ₄
Soil VOA Vial, □ water	□ 250 ml	□ 500	□ 1000 ml
Glass Soil Container (4 oz)	□ 250 ml	□ 500	□ 1000 ml
Other:	□ 250 ml	□ 500	□ 1000 ml
Water VOA Vial, □ As is	□ 250 ml	□ 500	□ 1000 ml
Glass Amber () ml	□ 250 ml	□ 500	□ 1000 ml
Plastic - As is, □ 250 ml	□ 250 ml	□ 500	□ 1000 ml
Plastic - H ₂ SO ₄ , □ 250 ml	□ 250 ml	□ 500	□ 1000 ml
Plastic - HNO ₃ , 250 ml	□ 250 ml	□ 500	□ 1000 ml
Plastic - NaOH, 250 ml	□ 250 ml	□ 500	□ 1000 ml

EMSL
Contact: Jeremy Bish
Refer to email correspondence for analytical request/quote

Relinquished By: *[Signature]*

Accepted By: *[Signature]*

Charge Exceptions: □ CT Tax Exempt □ QA/QC □ Other

Reporting and Detection Limit Requirements: □ RCP Deliverables □ MCP CAM Cert.

Additional Comments: Full for same parameter list as req previously in reports

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

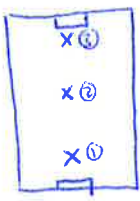
Appendix C

Field Data Sheets

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B20	
Sample#: 1609211101-01	<u>Sample Location ID</u> <i>Founder's field</i>	

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



Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>11/01/2021</u> Time: <u>09:45</u> Sampler: <u>WT</u> Weather: Ambient Temperature: <u>70.1°F</u> } <i>Ts1</i> Relative Humidity: <u>59.1%</u> } <i>IAQ - Cak</i> Barometric Pressure: <u>29.86 inHg</u> Sampling Device: Auger / Core Sampler / Shovel / <u>Trowel</u> / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / <i>3-point</i> / Other _____ PID Reading (ppm): <u>0.8</u>	4oz Amber	3	

Description Data

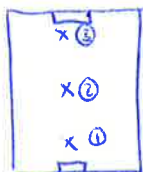
Generic Sample Description: Crumb rubber, *moist.*

Comments: ② 58.1°F | ③ 59.6°F
 63.3% RH | 61.9% RH

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B20	
Sample #: 1609211101- 02	<u>Sample Location ID</u> Brock Field	

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



Sample Data

Sample Data	Container	Quantity	Preservative
Date: 11/01/2021 Time: 10:30 Sampler: WT Weather: Ambient Temperature: 61.9°F } TSI IAQ calc. Relative Humidity: 56% RH } Barometric Pressure: 29.86 inHg Sampling Device: Auger / Core Sampler / Shovel / <u>Trowel</u> / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / 3-point Other _____ PID Reading (ppm): 0.7	4oz Amber	3	---

Description Data

Generic Sample Description: Crumb rubber, dry moist
--

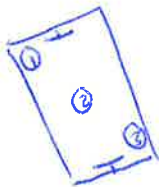
Comments:

② 66.3°F ③ 58.1°F
 55.8% RH 53.9% RH

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B20	
Sample#: 1609211101- 03	<u>Sample Location ID</u> Memorial Park	

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



Sample Data

Sample Data	Container	Quantity	Preservative
Date: 11/01/2021 Time: 11:15 Sampler: WT Weather: Ambient Temperature: 63°F Relative Humidity: 39.6% RH Barometric Pressure: 29.86 inHg (Local Conditions.com) Sampling Device: Auger / Core Sampler / Shovel / <u>Trowel</u> / Other Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other PID Reading (ppm): 0.9	4oz Amber	3	

Description Data

Generic Sample Description: Crumb rubber, Dry

Comments:

② ~~66.8°F~~
 64.5°F
 31.5% RH
 ③ 66.7°F
 32.2% RH

Crumb Rubber Monitoring Results

Memorial Park & DeFazio Park
Needham, Massachusetts

Needham Health Department

Needham, Massachusetts

August 11, 2020



FUSS & O'NEILL

Fuss & O'Neill, Inc.
108 Myrtle Street, Suite 502
Quincy, MA 02171



August 11, 2020

Mr. Timothy McDonald
Director of Public Health
Needham Health Department
1471 Highland Avenue
Needham, MA 02492

RE: Crumb Rubber Monitoring Results - June 2020
Memorial and DeFazio Parks
Needham, Massachusetts
Fuss & O'Neill Project No. 20081266.B10

Dear Mr. McDonald:

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.

If you should have any questions regarding the contents of this report please do not hesitate to contact me at (860) 646-2469 ext. 4538. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Daniel LaFrance, PE, LSP
Project Manager

108 Myrtle Street
Suite 502
Quincy, MA
02171
t 617.282.4675
800.286.2469
f 617.481.5885

/rs

Enclosure

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California
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Vermont

F:\P2008\1266\B10\Deliverables\Report\smd_CrumbRubberSampling_20200811.docx

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1. Summary of Crumb Rubber Monitoring Results
2. Real-Time Measurements

Figures

End of Report

1. Site Plan – Memorial Park
2. Site Plan – DeFazio Park

Appendices

End of Report

- APPENDIX A - LABORATORY ANALYTICAL REPORTS & CHAIN-OF-CUSTODY FORMS
APPENDIX B - SAMPLING EQUIPMENT
APPENDIX C - FIELD DATA SHEETS

1 Introduction and Background

Fuss & O'Neill, Inc. (Fuss & O'Neill) was retained by the Needham Health Department 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 for laboratory analysis at Memorial Park (Needham High School Field, 92 Rosemary Street) and DeFazio Park (Brock Field and Founders Field, 380 Dedham Avenue). The data were compared to toxicity reference data from the Massachusetts Department of Environmental Protection (MassDEP) to evaluate potential health-related impacts.

On June 4, 2020, Ms. Samantha DeVincentis of Fuss & O'Neill performed the crumb rubber sampling for the Needham Health Department (the "Client") in accordance with our proposal dated May 20, 2020.

2 Methodology and Scope of Testing

On June 4, 2020, Fuss & O'Neill and Client personnel accessed 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 a disposable trowel. The composite samples were comprised of crumb rubber collected from the two ends and the middle of each artificial turf athletic field. Diagrams depicting sample locations are included as *Figure 1* (Memorial Park) and *Figure 2* (DeFazio Park). Samples were collected from the Needham High School Field in Memorial Park, and from Founders Field and Brock Field in DeFazio Park.

The composite samples were submitted to EMSL Analytical Laboratory in Cinnaminson, New Jersey (EMSL). The crumb rubber was analyzed for the following target analytes:

- Trace metals by Environmental Protection Agency (EPA) Methods 6010/7471 (inductively coupled plasma atomic emission spectrometry [ICP-AES] and mercury by manual cold-vapor technique, respectively).
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270
- Volatile organic compounds (VOCs) by EPA Method TO-15. The VOCs were collected from a "closed container" test, with an air headspace over a 10-gram sample of the crumb rubber heated to 150°F for one hour. A "tentatively identified compound" (TIC) search was performed in connection with the analytical data.

The purpose of the closed container VOC test was to determine what concentrations 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. VOCs were measured using an Ion Science Tiger Photoionization Detector (PID). A TSI Q-Trak Air Quality Monitor was used to record ambient temperature, relative humidity (RH), and carbon dioxide (CO₂). Refer to *Appendix B* for a list of sampling equipment, and *Table 2* for real-time measurements.

3 Results

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

- Ethanol
- Isopropyl alcohol
- Acetone
- Methyl isobutyl ketone (MIBK)
- Methylene chloride

Furthermore, 2-methyl propene, acetaldehyde and one unknown compound were identified as TICs in the analyses.

Iron, lead and zinc were each detected in all three samples, while manganese was detected in the two samples collected from Brock and Founders fields. Mercury, arsenic, cadmium, chromium, and selenium were not detected in any sample.

Multiple PAHs, as well as bis(2-ethylhexyl)phthalate, were identified in each of the rubber samples.

The field readings generally indicated that VOCs were either not detected or detected at the instrument reporting limit (0.1 parts per million by volume, ppmv). Readings less than 1.0 ppmv may occur as a result of moisture in ambient air. The ambient relative humidity at the time of sampling was low (20%).

4 Data Evaluation

The Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) establishes soil standards for a variety of uses based on publically-available toxicity data for a range of compounds, including VOCs, SVOCs, and metals. The numerical standards and their derivations are publically-available.¹ MassDEP generally establishes these standards based on four criteria:

- Publically-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 levels (PQLs), i.e. levels which analytical laboratories can reliably quantify.

In its toxicity calculations for S-1 soil (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

¹ MassDEP, December 2017, "MCP Numerical Standards." <https://www.mass.gov/doc/mcp-numerical-standards-derivation/download>, accessed June 2020.

MassDEP's published toxicity levels. These values are included on *Table 1*. Where MassDEP has not published toxicity values, Fuss & O'Neill consulted the EPA "regional screening levels," (RSLs) which consist of similarly-derived guidance values for a range of compounds used for screening contaminant concentrations on sites evaluated under the Superfund program.² 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.

With the exceptions of ethanol and 2-methyl propene, MassDEP and/or EPA values were available for all detected compounds. As noted on *Table 1*, zinc was detected in two samples at concentrations equal to the MassDEP screening value, while the remaining concentrations were less than the respective screening levels. The exposure levels assume continuous high-contact exposure (five days per week, 30 weeks per year) over a multiple-year duration and are therefore extremely conservative with regard to the actual exposures for users of the field.

5 Conclusions

Fuss & O'Neill collected field and analytical data to characterize the crumb rubber at three fields in Needham, Massachusetts in June 2020. The analytical results were compared to MassDEP and EPA risk-based guidance levels for soil, to evaluate potential health risks associated with the use of the crumb rubber media on these athletic fields. The concentrations of zinc in two of three samples equaled the MassDEP threshold value, which is derived from an assumption of high-intensity exposure for a multi-year duration on a consistent basis. The remaining reported concentrations of metals, VOCs and SVOCs were less than the threshold values.

² EPA, May 2020. "Regional Screening Levels – Generic Tables." <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>, accessed June 2020.

Tables

Table 1
Summary of Crumb Rubber Monitoring Results – June 4, 2020

Analyte	Analytical Results			Risk-Based Levels
	Memorial Park	DeFazio Park		
	Needham High School 1543200604-03	Brock Field 1543200604-01	Founders Field 1543200604-02	
Semi-volatile organic compounds – dry weight (mg/kg) by method 3546/8270D				
Acenaphthene	ND <0.091	ND <0.098	ND <0.097	4,300
Acenaphthylene	ND <0.091	ND <0.098	ND <0.097	2,100
Anthracene	ND <0.091	0.23	0.25	21,000
Benzo(a)anthracene	ND <0.091	0.81	0.79	7.2
Benzo(a)pyrene	0.38	0.50	0.57	0.72
Benzo(b)fluoranthene	0.59	0.82	0.81	7.2
Benzo(g,h,i)perylene	0.57	0.88	0.88	2,100
Benzo(k)fluoranthene	0.22	0.29	0.37	72
Bis (2-ethylhexyl) phthalate	7.2	8.8	3.9	9.3
Chrysene	1.4	2.2	2.3	72
Dibenz(a,h)anthracene	ND<0.091	ND<0.098	ND<0.097	0.72
Fluoranthene	3.9	4.9	4.8	2,800
Fluorene	ND<0.091	ND<0.098	ND<0.097	2,800
Indeno(1,2,3-cd)pyrene	0.16	0.22	0.22	72
Naphthalene	ND <0.091	ND <0.098	ND <0.097	1,400
Phenanthrene	1.2	1.8	1.7	2,100
Pyrene	9.2	13	12	2,100
Volatile organic compounds – vapor (mg / m³) Closed Container Test by method TO-15				
1-Propene, 2-methyl-	ND	0.037	0.080	NE
Acetaldehyde	ND	0.018	ND	NE [1.3]
Acetone	0.12	0.19	0.13	0.8
Ethanol	0.30	0.26	0.11	NE
Isopropyl Alcohol	0.078	0.031	ND	NE [210]
4-Methyl-2-pentanone	0.80	0.91	0.70	3.00
Methylene Chloride	0.026	ND	ND	0.6

Table 1
Summary of Crumb Rubber Monitoring Results – June 4, 2020

Analyte	Analytical Results			Risk-Based Levels
	<u>Memorial Park</u>	<u>DeFazio Park</u>		
	Needham High School 1543200604-03	Brock Field 1543200604-01	Founders Field 1543200604-02	
Total Metals – dry weight (mg / kg) by methods 3050B / 6010D & 7471B				
Arsenic	ND <4.7	ND <4.9	ND <4.9	2.2
Cadmium	ND <0.93	ND <0.98	ND <0.99	71
Chromium	ND<2.3	ND<2.4	ND<2.5	130
Iron	290	1,400	1,200	NE [55,000]
Lead	14	12	7.9	110
Manganese	ND<3.5	9.6	9.2	NE [1,800]
Mercury	ND <0.050	ND<0.050	ND <0.049	18
Selenium	ND <4.7	ND<4.9	ND <4.9	380
Zinc	13,000	12,000	13,000	13,000

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.

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

VOCs, SVOCs, or TICs were only reported if detected in at least one sample, except EPA-designated Group 1 PAHs reported as a complete class.

Table 2
Real-Time Measurements, Needham Crumb Rubber Sampling – June 4, 2020

Location	VOC (ppm)	Temperature (°F)	RH (%)	CO ₂ (ppm)
Needham High School (HS)	0.0	95.0	13.9	399
Brock Field (D1)	0.1	97.8	21.0	408
Founders Field (D2)	0.0	95.0	19.0	407

Figures



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



FUSS & O'NEILL

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

NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 MEMORIAL PARK
 92 ROSEMARY ROAD

NEEDHAM

MASSACHUSETTS

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

FIGURE 1



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

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NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 DEFAZIO PARK
 380 DEDHAM ROAD

NEEDHAM

MASSACHUSETTS

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

FIGURE 2

Appendix A

Laboratory Analytical Reports & Chain of Custody Forms

**EMSL ANALYTICAL, INC.**

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

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Laboratory Report- Sample Summary

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
492000386-0001	1543200604-01	6/4/2020	11:13 AM
492000386-0002	1543200604-02	6/4/2020	11:38 AM
492000386-0003	1543200604-03	6/4/2020	12:14 PM
492000386-BKG	Laboratory Background	6/19/2020	

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

Report Date
6/22/2020

Report Revision
R0

Revision Comments
Initial Report

Owen McKenna, National Organics 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. When the information supplied by the customer can affect the validity of the results, it will be noted on the report.

**EMSL ANALYTICAL, INC.**

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

EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Case Narrative

Method Reference

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

Column

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

Concentrator Traps:

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

Gas Standards:

Certified Gas standards were used for all analyses.

Sample Volumes:

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

Holding Times:

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

Sampling Pressures:

All samples were received at acceptable pressure/vacuum unless listed below.

NA Bulk samples

Sample Dilutions:

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

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

Initial Calibration

All Initial Calibration criteria met method specification.

Initial Calibration Verification Standard (ICVS)- Second Source

ICVS met method specification with 70-130% recovery for 100% of compounds.

Laboratory Control Sample (LCS)

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

**EMSL ANALYTICAL, INC.**

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Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Case Narrative

Continuing Calibration Verification Standard (CCVS)

CCVS met method specification with all compounds within 30% deviation.

Ending Calibration Verification Standard (ECVS)

ECVS met method specification with all compounds within 30% deviation.

Method Blanks (MB)

Method Blank met method specification.

Reporting Limit Laboratory Control Samples (RL LCS)

RL LCS met method specification with 90% of compounds within the 60-140% recovery range. Individual compounds outside of the recovery range may be listed below.

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

The following data qualifiers that may have been reported with the data.

ND- Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.

U- Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.

J (Target)- Concentration estimated between Reporting Limit and MDL.

J- Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed

B- Compound found in associated method blank as well as in the sample.

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

D- Compound reported from additional diluted analysis.

N- indicates presumptive evidence of a compound based on library search match.

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

Owen McKenna, National Organics Manager
or other approved signatory

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0001
CUSTOMER SAMPLE ID: 1543200604-01

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8854.D	JAR110619A	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	140	5.0		260	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	13	5.0		31	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	79	5.0		190	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0001
CUSTOMER SAMPLE ID: 1543200604-01

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8854.D	JAR110619A	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	220	5.0		910	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			450	ppbv		1400	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

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Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 11:13
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8854.D	JAR110619A	25 cc	10

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
1-Propene, 2-methyl-	000115-11-7	56	16	JN	37	5.702	
Acetaldehyde	000075-07-0	44	10	JN	18	6.18	
Total TIC Concentrations:			26	ppbv	55	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0002
CUSTOMER SAMPLE ID: 1543200604-02

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 11:38
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8855.D	JAR8A	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	61	5.0		110	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	ND	5.0		ND	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	56	5.0		130	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	

7 of 16

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0002
CUSTOMER SAMPLE ID: 1543200604-02

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected: 06/04/2020 11:38
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8855.D	JAR8A	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	170	5.0		700	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			290	ppbv		940	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.9

Spike

10

Recovery

99%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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to15lab@EMSL.com | <http://www.EMSL.com>

EMSL ORDER ID: 492000386

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492000386-0002

CUSTOMER SAMPLE ID: 1543200604-02

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 11:38
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8855.D	JAR8A	25 cc	10

Tentatively Identified Compound Results Summary

Tentatively Identified Compounds	CAS#	MW(1)	Result ppbv	Q	Result ug/m3	Retention Time	Comments
unknown		92	23	JN	86	5.097	
1-Propene, 2-methyl-	000115-11-7	56	35	JN	80	5.71	
Total TIC Concentrations:			58	ppbv	170	ug/m3	

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

**EMSL ANALYTICAL, INC.**

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0003
CUSTOMER SAMPLE ID: 1543200604-03

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 12:14
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/20/2020	TP	J8856.D	JAR1OLD	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	160	5.0		300	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	32	5.0		78	12	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	50	5.0		120	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	7.4	5.0		26	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	

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Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-0003
CUSTOMER SAMPLE ID: 1543200604-03

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected: 06/04/2020 12:14
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/20/2020	TP	J8856.D	JAR1OLD	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	190	5.0		800	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			440	ppbv		1300	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.8

Spike

10

Recovery

98%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

EMSL ANALYTICAL, INC.

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EMSL ORDER ID: 492000386

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492000386-0003

CUSTOMER SAMPLE ID: 1543200604-03

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected: 06/04/2020 12:14
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/20/2020	TP	J8856.D	JAR1OLD	25 cc	10

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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

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EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-000B
CUSTOMER SAMPLE ID: Lab Background

Attention: Dan LaFrance
 Fuss & O'Neill, Inc.
 146 Hartford Road
 Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected:
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8853.D	JARNEWZ	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	ND	10		ND	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethane)	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	85	5.0		160	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	40	5.0		100	12	
Freon 113(1,1,2-Trichlorotrifluoroethane)	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	10	5.0		25	12	
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	9.1	5.0		32	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	ND	5.0		ND	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	ND	5.0		ND	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	ND	5.0		ND	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	ND	5.0		ND	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	ND	5.0		ND	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	

13 of 16

**EMSL ANALYTICAL, INC.**

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Attention: Dan LaFrance
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146 Hartford Road
Manchester, CT 06040

Phone: 860-646-2469
Email: dlafrance@fando.com

EMSL ORDER ID: 492000386
EMSL CUSTOMER ID: ENVI54
EMSL SAMPLE ID: 492000386-000B
CUSTOMER SAMPLE ID: Lab Background

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Collected:
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8853.D	JARNEWZ	25 cc	10

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	ND	5.0		ND	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			140	ppbv		320	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

Qualifier Definitions**ND = Non Detect**

B = Compound also found in method blank.

E= Estimated concentration exceeding upper calibration range.

D= Result reported from diluted analysis.

J= Concentration estimated between Reporting Limit and MDL.

Method Reference

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

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EMSL ORDER ID: 492000386

EMSL CUSTOMER ID: ENVI54

EMSL SAMPLE ID: 492000386-000B

CUSTOMER SAMPLE ID: Lab Background

Attention: Dan LaFrance
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Customer PO: 20081266.B10
EMSL Project ID:
Project Name: Nedham Crumb Rubber - #20081266.B10

Phone: 860-646-2469
Email: dlafrance@fando.com

Collected:
Received: 06/07/2020 09:45
Analyzed: See Results
Reported: 6/22/2020

Analysis Initial	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
	06/19/2020	TP	J8853.D	JARNEWZ	25 cc	10

Tentatively Identified Compound Results Summary

[illegible]

Qualifier Definitions

(1) = If unknown, MW is assigned as equivalent Toluene (92) for ug/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.

Method Reference

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



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

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

Attn:

EMAIL

7/31/2020

Fuss & O'Neill, Inc.

146 Hartford Road

Manchester, CT 06040

Phone: (860) 646-2469

Fax:

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/5/2020. The results are tabulated on the attached data pages for the following client designated project:

Needham Crumb Rubber Needham, MA 20081266.B10

The reference number for these samples is EMSL Order #012005592. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

Report amended 07/31/2020 13:03:19 Replaces initial report from 06/19/2020 14:13:41

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

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EMSL Order: 012005592

CustomerID: ENVI54

CustomerPO:

ProjectID:

Attn: **EMAIL**
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax:
Received: 06/05/20 9:45 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-01 **Collected:** 6/4/2020 **Lab ID:** 012005592-0001
Brock 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4,5-Tetrachlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2,4-Trichlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dichlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dinitrobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dichlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dinitrobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dichlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dinitrobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Chloronaphthalene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Methylnaphthalene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,4,6-Tetrachlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,5,6-Tetrachlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4,5-Trichlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4,6-Trichlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dichlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dimethylphenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrotoluene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dichlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dinitrotoluene	ND	2000 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chloronaphthalene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylnaphthalene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylphenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitroaniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitrophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3,3'-Dichlorobenzidine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Chloroaniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Nitroaniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4,6-Dinitro-2-methylphenol	ND	2000 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Bromophenyl-phenylether	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloro-3-methylphenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloroaniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-01 **Collected:** 6/4/2020 **Lab ID:** 012005592-0001
 Brock 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	4-Chlorophenyl-phenylether	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3&4-Methylphenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitroaniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitrophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthene	ND	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthylene	ND	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acetophenone	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Aniline	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Anthracene	230	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Atrazine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzaldehyde	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzidine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)anthracene	810	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)pyrene	500	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(b)fluoranthene	820	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(g,h,i)perylene	880	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(k)fluoranthene	290	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzoic Acid	ND	2000 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzotriazole	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzyl Alcohol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Biphenyl	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethoxy)methane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethyl)ether	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroisopropyl)ether	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)adipate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)phthalate	7200	2900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bisphenol A	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Butylbenzylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Caprolactam	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Carbazole	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Chrysene	2200	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-butylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-hexylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-octylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dibenz(a,h)anthracene	ND	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-01
 Brock

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Dibenzofuran	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diethylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisobutyl phthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisodecyl phthalate	ND	4900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisononyl phthalate	ND	4900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dimethylphthalate	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluoranthene	4900	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluorene	ND	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobutadiene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorocyclopentadiene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachloroethane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Indeno(1,2,3-cd)pyrene	220	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Isophorone	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N,N-Dimethylformamide	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Decane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Docosane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Dodecane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Eicosane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Hexadecane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitroso-di-n-propylamine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodi-n-butylamine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiethylamine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodimethylamine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiphenylamine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosopyrrolidine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Octadecane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Tetracosane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Tetradecane	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Naphthalene	ND	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Nitrobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	o-Toluidine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorobenzene	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorophenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Phenanthrene	1800	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-01 **Collected:** 6/4/2020 **Lab ID:** 012005592-0001
 Brock 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Phenol	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyrene	13000	98 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyridine	ND	980 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
METALS					
Mercury by EPA 7471B	Mercury	ND	0.050 mg/Kg	6/18/2020 SW	06/18/20 13:33 SW
3050B/6010D	Arsenic	ND	4.9 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Cadmium	ND	0.98 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Chromium	ND	2.4 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Iron	1400	240 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Lead	12	2.4 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Manganese	9.6	3.7 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Selenium	ND	4.9 mg/Kg	6/11/2020 AM	06/12/20 17:04 DM
3050B/6010D	Zinc	12000 D	240 mg/Kg	6/11/2020 AM	06/15/20 12:46 DM

Client Sample Description 1543200604-02 **Collected:** 6/4/2020 **Lab ID:** 012005592-0002
 Founders 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4,5-Tetrachlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2,4-Trichlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dichlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dinitrobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dichlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dinitrobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dichlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dinitrobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Chloronaphthalene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Methylnaphthalene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,4,6-Tetrachlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,5,6-Tetrachlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4,5-Trichlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-02
 Founders

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	2,4,6-Trichlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dichlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dimethylphenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrotoluene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dichlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dinitrotoluene	ND	1900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chloronaphthalene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylnaphthalene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylphenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitroaniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitrophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3,3'-Dichlorobenzidine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Chloroaniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Nitroaniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4,6-Dinitro-2-methylphenol	ND	1900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Bromophenyl-phenylether	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloro-3-methylphenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloroaniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chlorophenyl-phenylether	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3&4-Methylphenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitroaniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitrophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthene	ND	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthylene	ND	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acetophenone	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Aniline	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Anthracene	250	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Atrazine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzaldehyde	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzidine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)anthracene	790	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)pyrene	570	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(b)fluoranthene	810	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

**EMSL Analytical, Inc.**

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EMSL Order: 012005592

CustomerID: ENVI54

CustomerPO:

ProjectID:

Attn: **EMAIL**
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 06/05/20 9:45 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-02
 Founders

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Benzo(g,h,i)perylene	880	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(k)fluoranthene	370	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzoic Acid	ND	1900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzotriazole	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzyl Alcohol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Biphenyl	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethoxy)methane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethyl)ether	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroisopropyl)ether	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)adipate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)phthalate	8800	2900 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bisphenol A	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Butylbenzylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Caprolactam	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Carbazole	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Chrysene	2300	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-butylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-hexylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-octylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dibenz(a,h)anthracene	ND	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dibenzofuran	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diethylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisobutyl phthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisodecyl phthalate	ND	4800 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisononyl phthalate	ND	4800 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dimethylphthalate	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluoranthene	4800	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluorene	ND	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobutadiene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorocyclopentadiene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachloroethane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Indeno(1,2,3-cd)pyrene	220	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Isophorone	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N,N-Dimethylformamide	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-02
 Founders

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	n-Decane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Docosane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Dodecane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Eicosane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Hexadecane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitroso-di-n-propylamine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodi-n-butylamine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiethylamine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodimethylamine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiphenylamine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosopyrrolidine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Octadecane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Tetracosane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Tetradecane	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Naphthalene	ND	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Nitrobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	o-Toluidine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorobenzene	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorophenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Phenanthrene	1700	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Phenol	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyrene	12000	97 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyridine	ND	970 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

METALS

Mercury by EPA 7471B	Mercury	ND	0.049 mg/Kg	6/18/2020 SW	06/18/20 13:34 SW
3050B/6010D	Arsenic	ND	4.9 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Cadmium	ND	0.99 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Chromium	ND	2.5 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Iron	1200	250 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Lead	7.9	2.5 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Manganese	9.2	3.7 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Selenium	ND	4.9 mg/Kg	6/11/2020 AM	06/12/20 17:24 DM
3050B/6010D	Zinc	13000 D	250 mg/Kg	6/11/2020 AM	06/15/20 12:50 DM

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146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
Fax:
Received: 06/05/20 9:45 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-03 **Collected:** 6/4/2020 **Lab ID:** 012005592-0003
Memorial 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	1,2,4,5-Tetrachlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2,4-Trichlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dichlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Dinitrobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,2-Diphenylhydrazine (as azobenzene)	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dichlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,3-Dinitrobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dichlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1,4-Dinitrobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Chloronaphthalene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	1-Methylnaphthalene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,4,6-Tetrachlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,3,5,6-Tetrachlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4,5-Trichlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4,6-Trichlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dichlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dimethylphenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,4-Dinitrotoluene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dichlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2,6-Dinitrotoluene	ND	1800 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chloronaphthalene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Chlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylnaphthalene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Methylphenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitroaniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	2-Nitrophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3,3'-Dichlorobenzidine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Chloroaniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3-Nitroaniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4,6-Dinitro-2-methylphenol	ND	1800 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Bromophenyl-phenylether	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloro-3-methylphenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Chloroaniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 06/05/20 9:45 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-03
 Memorial

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0003

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	4-Chlorophenyl-phenylether	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	3&4-Methylphenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitroaniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	4-Nitrophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthene	ND	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acenaphthylene	ND	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Acetophenone	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Aniline	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Anthracene	120	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Atrazine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzaldehyde	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzidine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)anthracene	470	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(a)pyrene	380	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(b)fluoranthene	590	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(g,h,i)perylene	570	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzo(k)fluoranthene	220	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzoic Acid	ND	1800 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzotriazole	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Benzyl Alcohol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Biphenyl	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethoxy)methane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroethyl)ether	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-chloroisopropyl)ether	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)adipate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bis(2-ethylhexyl)phthalate	3900	2700 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Bisphenol A	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Butylbenzylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Caprolactam	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Carbazole	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Chrysene	1400	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-butylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-hexylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Di-n-octylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dibenz(a,h)anthracene	ND	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

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Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-03
 Memorial

Collected: 6/4/2020
 11:13:00 AM

Lab ID: 012005592-0003

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Dibenzofuran	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diethylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisobutyl phthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisodecyl phthalate	ND	4600 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Diisononyl phthalate	ND	4600 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Dimethylphthalate	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluoranthene	3900	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Fluorene	ND	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorobutadiene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachlorocyclopentadiene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Hexachloroethane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Indeno(1,2,3-cd)pyrene	160	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Isophorone	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N,N-Dimethylformamide	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Decane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Docosane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Dodecane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Eicosane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Hexadecane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitroso-di-n-propylamine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodi-n-butylamine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiethylamine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodimethylamine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosodiphenylamine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Nitrosopyrrolidine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Octadecane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	n-Tetracosane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	N-Tetradecane	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Naphthalene	ND	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Nitrobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	o-Toluidine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorobenzene	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pentachlorophenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Phenanthrene	1200	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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

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

EMSL Order: 012005592

CustomerID: ENVI54

CustomerPO:

ProjectID:

Attn: **EMAIL**
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Phone: (860) 646-2469
 Fax:
 Received: 06/05/20 9:45 AM

Project: **Needham Crumb Rubber Needham, MA 20081266.B10****Analytical Results**

Client Sample Description 1543200604-03 **Collected:** 6/4/2020 **Lab ID:** 012005592-0003
 Memorial 11:13:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
GCMS-SVOA					
3546/8270D	Phenol	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyrene	9200	91 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
3546/8270D	Pyridine	ND	910 µg/Kg	6/10/2020 AC	06/10/20 0:00 AC
METALS					
Mercury by EPA 7471B	Mercury	ND	0.050 mg/Kg	6/18/2020 SW	06/18/20 13:36 SW
3050B/6010D	Arsenic	ND	4.7 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Cadmium	ND	0.93 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Chromium	ND	2.3 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Iron	290	230 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Lead	14	2.3 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Manganese	ND	3.5 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Selenium	ND	4.7 mg/Kg	6/11/2020 AM	06/12/20 17:29 DM
3050B/6010D	Zinc	13000 D	230 mg/Kg	6/11/2020 AM	06/15/20 12:55 DM

Definitions:

MDL - method detection limit

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

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

RL - Reporting Limit (Analytical)

D - Dilution Sample required a dilution which was used to calculate final results



(866) 646-2469 • www.FandO.com

- ☐ 146 Hartford Road, Manchester, CT 06040
- ☐ 56 Quarry Road, Trumbull, CT 06611
- ☐ 1419 Richland Street, Columbia, SC 29201

☐ 80 Washington Street, Suite 301, Poughkeepsie, NY

☐ Other _____

CHAIN-OF-CUSTODY RECORD

42333

Turnaround

☐ 24-Hour* ☐ 72-Hour* ☐ Other _____ (days)
☐ 48-Hour* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME

PROJECT LOCATION

PROJECT NUMBER

LABORATORY

NEEDHAM CUMPS KURZER NEEDHAM, MA

2008/266.310

REPORT TO: DAN LAKEANCE (dlakeance@fundo.com)

INVOICE TO:

P.O. No.: 154329081266, B40

Sampler's Signature: [Signature] Date: 1-16-2014

Source Codes:
 MW=Monitoring Well
 SW=Surface Water
 X=Other
 PW=Potable Water
 ST=Stormwater
 T=Treatment Facility
 W=Waste
 A=Air
 S=Soil
 C=Concrete
 B=Sediment

X=Other CYMB RUBBER

Item No.	Transfer Check
1	2 3 4

Sample Number

Source
C-1

Date _____

Time

1	2	3
①	②	③

Page 1 of 1

Transfer	Relinquished By
----------	-----------------

Accepted By

Time

Charge Exceptions: ☐ CI Tax Exempt☐ Other: _____

1

1

Feed Ex

				R
			6/4/2013	

Reporting and Detection Limit Requirements

Reporting and Detection Limit Requirements: ☐ RCP Deliverables ☐ MCP CAM Cert.

3

split w/ TD-15 149615Bc

--	--	--	--

Additional Comments: *See at

Additional Comments: *See attached email for

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

--	--	--	--	--

METALS & CONCENTRATIONS

METALS of concern = Hg, As, Cd, Cr, Pb, Fe

METALS of concern = Hg, As, Cd, Cr, Pb, Fe, Mn, Se, Zn

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, & Carbon Dioxide	TSI Q-Trak Air Quality Monitor	Calibrated by Rental Company Verified Prior to Use

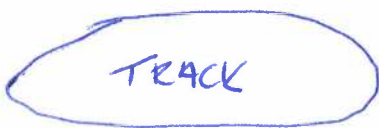
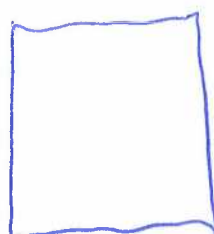
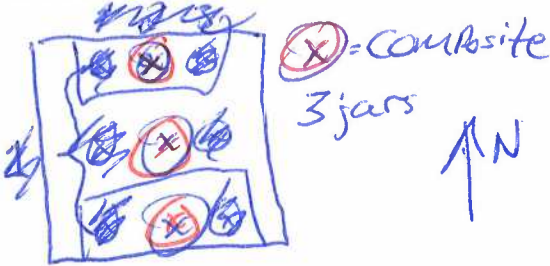
Appendix C

Field Data Sheets

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B10	
Sample#: 1543200604- 01	<u>Sample Location ID</u> BROCK	

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

 TRACK * See STP		 (X) = Composite 3 jars ↑ N
---	---	--

Sample Data

Sample Data		Container	Quantity	Preservative
Date: 06/04/2020	Time: 1113	4oz Amber	3	---
Sampler: SMD	Weather: 85°F			
Sampling Device: Auger / Core Sampler / Shovel / Trowel / Other Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other				

Description Data

Generic Sample Description: Crumb rubber
--

Comments:

TVOC 0.1 Temp 97.8°F RH 21.0% CO₂ 408ppm CO 1.0ppm

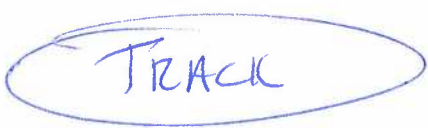
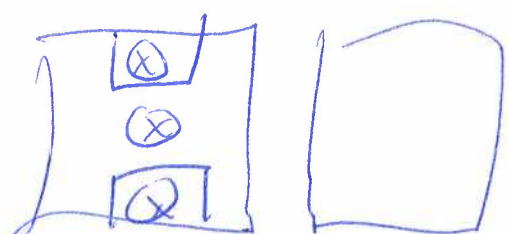
INSTRUMENTS

PID (TIGER MODEL # T-106040)
 Q-TRAK (7565X0720004)

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B10	
Sample#: 1543200604- 02	<u>Sample Location ID</u> FOUNDERS	

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



 (X) = Composite Sample
 ↑ N

Sample Data

Sample Data		Container	Quantity	Preservative
Date: 06/04/2020	Time: 1138	4oz Amber	3	---
Sampler: SMD	Weather: 85°F			
Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Trowel / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other _____				

Description Data

Generic Sample Description: Crumb rubber

Comments:

TVOC Temp RH CO2 CR
 0.0 95% 19.0% 407ppm 1.2ppm

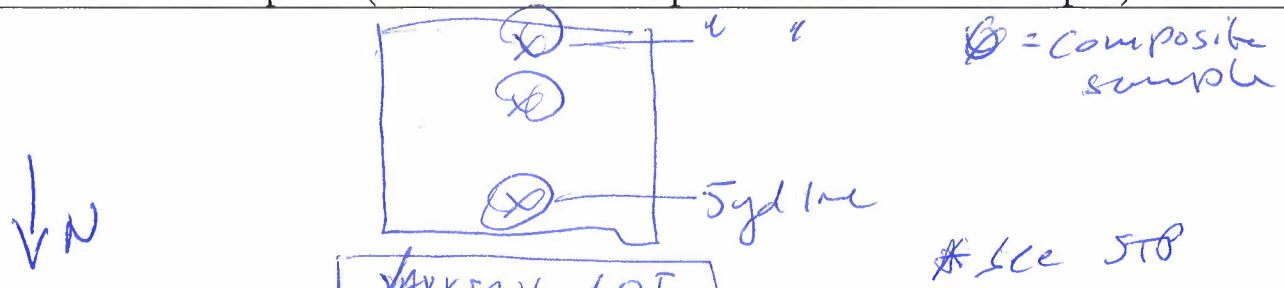
INSTRUMENTS

PID (TECUM MODEL T-106040)
 Q-TRAK (7565X0720004)

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B10	
Sample#: 1543200604- 03	Sample Location ID MEMORIAL	

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



Sample Data

Sample Data		Container	Quantity	Preservative
Date: 06/04/2020	Time: 1214	4oz Amber	3	---
Sampler: SMD	Weather: 85°F			
Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Trowel / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: Grab / <u>Composite</u> / Other _____				

Description Data

Generic Sample Description: Crumb rubber

Comments:

TVOL Temp RH CO₂ CO
 0.0 95°F 12.7% 379ppm 0.3 ppm

INSTRUMENTS

PID (TEKOR Model # T-106040)
 G-TRAK (2565X0720004)



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.:	
MS VIEW:	
0 150 75'	
GRAPHIC SCALE	

f

FUSS & O'NEILL

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

NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 DEFAZIO PARK
 380 DEDHAM ROAD

NEEDHAM

MASSACHUSETTS

PROJ. No.: 20081266.A9E
 DATE: OCTOBER 2018

FIGURE 2

File Path: J:\DWG\IP20081266A9E\Environmental\Plan\20081266A9E_STP01.dwg Layout: 08.5X11-P Plotted: Tue, September 25, 2018 - 11:47 AM User: h Keller
Plotter: AUTOCAD PDF (GENERAL DOCUMENTATION).PC3 CTB File: FO HALF STB
MS VIEW: LAYER STATE

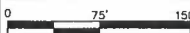


MAP REFERENCE

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.:	
	
GRAPHIC SCALE	

**FUSS & O'NEILL**

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

NEEDHAM HEALTH DEPARTMENT

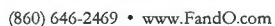
SITE PLAN

MEMORIAL PARK
92 ROSEMARY ROAD

NEEDHAM MASSACHUSETTS

PROJ. No.: 20081266.A9E
DATE: OCTOBER 2018

FIGURE 1



□ 1419 Richland Street, Columbia, SC 29201

☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908

☐ Other _____

42333

Turnaround

☐ 48-Hour* ☒ Standard (____ days) *Surcharge Applies

LABORATORY

EMSC (NJ)

Analysis Request

Containers

Analysis Request	Containers
SVOCs (CHAs) METALS VOCs by 0270625 by 6014/7470 TO-15 #	Soil VOA Vial, ☐ methanol Soil VOA Vial ☐ water ☐ Na ₂ (SO ₄) ₂ Glass Soil Container (4) oz Other: Other: Water VOA Vial, ☐ As is ☐ HCl Glass Amber () ml, ☐ As is ☐ H ₂ SO ₄ Plastic - As is, ☐ 250 ml ☐ 500 ☐ 1000 ml Plastic - H ₂ SO ₄ , ☐ 250 ml ☐ 500 ml Plastic - HNO ₃ , 250 ml ☐ Filtered ☐ 0.45µ ☐ 10µ Plastic - NaOH, 250 ml
	Comments

Analysis Request	Containers
SVOCs (CHAs) METALS VOCs by 0270625 by 6014/7470 TO-15 #	Soil VOA Vial, ☐ methanol Soil VOA Vial ☐ water ☐ Na ₂ (SO ₄) ₂ Glass Soil Container (4) oz Other: Other: Water VOA Vial, ☐ As is ☐ HCl Glass Amber () ml, ☐ As is ☐ H ₂ SO ₄ Plastic - As is, ☐ 250 ml ☐ 500 ☐ 1000 ml Plastic - H ₂ SO ₄ , ☐ 250 ml ☐ 500 ml Plastic - HNO ₃ , 250 ml ☐ Filtered ☐ 0.45µ ☐ 10µ Plastic - NaOH, 250 ml
	Comments

Analysis Request	Containers
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	Comments

Analysis Request	Containers
SVOCs (CHAs) METALS VOCs by 0270625 by 6014/7470 TO-15 #	Soil VOA Vial, ☐ methanol Soil VOA Vial ☐ water ☐ Na ₂ (SO ₄) ₂ Glass Soil Container (4) oz Other: Other: Water VOA Vial, ☐ As is ☐ HCl Glass Amber () ml, ☐ As is ☐ H ₂ SO ₄ Plastic - As is, ☐ 250 ml ☐ 500 ☐ 1000 ml Plastic - H ₂ SO ₄ , ☐ 250 ml ☐ 500 ml Plastic - HNO ₃ , 250 ml ☐ Filtered ☐ 0.45µ ☐ 10µ Plastic - NaOH, 250 ml
	Comments

Analysis Request	Containers
SVOCs (CHAs) METALS VOCs <i>by 0270625</i> <i>by 6014/7470</i> <i>TO-15 #</i>	☐ Soil VOA Vial, ☐ methanol ☐ Soil VOA Vial ☐ water ☐ Na ₂ (SO ₄) ₂ Glass Soil Container (<u>4</u>) oz Other: Other: Water VOA Vial, ☐ As is ☐ HCl Glass Amber () ml, ☐ As is ☐ H ₂ SO ₄ Plastic - As is, ☐ 250 ml ☐ 500 ☐ 1000 ml Plastic - H ₂ SO ₄ , ☐ 250 ml ☐ 500 ml Plastic - HNO ₃ , 250 ml ☐ Filtered ☐ 0.45µ ☐ 10µ Plastic - NaOH, 250 ml
	Comments



US Environmental Rental Corporation

(888) 550-8100

www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560

91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700

5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555

1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Company: FUSS AND ONEIL

Contact: SAMANTHA

Phone #: #N/A

Order No.: R-45724

Date: 6/3/2020

Technician: BP

Packing List

Item	Serial Number	Included	QC
Q-Trak	7565X0720004	✓	
Manual		✓	
External Power Cable		✓	
External Probe Holder		✓	
Calibration Cover		✓	
Extra Batteries		✓	
Software		✓	
Comm. Cable		✓	
Regulator			
Tedlar Bag			
Calibration Gas			

Calibration Report

Q-Trak

7565X0720004

Calibrated with the following calibration gas:

50/1000

Lot #: 4726802

	Span Setting	Calibrated Reading	Post-Calibration Bump Test
CO	50 ppm	50 ppm	51 ppm
CO2	1000 ppm	0 ppm	0 ppm

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.



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91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700

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1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Company: FUSS AND ONEIL
Contact: SAMANTHA
Phone #: #N/A

Order No.: R-45724

Date: 6/3/2020

Technician: BP

Packing List

Item	Serial Number	Included	QC
Ion Science Tiger	T-106040	✓	
Manual		✓	
Charger		✓	
Probe Tip		✓	
Alkaline Battery Pack		✓	
External Filters		✓	
Software			
Comm. Cable			
Regulator		✓	
Tedlar Bag		✓	
Calibration Gas		✓	
Tube Holder			
Zero Tubes			

Calibration Report

Item	Information
Ion Science Tiger	T-106040
Calibration Gas:	100ppm ISO
Lot Number:	4931808
Span Setting:	100.00 ppm
Correction Factor:	1.00
Zero Reading:	0.00 ppm
Span Reading:	100.00 ppm
Post-Cal Bump Test:	100.00 ppm
Lamp	10.6 eV

Need help with the calibrating your PID?

We have "How To" Videos on our website. Use your smart phone's QR Code reader to find our videos at:
usenvironmental.com/technical-support/videos/



This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.



**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Pesticide Reduction PSA and Brochure Revised Drafts
Presenter(s)	Ally Littlefield, Food Program Intern Tara Gurge, Assist. Public Health Director

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Continued discussion and work on the revised drafts of our pesticide reduction brochure, "Healthy Lawns and Landscapes." Also review the revised Pesticide Advisory/PSA, now entitled, "Learn About Pesticides." For the PSA document, we incorporated the feedback received from our last BOH meeting. The biggest changes were the removal of the EPA statement and the "irreversible long-term health consequences for children" statement. We also changed the title of the document from, "Pesticide Advisory" to "Learn About Pesticides." We also updated the resources provided on the bottom of the PSA to align with a more neutral approach. We took out the very strong language like "toxic" "dangerous" etc. The PSA is now shorter and simpler. We are open to receiving any additional feedback in order to finalize this document before sending out in the upcoming spring water bills. For the revised brochure, we are still revising this document to also make it more neutral, and we have provided you with some additional resources from EPA and CO State Univ. Ext., which are more in line with finding a more Integrated Pest Management (IPM) options. We are open to any additional feedback on this document.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
A vote may be requested if necessary, and additional comments on the pesticide reduction materials are welcome.	
3.	BACK UP INFORMATION:
- Copy of revised and shortened PSA, now entitled, "Learn About Pesticides." - Copy of "Healthy Lawns & Landscapes" draft brochure (to be revised). - Sample EPA Green Scaping Brochure. - Sample CO Homeowner's Guide for Alternative Pesticide Management.	



NEEDHAM PUBLIC HEALTH DIVISION

178 Rosemary Street, Needham, MA 02492
healthdepartment@needhamma.gov

781-455-7940x504(tel) 781-455-6922(fax)
www.needhamma.gov/health



Learn About Pesticides

A Public Health Message To Needham Residents

The Needham Health Department recommends that homeowners learn the facts about pesticides and seek to eliminate pesticide use in their yards and homes. According to the U.S Environmental Protection Agency (EPA), pesticides such as herbicides, insecticides, fungicides, and "Weed & Feed"-type products are all harmful to some degree.

Children are the most vulnerable to the harmful effects of pesticides due to physiological and age-related factors. Scientific studies have revealed that exposure to common lawn care pesticides is linked with a possible increased risk of several types of cancer, neurological and respiratory diseases, hormone disruption, birth defects, and damage to the kidneys and liver. Pesticides also disrupt our ecosystems since they are toxic to birds, fish, beneficial insects, and non-target plants.

Recognizing the potential effects of widespread pesticide use, the Town of Needham follows integrated pest management (IPM) policies, and pesticides are used only as a last resort. In Needham, areas such as the Town Common and the Needham Heights Common are 100% pesticide-free.

Still, the greatest environmental source of pesticide contamination and exposure to children in Needham is likely from residents' yards, lawns, and the runoff from excessive or inappropriate use. This year, help make Needham a safer place for your family and neighbors by reducing your personal pesticide use and opting for safer alternatives.

To learn more about how you can practice reducing your reliance on pesticides, contact the Needham Health Department, and check out the following resources:



The Easy Way to a Greener, Healthier Yard

<https://www.epa.gov/safepestcontrol/greenscaping-easy-way-greener-healthier-yard>



<https://www.greenneedham.org/blog/zero-waste-main-page-2/>

Alternative Pesticide Management for the Lawn and Garden

<https://extension.colostate.edu/docs/pubs/garden/xcm221.pdf>

Managing Your Lawn Service

Ask for their pesticide license. If your lawn care “specialists” are not licensed, do not allow them to treat your lawn.

Ask what pesticides they’re applying and why. You might be surprised how many companies will not provide this information. Never allow unidentified products to be used on your lawn.

Beware if a lawn service tells you a chemical application is safe. Federal EPA regulations prohibit manufacturers from making pesticide safety claims, even if used as directed. All pesticides must be treated with caution.

Ask if they offer an organic program. The most effective way to protect your household, neighbors, pets, and grass is to follow an organic program. Know that an organic lawn can take up to 3 years to fully establish.

For organic landscapers available in our area visit:

<https://www.greenneedham.org/blog/local-sustainable-landscapers/>

Yearly Schedule

Fall

- Spread 1/4" compost, or sprinkle organic fertilizer.
- Seed with a mix of hardy grasses.
- Aerate soil if compacted.
- Do a final mow of 2" for easier leaf raking in November.

Spring

- Mow high at 3"! Keep mower blades sharp.
- Test your soil at UMass Soil Testing Lab
 - www://ag.umass.edu/services/soil-plant-nutrient-testing-laboratory
 - Strive for soil pH around 6.8.
- Add soil aids based on the soil test.
- Overseed bare spots to reduce weeds.
- Leave clippings on lawn to fertilize.

Summer

- Check for weeds; pull out by hand.
- Monitor for insect pests.
- Water only when soil is dry 6" down.
- If you have a history of grub damage, spot treat with beneficial nematodes every year. Make sure you apply them on a rainy day.

Healthy Lawns & Landscapes

Protect Needham Go Organic!

Needham Public Health
in collaboration with Green Needham



178 Rosemary Street, Needham, MA 02494
781-455-7940x504
healthdepartment@needhamma.gov
www.needhamma.gov/health



A chemical-free yard

Your kids can play safely on grass where you never need a "keep off, pesticide application" warning sign.

Reduced water costs

Healthy soils with thriving microorganisms lead to deep-rooted grass which require less watering, fertilizing, and overall cost.

Less mowing

Turn part of your lawn into a landscape with a diversity of native plants, hardy flowers, ground covers, trees, and shrubs.

Grub Control
Weed Killer
Fungus Treatment
Insect Spray
Crab Grass Preventer
Insecticides
Herbicides

Examples of
Pesticides

Keep You and Your Neighbors Safe

Pesticides are a major environmental and public health concern.

Most pesticides on the market have not been tested enough to determine all their effects on the health of people, pets, and the environment. Pesticides get carried indoors, linger for months, and can contaminate nearby drinking water supply.

Scientific studies potentially link exposure to common lawn care pesticides with an increased risk of:

- **several types of cancer**
- **neurological and respiratory diseases**
- **endocrine disruption**
- **birth defects**
- **liver and kidney damage**

Children are particularly vulnerable to these harmful effects. Pesticides can also disrupt our ecosystems since they are hazardous to birds, fish, beneficial insects, and non-target plants.



Simple Steps to Organic Lawn Care

The easiest, most cost-effective way to a beautiful, healthy yard is to work with nature, not against it.

A healthy lawn needs nutrients and microbe-rich soil to develop deep-rooted, dense turf that competes successfully with weeds. Dense turf is beautiful and low maintenance. It naturally resists drought, insects, and disease.



Pesticides are not necessary for a beautiful lawn or garden.

In fact, they can do more harm than good. They kill the microbial life necessary for healthy soil and can kill pests' natural enemies. This invites disease and insect infestation, which leads to more pesticide use and traps you in an unhealthy, costly chemical cycle.

Green Scaping

The Easy Way to a
Greener, Healthier Yard



EPA

United States
Environmental Protection
Agency

*Why
GreenScape?*



Our yards are our outdoor homes: fun, beautiful, great spaces for relaxing. By taking care of our lawns and gardens properly, we can save money, time and help the environment. GreenScaping encompasses a set of landscaping practices that can improve the health and appearance of your lawn and garden while protecting and preserving natural resources.

By simply changing your landscape to a Green-Scape, you can save time and money and protect the environment.

Save time by landscaping with plants that require less care

Save money by eliminating unnecessary water and chemical use

Protect the environment by:

- ✿ Conserving water supplies.
- ✿ Using chemicals properly and only when necessary to keep waterways and drinking water clean.
- ✿ Reducing yard waste by recycling yard trimmings into free fertilizer.

Put nature to work in your yard

In nature, soil recycles dead plants into nutrients for new plant growth. Plants are adapted to the water, sun and soil available in their site. Maintaining a wide variety of healthy plants, soil organisms, beneficial insects and animals can keep most pests and diseases in check.

By working with nature, you can have a great-looking yard that's easier to care for, cheaper to maintain and healthier for families, pets, wildlife and the environment.



How?

Start with these five easy steps:

- 1 Build and maintain healthy soil**
- 2 Plant right for your site**
- 3 Practice smart watering**
- 4 Adopt a holistic approach to pest management**
- 5 Practice natural lawn care**

1 **Build and maintain healthy soil with compost and mulch**

A teaspoonful of healthy soil contains about 4 billion organisms! This community of beneficial soil creatures keeps our landscapes healthy by:

- ✿ Creating a loose soil structure that allows air, water and plant root growth into the soil.
- ✿ Recycling nutrients and making them available to plants.
- ✿ Storing water until plants need it.
- ✿ Protecting plants from some pests and diseases.



Know what your soil needs.

A soil test will tell you how much nitrogen, phosphorus, potassium and lime your soil needs to grow healthy plants. Depending on the condition of the soil, you may not even need to apply these nutrients! Contact your local Cooperative Extension office or garden supply center for a soil test kit.

Feed your soil with compost.

Dig or rototill one to three inches of compost into 6 to 12 inches of top soil when you're making new beds or planting lawns. Top dress existing lawns with a quarter- to half-inch of compost every spring or fall. Compost helps sandy soils hold nutrients and water, loosens clay soils and feeds the beneficial soil life so it can feed and protect your plants.



Make compost at home, or buy it in bags or bulk.

Yard and food waste are a gardener's gold! Leaves, chopped stalks, flowers and grass all make great compost in a pile or bin. Vegetable scraps and coffee grounds can also be added to your bin, but do not use meat, dairy or oils because they can attract pests. You should turn your compost every few weeks with a pitchfork to distribute air and moisture. Make sure to sprinkle water on your pile in dry weather. In most climates, you will have finished compost in three to six months, when the waste becomes a dark, crumbly material that is uniform in texture.

Mulch it!

Mulch is a layer of organic material like leaves, aged wood chips, compost or grass clippings that you spread in spring or fall around your plants. Never exceed more than three inches of mulch in your landscaping beds, and keep mulch about an inch away from stems and tree trunks. Mulch stabilizes soil temperature, prevents weeds, feeds the soil for healthier plants and helps to conserve water. And it recycles itself!



Mulch improves:

- ❁ **Flower beds and vegetable gardens** Use one to three inches of shredded leaves, compost or grass clippings that have not been treated with pesticides.
- ❁ **Trees, shrubs and woody perennials** Use two to three inches of woody mulches, like shredded tree bark or aged wood chips. Shredded fall leaves also work well. Be sure to keep mulches an inch away from plant stems or trunks to prevent rot.
- ❁ **Lawns** Mulch your lawn? Yes, you can “grasscycle” (leave the clippings on the lawn when mowing). The clippings quickly decompose and release valuable nutrients back into the soil to feed the grass, reducing the need for nitrogen by 25 to 50 percent.

Need fertilizer? Go slow!

Most trees and shrubs get all the nutrients they need from the soil. But annual plants, vegetable gardens and lawns sometimes need additional nutrients from a fertilizer. When shopping for fertilizer, look for a product that contains “**natural organic**” or “**slow-release**” ingredients. Unlike “quick-release” fertilizers, “natural organic” or “slow-release” fertilizers feed your plants slowly and evenly. The result? Healthier plants with strong root systems and no excessive “top growth” — saving you time and money.



Improper use of fertilizers can damage beneficial soil life essential for healthy soils and plants.

2 Plant right for your site

Get to know your yard and decide how you want to use it.

Where is it sunny or shady? What is the pH of your soil? What type of soil (e.g., sandy, clay) do you have in your yard? Look around — are there plants with problems? Where do you want play areas, vegetables, color, views or privacy? How much lawn do you need or want to maintain?

Choose the right plant for the right place.



Select plants that grow well in your area of the country and fit the amount of sun, type of soil and water available in your yard. In general, it makes sense to use low-water plants to save yourself the time and expense of watering.



pH is a measure of soil acidity or alkalinity and directly affects the availability of nutrients for your plants.

Think about how big a tree or shrub will be when mature (especially next to your house or driveway and near power lines).

Pick plants that resist pests.

Many garden centers and nurseries offer information about pest- and disease-resistant plant varieties. After they're established, they'll save you time and money on pest control.

Give plants a good start.

Prepare the soil by mixing one to three inches of compost into soil in planting beds. For trees and shrubs, mix compost into the whole planting bed, or just plant in existing soil and mulch thoroughly. Set plants at the correct soil level, following instructions provided with your plant. Mulch new plantings and be sure to water even drought-tolerant plants during their first few years especially in the summer and fall, until they build deep roots.

Make space for wildlife.

- ✿ You can invite birds, butterflies and other wildlife into your yard, protect streams and fish, and make a more attractive landscape.
- ✿ Consider planting native trees and plants, especially ones with berries, fruit and flowers.
- ✿ Plant in layers (ground cover, shrubs and trees) so your landscape is like the forest.
- ✿ Don't plant invasive species — check with your local Cooperative Extension office for a list of invasive "noxious weeds."
- ✿ Minimize potential harm to birds, beneficial insects and fish by using pesticides only when necessary and using them properly. Read the label and follow instructions carefully whenever you use a pesticide.
- ✿ Provide a bird bath or other small water source. Make sure you change the water every couple of days so your bird bath doesn't become a mosquito breeding ground.
- ✿ Leave wild "buffer" areas of native plants along ravines, streams, shorelines and fencelines.



3 Practice smart watering for healthier plants

Too much of a good thing.

Did you know that watering too much or too little is the cause of many common plant problems? You can have healthier plants, save money on water bills and conserve precious water resources by learning to give your lawn and garden just what they need, and no more.

Water deeply, but infrequently.

Most plants do best if the soil is allowed to partially dry out between waterings. A loss of shine or footprints remaining after you walk across the lawn indicates that it's time to water. Vegetables and other annuals should be watered at the first sign of wilting, but tougher perennials (plants that live several years) need water only if they stay droopy after it cools off in the evening. Trees and shrubs usually don't need any watering once their roots are fully established (two to five years), except in very dry years.

Make every drop count.

Some easy ways to lower water bills and get more water to plants include:

- ✿ Build your soil with compost and mulch to hold water and reduce evaporation.
- ✿ Choose low-water-use plants. Once established, they can often thrive just on rainfall.
- ✿ Use soaker hoses or drip irrigation on beds — they can save 50 percent or more compared with sprinklers.
- ✿ Use an outdoor water timer (available at garden stores) to water just the right amount, frequency and time of day.
- ✿ Water lawns separately from other plantings. Make sure sprinklers aren't watering the pavement.
- ✿ When soil is dry or compacted, it won't absorb water quickly. If water puddles, stop watering a while and then restart so the water has time to soak in.



❁ Water in the early morning — if you water at mid-day, much of the water just evaporates. Evening watering should be avoided because it can encourage the growth of mold or plant diseases.

❁ In a dry spell, you can allow an established lawn to go dormant. Water just once a month and brown areas of the lawn will bounce back in the fall.



Let the rain soak in.

Rain rushes off roofs, pavement and compacted soil. This causes flooding downstream, erodes stream banks and muddies the water, which harms fish and other wildlife. You can help slow this run-off and help the soil hold the moisture plants need in the summer.



- ❁ Direct downspouts out into lawns, rain gardens or “rain barrels.”
- ❁ Use compost and mulch to reduce erosion and help rain soak in.
- ❁ Use open pavers, gravel or other pavement options that let rain seep into the soil.
- ❁ Plant dense strips of native trees, shrubs and groundcovers next to streams, lakes and ditches to stabilize the soil and to slow and filter run-off.

4 Adopt a holistic approach to Pest Management

Pesticides (including weed and bug killers) can be effective tools for controlling pests such as insects, weeds and diseases. Be sure you need a pesticide before you use it. On-going pest problems are often



a sign that your lawn or garden is not getting what it needs to stay healthy. You need to correct the underlying problem to reduce the chance of pests re-appearing. Remember, a holistic — or integrated pest management — approach is the most effective way to manage pests. Here's how:

Start with prevention.

- ✿ Maintain healthy soil with compost and mulch.
- ✿ Select pest-resistant plants and put them in the sun/shade and soil conditions they like.
- ✿ Use a variety of plants so, if pests attack, your whole garden isn't at risk.
- ✿ Mow higher. Most grasses should be mowed to a height of two to three inches. Taller grass has more leaf surface and deeper roots and eventually chokes out many weeds.
- ✿ Clean out diseased plants so disease doesn't spread.
- ✿ Pull weeds before they go to seed and spread.
- ✿ Remove dead plants to reduce hiding places for insect pests.

Identify the problem before you spray, squash or stomp.

Whether it's a bug, disease or weed, you need to identify it to know how to effectively manage it. The cause of ailing plants or grass may not be pests or disease but incorrect mowing or pruning, improper watering or other easily corrected practices. That scary bug could actually be a beneficial "good bug" that eats problem pests.

Accept a little damage — give nature time to work.

Accept a few pests, as long as they are not harmful to the long-term effects of the landscape. Natural predators often bring pests under control, but they

need time to work. Monitor your landscape to spot signs of pests but don't spray at the first sign of damage — nature may control it for you or plants may outgrow the damage.

If a pest or weed problem develops, use an integrated approach to solve the problem.

Physical controls like traps, barriers, fabric row covers or plants that repel pests can work for some pests.

- ✿ Use a little “elbow grease.” Long-handled weed pullers pop dandelions and other weeds out easily.
- ✿ Mulching, not to exceed three inches, reduces weeds in garden beds.
- ✿ Use “crop rotation” techniques by changing the planting location for annuals to minimize their susceptibility to pests and disease.



Replace problem plants with pest-resistant ones for a healthier, care-free yard.

- ✿ If a plant, even a tree, has insect, pest or disease problems every year, consider replacing it with a more tolerant or resistant variety or another type of plant that doesn't have these problems.

Use pesticides responsibly.

- ✿ Carefully read and follow pesticide product label instructions. Avoid overuse of pesticides. When you have a small problem area, treat just that area, not the entire yard.

Most bugs are good bugs.



Only about 5–15 percent of the bugs in your yard are pests. “Good bugs,” like the ladybug (left) and the praying mantis (right), help control pests.



5 Practice Natural Lawn Care

It's easy to save time and money by putting these steps to work for a beautiful yard.

Mow higher, mow regularly and leave the clippings.

- ✿ Mow more frequently when grass is actively growing so that you are only cutting no more than one-third of the height of the grass. This practice minimizes the amount of grass clippings.
- ✿ The desired height of grass varies depending on climate. Contact your local Cooperative Extension office for local recommendations.
- ✿ "Grasscycling," or leaving the clippings on the lawn, doesn't cause thatch build up — but it does make lawns healthier. Soil organisms recycle the clippings into free fertilizer, and you save all the work of bagging.
- ✿ Modern mulching lawn mowers make "grasscycling" even easier, and homeowners can reduce their mowing time by 30 to 40 percent by not having to bag clippings.

Use "natural organic" or "slow-release" fertilizers.

Choose "natural organic" or "slow-release" fertilizers to reduce nutrient run-off and leaching. To avoid run-off, keep fertilizers on the soil and away from sidewalks, streets and driveways. Fertilizers that run off are a waste of money and contribute to pollution of streams and lakes. Read and follow product labels carefully before using fertilizer and



How much is one inch of water a week?

Scatter clean, empty tuna cans or other straight-sided containers on your lawn; turn on the sprinklers and check the time. When most

cans have one inch of water in them, turn off the sprinkler and check how long it ran. Now you know how long to run your sprinkler each week in summer if you want to keep your lawn green.

Honey, I shrunk the lawn!

Grass grows best on level, well-drained soil in full sun or part shade. Consider alternatives to grass on steep slopes, shady areas or near streams and lakes. In these areas, it takes a lot of extra work (and sometimes chemicals) to maintain grass. Look for other plants, such as ground covers, better suited to soggy soil, slopes or heavy shade. Leave or plant a “buffer” of dense native vegetation along streams and lakes to filter and slow run-off, shade and cool the water, provide homes for wildlife and prevent bank erosion.



other lawn chemicals. Use fertilizers sparingly. The more you fertilize, the faster the grass grows and the more frequently you have to mow!

Water deeply, but infrequently, to moisten the whole root zone.

Let the soil dry between waterings to prevent lawn disease and save water. Lawns need only about one inch of water a week in summer, including rain, to stay green. Or you can let areas of lawn that don't get heavy wear go brown and dormant — just water once a month and they'll bounce back in the fall.

Overseeding can improve the quality of your lawn.

- ✿ Core aerate in the fall to improve root development and water penetration.
- ✿ Follow by overseeding thin areas of lawn with grass seed blends recommended for your area.
- ✿ Then “top-dress” by raking in $\frac{1}{4}$ to $\frac{1}{2}$ inch of compost to cover the seed and improve the soil.
- ✿ Repeat these steps annually as needed to improve poor lawns.

Lawn care practices are often targeted by watershed managers as significant contributors of pesticides and nutrients to run-off. In fact, surveys show higher concentrations of some pesticides, particularly insecticides, in urban streams than in agricultural streams.



Remember to work with nature in your yard by starting with these five easy steps :

1 Build and maintain healthy soil

2 Plant right for your site

3 Practice smart watering

4 Adopt a holistic approach to pest management

5 Practice natural lawn care

By following these steps, you can save time, money and make your piece of the planet a healthier place to live.

Check with local authorities to find out more about specific requirements concerning watering, using pesticides and fertilizers, composting and other practices recommended in this brochure.

Remember the Four R's:

❁ Reduce

❁ Reuse

❁ Recycle

❁ Rebuy

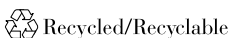
**For more information on these and other
GreenScaping techniques and resources,
please visit our Web site at**

www.epa.gov/GreenScapes

GreenScapes is a component of EPA's Resource Conservation Challenge, designed to promote environmentally beneficial landscape practices across the nation. By adopting the practices outlined in this booklet, consumers can learn how to "GreenScape" their yards and, in doing so, help to preserve natural resources and prevent waste and pollution.



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Alternative Pesticide Management for the Lawn and Garden

XCM-221

A pest-free lawn and garden may sound ideal, but is it really?

Maintaining the perfect urban landscape may result in a reliance on pesticides that can lead to environmental and human health problems.

Many homeowners are looking for alternative ways to control pests in gardens and landscapes.

Fortunately, there are many biological processes that work to keep pests in a natural balance. The “ideal” garden is one with vigorous plants and protected natural enemies of certain annoying pests. The conventional approach – applying pesticides routinely, or at the first sign of any pest – is replaced with a lower input emphasis on nature at its best.

It is not the answer to all problems every time. But when it works, it is an ideal way to address pest problems while helping protect our water supplies and environment.

Principles of this alternative approach include:

- Learning more about plants and their pests
- Selecting landscape and garden plant varieties that are resistant to pests
- Rotating annual garden plants to reduce the buildup of pests
- Inspecting plants frequently for the presence both of pests and beneficial organisms
- Determining if control measures are really necessary before taking action.
- Selecting methods that are least disruptive to natural controls and least hazardous to the environment.

As you experiment with alternative methods of pest control, it's a good idea to keep a record of your observations and the results of your treatments for future reference.

CULTURAL PEST CONTROL METHODS

Cultural methods seek to create the optimum growing conditions for plants and natural predators, and unfavorable conditions for pests.





Learn to identify specific insects before determining control. (Insect populations can include beneficial insects that you may not want to kill.)

Some things to remember in managing a garden:

- Select well-adapted, disease-resistant plant varieties.
- Choose the right plants for the location and soil conditions.
- Buy healthy and pest-free transplants.
- Avoid under- or over-watering, since both make plants vulnerable to insects and disease.
- Improve the soil by adding organic amendments. A soil analysis helps to evaluate soil type and fertility. Soil testing kits can be ordered by visiting soiltestinglab.colostate.edu.
- Change the location of annual plants from year to year to disrupt the life cycle of pests.
- Remove infested plant residue from your garden in the fall, so that pests do not over-winter there.
- Incorporate a wide variety of plants to disperse potential pest problems and to provide diverse habitat for beneficial insects.
- Keep your vegetable garden clean of rocks, wood, and debris that provide hiding places for slugs or damaging insects.

Some things to consider when managing your lawn:

- Plant native grasses or hardy strains of turf- type tall fescue, blue grama, wheatgrass, or buffalograss instead of Kentucky blue grass.
- Maintain a healthy lawn with good watering practices: water as needed, and turn off automatic sprinkler systems after a rain or during cool cloudy weather.
- Fertilize your lawn only as needed to promote a vigorously growing turf that will compete well with weeds. A soil test is one way to know what nutrients your lawn needs.
- Maintain a mowing height no less than 2½ to 3 inches, and leave the clippings on the lawn so that nutrients are recycled.
- Core aerate the lawn once or twice a year.
- Use groundcovers, mulch, or beds instead of grass in difficult areas such as sloped ground or shady spots.

MECHANICAL PEST CONTROL METHODS

Mechanical pest management options rely on physical methods of destroying pests and include:

- Hand weeding
- Using a hoe or tiller rather than a herbicide
- Hand-picking insects off plants
- Hosing down plants to dislodge insects
- Pruning diseased or insect-infested woody plants
- Using mulches to reduce erosion and weeds and to conserve moisture

BIOLOGICAL PEST CONTROL METHODS

Beneficial organisms such as certain insects or fungi can help control pests naturally, or they may be purposely introduced.

The main categories of these “beneficials” include:

Predators – include lady beetles, spiders, green lacewings, syrphid flies, damsel bugs, minute pirate bugs, ground beetles, and predatory mites. Larger animals such as birds, frogs, and garden snakes also prey on pest insects.

Xeriscape design, photo by Grant Reid.



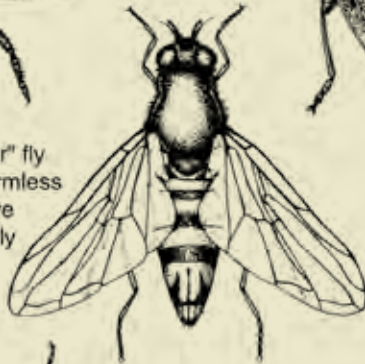
BENEFICIAL INSECTS AND THE PESTS THEY CONTROL



Crab Spiders, among others, control fleas, flies, leafhoppers, aphids, caterpillars, and carrot weavils.



Lady Beetles, or "Ladybugs", control aphids, aphid nymphs, rootworms, spider mites, and weavils.



The Flower fly or "Hover" fly (Syrphidae family) is harmless to humans but is effective against aphids, especially early in the season.



Minute pirate bugs are tiny (less than 1/8 inch) but feed on thrips, spider mites, and insect eggs.



Green lacewings, especially the larvae, are voracious consumers of aphids, caterpillars, beetles, and white flies.



The Polistes paper wasp will hunt for caterpillars which they feed to immature wasps in paper nests.

Drawings by Tom J. Weissling

Parasites – include the tachinid fly and braconid wasp that lay eggs on or inside insect pests.

Pathogens – fungi, bacteria, and viruses that infect pests much in the same way they infect people or other animals.

Some garden stores and catalogs carry beneficials, such as lady beetles. Conserving beneficials already in your garden is likely more cost-effective, and frequently is more successful. Pesticides often kill these natural garden friends.

To encourage beneficials in your yard:

- Plant a diverse landscape that provides a variety of habitats and food sources.
- Learn to distinguish beneficial insects from pests.
- Minimize pesticide applications.

These natural controls often work more slowly than pesticides, and they require a food supply that could be the very pest you'd prefer to be gone. However, they are nature's way of handling high populations of pests, they don't contaminate our water supplies, and they can lend beauty to a garden.

WHAT TO PLANT TO ATTRACT BENEFICIAL INSECTS

- **Herbs belonging to the mint family:** lemon balm, pennyroyal, thyme, and spearmint
- **Plants belonging to the carrot family:** dill and parsley
- **Vegetables belonging to the cabbage family:** radishes, mustard, and broccoli (if allowed to flower)
- **Queen Anne's lace**, also known as wild carrot, will serve as a nectar plant for parasitic wasps.
- **Aster, Asclepias (butterfly plant), cosmos, beebalm (monarda), Russian sage, Cleome, and purple cornflower** attract butterflies and bees.

CHEMICAL PEST CONTROL METHODS

There are some naturally occurring chemicals that are classified as pesticides but nevertheless can be used in the context of “organic gardening.” In general, these compounds tend to be less harmful to beneficial insects, and they often break down more rapidly than synthetic pesticides.

Reduced risk pesticides include microbial insecticides, botanical pesticides, mineral-based pesticides, and synthetic organic compounds (oils, soaps, and detergents) produced from petroleum distillates. These chemicals are available in some garden stores, but may have to be requested specifically. Some of these products are listed in Table 1.

Please note that these products are still classified as pesticides and should not be used indiscriminately. They are best incorporated into a management program that uses all available cultural, mechanical, and biological control methods.

Finally, it is a mistake to assume that naturally occurring chemicals are non-toxic. Some of these are more toxic to humans than synthetic pesticides. As with all chemicals, always read the label instructions prior to using these alternatives. Under certain conditions, some of these chemicals can cause injury to plants and animals.

Table 1. Alternative Pesticides for Lawn and Garden Use*

ALTERNATIVE CONTROL	CONTROLS	NOTES
Bacillus thuringiensis (BT, Dipel)	Caterpillars	Non-toxic to mammals
Avermectin-B (Avid)	Mites, leafminers, psyllids	
Sabadilla (Red devil)	Leaf hopper, caterpillars, squash bugs, et al.	Low toxicity, fast knockdown short residual, may irritate
Neem (Margosan-O)	Leaf miners, loopers, mealy bugs, thrips, whitefly; some fungicidal activity	Slow kill
Sulfur	Fungicidal activity on powdery mildew, rust, some blights insecticidal activity on psyllids, mites, thrips	Plant injury possible, especially at high temperatures
Lime sulfur	Dormant spray for diseases such as blight, anthracose, powdery mildew	Bad-smelling; may irritate
Bordeaux mixture	Acts as a fungicide, controls bacterial leaf spot; repels many insects	Some cannot be used on certified “organic” produce
Diatomaceous earth	Flea beetles, squash bugs, slugs	Dust can cause lung and eye irritation. Avoid inhalation and eye contact.
Insecticidal soap (Safer’s soap)	Aphids, certain scales, mealy bugs, psyllids, mites, thrips, white fly	Non-toxic to mammals; plant injury possible
Dormant oils	Aphids, mites, and certain scales that over-winter on woody plants	Non-toxic to mammals; possible plant injury
Summer oils	Aphids, mites, scales, thrips and their eggs	Plant injury possible

*For more information, see the following factsheets from Colorado State University Extension at ext.colostate.edu: Bacillus thuringiensis, 5.556; Insect Control: Horticultural Oils, 5.569; Insect Control: Soaps and Detergents, 5.547; Insect Parasitic Nematodes, 5.573.

ALTERNATIVE PEST MANAGEMENT METHODS

INSECTS:

- Keep your garden free of infested plant residue and other debris.
- Prune out insect-infested parts of plants. Hand pick bugs off garden plants.
- Encourage biological controls by planting flowers that provide nectar, pollen, and habitat for friendly predators.
- Avoid broad spectrum insecticides.
- Use insecticidal soaps, oils, and botanicals as appropriate.
- Dislodge unwanted insects from woody plants using a stream of water.
- Accept some insect activity as part of a natural landscape.

SLUGS:

- Put beer in shallow containers or saucers to attract and drown slugs.
- Place an overturned clay pot near plants where slugs feed. Check frequently for collected slugs.

WEEDS:

- Crowd out weeds with a healthy lawn.
- Use mulches and non-plastic landscape fabric.
- Hand pull, mow, or hoe weeds.
- Accept some weeds in your lawn as part of a natural landscape.

DISEASES:

- Look for healthy transplants of well-adapted, disease-resistant varieties.
- Rotate your annuals each year.
- Avoid over- or under-watering.
- Thin crowded plantings to improve air circulation.
- Remove and destroy infected plants from your garden and landscape.





**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Proposed changes to Board of Health Article 20 as requested from Sira Naturals RMD
Presenter	Tiffany Zike and Tara Gurge, Assistant Directors of Public Health

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
In a letter dated September 17, 2021 to Timothy McDonald, the Director of Health and Human Services, Sira Natural RMD requested the following changes to Article 20 of the Board of Health (BOH) regulations: 1. Revise 20.6.5 to allow coupons and discounts sale including promotional gifts and materials with references to marijuana or MIPs, including the logo of Sira Naturals, Inc. d/b/a Ayr. Thus, we request the BOH amend regulation 20.6.10 (A) to allow the logo of Sira Naturals, Inc. d/b/a Ayr and brand. 2. Amend 20.6.10 to allow the logo of Sira Naturals on promotional items and materials. 3. Change its policy of requiring approval of edible packaging before allowing sales. 4. Discontinue the requirement to submit CORI reports now that the Cannabis Control Commission has that requirement. The Public Health Division provided a summary of these requests and recommendations to the BOH at the January 20, 2022 meeting. The BOH discussion included questions which the Public Health Division has researched and presents to the BOH for follow-up discussion. A summary of the research and a draft revision of Article 20 follow this document.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Vote is required.	
3.	BACK UP INFORMATION ATTACHED:
Letter from Sira Naturals, dated September 17, 2021, from Dwan Packnett, VP Gov't Relations & Community Investment	
Medical Marijuana Summary, dated March 22, 2022, from the Needham Public Health Division	
Draft revision of Article 20	



September 17, 2021

Mr. Timothy Muir McDonald
Director of Public Health
Needham Board of Health
178 Rosemary Street
Needham, MA 02494

RE: Sira Naturals, Inc. Request to Appear before the Needham Board of Health

Founded and operated by Massachusetts natives and residents since 2013, Sira Naturals weathered the unpredictable cannabis market to become one of the state's largest employers and vertically integrated cultivator, product manufacturer, and retailer of cannabis products for both the medical and adult-use markets in Massachusetts. Through a Community Benefits Agreement (CBA) signed by the Needham Board of Selectmen on June 14, 2016; the Special Permit granted by the Needham Planning and Community Development Department on June 13, 2017; and subject to the provisions of Article 20 of the Board of Health (BOH) Regulations effective March 31, 2016; Sira Naturals opened a retail medical facility at 27-29 Franklin in the Town of Needham in June 2017.

Sira Naturals seeks the Board of Health's reconsideration of Article 20 BOH Regulations governing discounted products and labeling, signage and other materials more particularly described below. The medical cannabis industry has had no detrimental impacts in the Commonwealth of Massachusetts since its introduction in 2013. And the medical marijuana industry has undergone significant technological improvements such as state monitored seed to sale Metric Tracking systems allowing data visibility to retailers across the state allowing a safe and reliable distribution to and accessibility for medical marijuana patients.

Such accessibility, however, is not available for cost-conscious consumers or those living on a fixed income who enjoy discounts similar to those provided every day at local pharmacies like Walgreens, CVS, or Walmart. The failure to provide discounts can become a barrier to use that reinforces the "illegal" stigma of cannabis. We believe promotional discounts will help to relieve this stigma by providing a more welcoming environment - similar to any pharmacy - for those marginalized by the war on drugs.



Thus, we request the BOH remove or amend regulations 20.6.5 (B) and (C) set forth below so Sira may provide discounts and loyalty programs to Needham residents.

1. 20.6.5 Registered Sales by Registered Marijuana Dispensary

B. No person shall Accept or redeem, offer to accept, or redeem, or cause or hire any person to accept or redeem, or offer to accept or redeem, through any coupon or other method, any marijuana or marijuana-infused product for less than the listed or non-discounted price; or

C. Sell marijuana or a marijuana-infused product through any discounts (e.g., “buy-two-get-one-free”) or otherwise provide any marijuana or marijuana-infused product for less than the listed or non-discounted price in exchange for the purchase of any other product.

Sira Naturals also requests the BOH allow us to discount products for sale including promotional gifts and materials with references to marijuana or MIPs, including the logo of Sira Naturals, Inc. d/b/a Ayr. Thus, we request the BOH amend regulation 20.6.10 (A) to allow the logo of Sira Naturals, Inc. d/b/a Ayr and brand.

2. 20.6.10 Marketing and Advertising Requirements

A. A RMD may develop and use a logo for labeling, signage, and other materials, but that logo may not contain medical symbols, images of marijuana and marijuana-related paraphernalia, or colloquial references to cannabis and marijuana. Likewise, a RMD may not offer for sale or as a promotional gift any items which contain symbol of or references to marijuana or MIPs, including the logo of the RMD.

Finally, while not specifically listed in Article 20, Sira Naturals is currently required to send all edible packaging to the Needham Board of Health for pre-approval before being offered for sale to patients. Since packaging and labelling is currently regulated by the Cannabis Control Commission, we would like to request amending this municipal specific requirement.

Sira is prepared to highlight specific data that shows the potential anticipated benefits of easing these restrictions and would very much like to review additional requirements such as background checks and CORIs reviewed by the Needham BOH that may have worked theoretically and before the CCC was established. But now after four years of practice with excellent outcomes, we are confident this heightened level of scrutiny has become burdensome to both Sira Naturals and the Needham BOH and is no longer needed in every instance.



Thank you for your consideration. If you have any questions, or if additional information is needed, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, reading "Dwan Packnett".

Dwan Packnett
VP Gov't Relations & Community Investment

cc: Kate Fitzpatrick, Needham Town Manager
David Davis, Needham Director of Finance
Matthew Radebach
Louis Karger
Michelle Foley
Andrea Odian



NEEDHAM PUBLIC HEALTH DIVISION



TO: Needham Board of Health

FROM: Julie McCarthy, Epidemiologist

SUBJECT: Question on Psychotropic Effects Following Topical Application of THC- Summary for 3.29.22 Board of Health Meeting

There are very few peer reviewed articles discussing psychotropic effects of THC after topical application. However, from the available literature, it seems that THC does not enter systemic circulation when applied topically and thus would not produce the psychotropic effects that are typically associated with THC.

First, as demonstrated in Hess et al., when 3 volunteers applied salves containing THC over a period of 3 days, every 2-4 hours, THC could not be detected in their blood or urine (samples taken ever 2-4 hours until 15 hours after the last application; n=10 for urine and blood samples). One participant applied the salve to broken skin, as this may enhance transdermal uptake by increasing permeability, but the blood and urine samples collected from this participant remained negative for THC.

As mentioned in Hess et al. but detailed more in Touitou et al. and Tijani et al., the chemistry of THC does not allow for permeation of the skin into the dermis, where it would enter systemic circulation. THC is a highly lipophilic molecule (lipophilic= ability to dissolve in fats/oils) and is sensitive to degradation by light and heat (i.e. some of the product is lost immediately after application due to UV rays, heat/etc). When applied to skin, substances penetrate from the outer layer of the skin into the deeper layers. The lipophilic nature of THC means it tends to stay in the stratum corneum (main barrier- first layer of the epidermis) of the skin versus moving deeper into the layers of the skin and then systemic circulation. In fact, it seems that THC creates a reservoir in the stratum corneum; it doesn't reach systemic circulation because it does not permeate the aqueous epidermis underneath the stratum corneum (due to its highly lipophilic nature versus hydrophilic nature, which would mean ability to mix in/dissolve in water). It is possible that certain THC products could be transdermal with the addition of agents to assist in penetration of the stratum corneum, but it seems that there are very few of these products available on the market and when available, may come in the form of gels or patches.

Sources (PDF documents available upon request):

Hess C, Krämer M, Madea B. Topical application of THC containing products is not able to cause positive cannabinoid finding in blood or urine. *Forensic Sci Int.* 2017 Mar;272:68-71. doi: 10.1016/j.forsciint.2017.01.008. Epub 2017 Jan 16. PMID: 28122323

Touitou E, Fabin B. Altered skin permeation of a highly lipophilic molecule: tetrahydrocannabinol. *Int J Pharm* 1988; 43; 17-22

Tijani AO, Thakur D, Mishra D, Frempong D, Chukwunyere UI, Puri A. Delivering therapeutic cannabinoids via skin: Current state and future perspectives. *J Control Release.* 2021 Jun 10;334:427-451. doi: 10.1016/j.jconrel.2021.05.005. Epub 2021 May 6. PMID: 33964365



Board of Health

Edward Cosgrove, PhD
Vice Chair, Board of Health

Stephen Epstein, MD, MPP
Chair, Board of Health

Jane Fogg, MD, MPH
Member, Board of Health

ARTICLE 20 **REGULATION TO ENSURE THE SANITARY AND SAFE OPERATIONS OF ~~REGISTERED MARIJUANA DISPENSARIES~~ MARIJUANA TREATMENT CENTERS ~~MARIJUANA TREATMENT CENTERS~~ AND THE SALE OF MARIJUANA TO PERSONS WITH DOCUMENTED MEDICAL NEEDS**

SECTION 20.1 **AUTHORITY**

This regulation is promulgated under the authority granted to the Needham Board of Health under Massachusetts General Laws Chapter 111, Section 31 which states that "boards of health may make reasonable health regulations," and pursuant to Chapter 369 of the Acts of 2012 An Act for the Humanitarian Medical Use of Marijuana ("The Act") and [the Cannabis Control Commission Massachusetts Department of Public Health Regulations, regulation, 935 CMR 501.000 : MEDICAL USE OF MARIJUANA](#). [The primary purpose of 935 CMR 501.000 is to implement St. 2017, c. 55: An Act to Ensure Safe Access to Marijuana; M.G.L. c.94G and M.G.L. c. 941](#)

SECTION 20.2 **PURPOSE**

The primary purpose of this regulation is to provide for local oversight and inspection of [Registered Marijuana Dispensaries](#) [Marijuana Treatment Centers \(RMDMTCs\)](#) and hardship cultivation sites within the town; oversight and inspections will be provided by Needham's Board of Health and its agents to ensure the safe and sanitary operation of any such [RMDMTC](#) or hardship cultivation site consistent with public health and safety.

The regulation is intended to ensure that only people with a documented medical need will acquire medical marijuana or marijuana-infused products pursuant to the Act, and that

marijuana will not be diverted to individuals without a documented medical need. Since the existence of an ~~RMDMTC~~ or hardship cultivation site present a risk of improper diversion and other collateral consequences within the community, it is necessary to regulate this activity at the local level.

SECTION 20.3 DEFINITIONS

Unless otherwise indicated, terms used throughout this regulation shall be defined as they are in ~~935 CMR 501.000105-CMR 725.004~~.

Board of Health: Town of Needham Board of Health and its designated agents.

Board of Health Agent: The Director of Public Health and any town employee designated by the Director, which may include Public Health Department staff, law enforcement officers, fire officials, and code enforcement officials

Business Agent: A ~~Dispensary Treatment Center~~ Agent, as also defined in ~~935 CMR 501.000105-CMR 725.004~~, who has been designated by the ~~RMDMTC~~ Permit Holder to be a manager in charge of the ~~RMDMTC~~ facility and its operations.

Card Holder: A registered qualifying patient, a personal caregiver, or a ~~dispensary Treatment Center~~ agent of a ~~RMDMTC~~ who has been issued and possess a valid registration card.

Director: The Director of Public Health.

~~Dispensary Treatment Center Agent~~: A ~~Dispensary Treatment Center~~ Agent, as also defined in ~~935 CMR 501.000,105-CMR 725.004~~, is a board member, director, employee, executive, manager, or volunteer of a ~~RMDMTC~~, who is at least 21 years of age. Employee includes a consultant or contractor who provides on-site services to a ~~RMDMTC~~ related to the cultivation, harvesting, preparation, packaging, storage, testing, or dispensing of marijuana.

Home Permit: Issued by the Board of Health, to be renewed annually, to the holder of a hardship cultivation registration issued by the ~~Cannabis Control Commission Massachusetts Department of Public Health (DPH(CCC))~~ in ~~935 CMR 501.000105-CMR 725.000~~, which registration is for a specific location within the town.

Non-Residential Roll-Your-Own (RYO) Machine: A mechanical device made available for use (including to an individual who produces rolled marijuana products solely for the individual's own personal consumption or use) that is capable of making rolled marijuana products. RYO machines located in private homes used for solely personal consumption are not Non-Residential RYO machines.

Period of Performance: The time period for which violations of a ~~RMDMTC~~ or Home Permit are

counted. For example, a violation that occurs in July 2016 will no longer weigh on the ~~RMDMTC~~ or Home Permit holder's record with the Board of Health after the passage of 36 months from the date of the discipline imposed for that violation. If the Board of Health hearing on the violation occurred on July 31, 2016, then the violation will be outside the period of performance and no longer counted on August 1, 2019.

~~Registered Marijuana Dispensary Marijuana Treatment Center (RMDMTC):~~ A ~~Registered Marijuana Dispensary (also known as a Medical Marijuana Treatment Center)~~ is a ~~not-for-profit~~ entity registered under ~~105-CMR-725.100~~935 CMR 501.000, that acquires, cultivates, possesses, processes (including development of related products such as edible MIPs, tinctures, aerosols, oils, or ointments), transfers, transports, sells, distributes, dispenses, or administers marijuana, products containing marijuana, related supplies, or educational materials to registered qualifying patients or their personal caregivers. The term ~~RMDMTC~~ may also refer, in context, to the site(s) of dispensing, cultivation, and preparation of marijuana by an ~~RMDMTC~~ entity.

Commented [TZ1]: Our current MTC is a for profit business. This should be removed from our regulations to be updated with the changes made by the CCC in 2017 & to be accurate with our current businesses.
<https://www.sec.state.ma.us/cor/coralert/cormedmaralert.htm>

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~~RMDMTC Permit:~~ A ~~Registered Marijuana Dispensary Treatment Center Marijuana Treatment Center~~ Permit, to be renewed annually, which may be issued by the Board of Health to a non-profit corporation holding a Certificate of Registration issued by the Massachusetts Department of Public Health (DPH) pursuant to 935 CMR 501.000~~105-CMR-725.000~~, which permits a ~~RMDMTC~~ to operate within the town.

Self-Service Display: Any display from which customers may select marijuana or a marijuana-infused product without assistance from a ~~Dispensary Treatment Center~~.

Town: The Town of Needham, Massachusetts.

Vending Machine: Any automated or mechanical self-service device, which upon insertion of money, tokens or any other form of payment, dispenses or makes marijuana products.

Verified Financial Hardship: Is an individual's status as a recipient of MassHealth or Supplemental Security Income, or else a determination that an individual's income does not exceed 300% of the federal poverty level when adjusted for family size.

Violation: A failure to comply with an operational requirement outlined in this regulation. For this regulation, a MINOR violation is a failure to comply with specific regulatory requirements which, while important, do not jeopardize the primary purposes of this regulation. A MAJOR violation is one that has the potential to jeopardize the primary purposes of this regulation, meaning that non-compliance in this area may divert marijuana to individuals without a documented medical need and/or which may produce significant collateral consequences to community health and safety.

SECTION 20.4 PERMIT TO OPERATE A REGISTERED MARIJUANA ~~DISPENSARY TREATMENT CENTER~~

20.4.1 – Permits for a ~~Registered Marijuana Dispensaries~~ Marijuana Treatment Centers

- A. No person or organization shall sell or otherwise distribute marijuana or marijuana-infused products within the Town of Needham without first obtaining a RMDMTC Permit. A RMDMTC Permit may only be issued to a nonprofit corporation which:
- (i) has a current Certificate of Registration issued by the ~~Massachusetts Department of Public Health (DPH)~~ Cannabis Control Commission (CCC) pursuant to 935 CMR 501.000 ~~105 CMR 725.000~~; and
 - (ii) has a permanent, non-mobile location in Needham approved by the ~~DPH~~ CCC for use as an RMDMTC; and
 - (iii) ~~is in compliance~~ complies with all applicable zoning requirements.

And which provides satisfactory documentation of compliance with those requirements to the Board of Health.

- B. The applicant shall also submit to the Board of Health a copy of the operating policies and procedures for the RMDMTC which was submitted to ~~DPH~~ CCC pursuant to ~~105 CMR 725.000~~ 935 CMR 501.000 and any other relevant ~~DPH~~ CCC directives, memorandums or notifications.
- C. The applicant shall sign a statement declaring that the applicant understands that, under this local regulation:
- (i) all Dispensary Treatment Center Agents are responsible for complying with all local and state regulations pertaining to the operation of the RMDMTC. Specifically, a violation of any provision of 935 CMR 501.000 ~~105 CMR 725.000~~ or other applicable state regulations constitutes a violation of this regulation, which may be enforced by the Board of Health; and
 - (ii) the applicant is responsible for providing instruction and training for ~~dispensary~~ Treatment Center agents in all applicable local and state regulations; and
 - (iii) the fact that a Dispensary Treatment Center Agent, vendor, or other person associated with the RMDMTC is unaware of a regulation or lacks understanding of its content, shall not be a defense to any violation; and
 - (iv) the Board of Health and its designated agents may conduct periodic, unannounced inspections of the RMDMTC premises.
- D. The fee for a RMDMTC Permit shall be at the level determined in the Needham Board of Health's Fee Schedule. All RMDMTC Permits expire on June 30 annually, regardless of the year or day and month on which they were issued.
- E. The initial plan review for marijuana-infused product (MIP) production facilities (see section 20.5.1) shall result in a fee at the level determined in the Needham Board of Health's Fee Schedule. The initial plan review for the safe and sanitary storage of

marijuana-infused products in a RMDMTC (see section 20.5.2) shall result in a fee at the level determined in the Needham Board of Health's Fee Schedule. The initial plan review for trash collection and the safe and sanitary disposal of waste (see section 20.5.3) shall result in a fee at the level determined in the Needham Board of Health's Fee Schedule. The plan reviews for emergencies and continuity of operations (see section 20.5.4) and for safety and security (see section 20.5.5) shall result in a fee at the level determined in the Needham Board of Health's Fee Schedule.

F. RMDMTC Permits in good standing may be renewed annually by the Board of Health, at the Board's discretion, based on a completed and satisfactory application, in a form required by the Board, filed by the RMDMTC and payment by the RMDMTC of the annual fee according to the fee schedule.

- (i) Any material changes from the most recent approved operating policies and procedures, or from the plans described in Section E above shall be disclosed in the renewal application, and RMDMTC shall pay the applicable fees for any reviews which the Board deems necessary as a condition of renewal.
- (ii) If a permit has been modified by the Board, the RMDMTC shall demonstrate compliance with any requirements of that modification, to the satisfaction of the Board, as a condition of renewal and shall pay the applicable fees for any reviews which the Board deems necessary as a condition of renewal.
- (iii) If a permit has been suspended by the Board, prior to reinstatement of the permit, the RMDMTC shall provide evidence satisfactory to the Board that it will comply with all requirements of the Board and these regulations, and shall pay the applicable fees for any reviews which the Board deems necessary as a condition of renewal
- (iv) If a permit has been revoked by the Board, the RMDMTC permit may be reissued based on a new application, all necessary fees, and a public hearing.

G. A separate RMDMTC Permit is required for each RMDMTC retail establishment selling marijuana or marijuana-infused products within the Town. A violation of this provision constitutes a MINOR violation of these regulations.

H. Each RMDMTC Permit shall be displayed at the RMDMTC retail establishment in a conspicuous place. A violation of this provision constitutes a MINOR violation of these regulations.

I. A RMDMTC Permit is non-transferable. A violation of this provision constitutes a MINOR violation of these regulations.

J. A RMDMTC Permit will not be renewed if the RMDMTC Permit Holder has failed to pay any outstanding fines or fees or failed to satisfy any other penalties or conditions

lawfully imposed by the Town.

- K. A ~~RMDMTC~~ may not open for business before 8:00 A.M. and shall close no later than 8:00 P.M., on each day the ~~RMDMTC~~ is open. Deliveries from, or on behalf of, the ~~RMDMTC~~ that are made to patients must adhere to the same hours. The hours and days of ~~RMDMTC~~ operation must be posted conspicuously on the front entrance door. A violation of this provision constitutes a MINOR violation of these regulations.
- L. Acceptance of a ~~RMDMTC~~ Permit constitutes an agreement by the ~~RMDMTC~~ that it will adhere to the practices, policies, and procedures described or submitted with its application, as well as the relevant laws, state and local regulations, and conditions imposed by the Board of Health as part of the permit process.

20.4.2 – Inspections and Compliance of ~~Registered Marijuana Dispensaries~~ Marijuana Treatment Centers

- A. ~~Dispensary Treatment Center~~ Agents must present their Registration Card on request by any Board of Health agent. A violation of this provision constitutes a MINOR violation of these regulations.
- B. Issuance and maintaining a ~~RMDMTC~~ Permit shall be conditioned on the ~~RMDMTC~~ Permit Holder's ongoing consent to periodic, unannounced inspections of the ~~RMDMTC~~ premises by the Board of Health and its designated agents. The applicant also consents to abide by the provisions relating to inspections found in 935 CMR 501.000 ~~105 CMR 725.300~~ and related sections including, but not limited to, "deficiency statements" and "plans of correction." A violation of this provision constitutes a MINOR violation of these regulations.
- C. There must be a designated Business Agent on the premises at all times that the ~~RMDMTC~~ is open for business. A violation of this provision constitutes a MINOR violation of these regulations.
- D. The Board of Health and its designated agents, as well as the Needham Police Department, shall be provided with an updated phone list through which a Business Agent may be reached on a 24-hour basis. A violation of this provision constitutes a MINOR violation of these regulations.
- E. Issuance and maintaining a ~~RMDMTC~~ Permit shall be conditioned on the ~~RMDMTC~~ Permit Holder's ongoing consent to provide the Board of Health with copies of the Registration Cards for all ~~Dispensary Treatment Center~~ Agents working at the ~~RMDMTC~~, and the names of all Business Agents of the ~~RMDMTC~~, and to submit any changes in staffing and registration information within five (5) business days. The notification and information about changes in staffing and registration shall be submitted in either paper copy via courier or certified mail or else electronically in a

verified/e-signed PDF format. A violation of this provision constitutes a MINOR violation of these regulations.

- F. ~~As per, 935 CMR 501.030 (3), the RMDMTC~~ Permit Holder shall submit to the Cannabis Control Commission the Criminal Offender Record Information (CORI) ~~inquiry~~ and a Sex Offender Registry Information (SORI) ~~inquiry~~ on all applicants for the positions of ~~Dispensary Treatment Center~~ Agent and for Business Agents. ~~Such checks shall be conducted in all states in which the applicant has worked or resided within the last ten (10) years.~~ The results of those inquiries shall be submitted reported to the Needham Public Health ~~Division~~department upon request. A violation of this provision constitutes a MINOR violation of these regulations.

Commented [LS2]: Added per Board discussion

- G. Issuance and maintaining a ~~RMDMTC~~ Permit shall be conditioned on the ~~RMDMTC~~ Permit Holder's ongoing consent to provide the Board of Health with updated copies of all ~~RMDMTC~~ documents including copies of staffing plans, training protocols, audit results, security assessments (subject to appropriate redaction), and all other documents. Updated submissions shall be sent to the Board of Health monthly electronically in a verified/e-signed PDF format. A violation of this provision constitutes a MINOR violation of these regulations.
- H. No ~~RMDMTC~~ Permit Holder shall permit any disorder, disturbance, or illegality of any kind to take place in or on the licensed premises. The term "illegality" includes, but is not limited to, any violation of ~~935 CMR 501.000 105-CMR 725.000~~ and related directives, memoranda or notifications; and any violation of these regulations promulgated by the Board of Health. The Permit Holder shall be responsible for any disorder, disturbance or illegality of any kind whether present or not. A violation of this provision shall be considered either a MINOR or a MAJOR violation depending upon the severity of the illegality identified.
- I. Failure or refusal of an ~~RMDMTC~~ or Home Permit holder to cooperate with the Board of Health or its agent shall be considered a MAJOR violation of these regulations.

20.4.3 – Records Retention of ~~Registered Marijuana Dispensaries~~ Marijuana Treatment Centers

- A. A ~~RMDMTC~~ Permit Holder shall notify the Needham Public Health Department and the Board of Health verbally and in writing within 24 hours of a visit to the premises or request for information by any representative of ~~DPH-CCC~~ acting in an official capacity. The ~~RMDMTC~~ Permit Holder shall provide the Board with any reports, correspondence, emails or other information from ~~DPH-CCC~~ on demand or, in any case, within five (5) business days after receipt by the ~~RMDMTC~~. A violation of this provision constitutes a MINOR violation of these regulations.

- B. Video surveillance shall conform to the requirements of ~~105 CMR 725.110~~ 935 CMR 501.110 (~~Ø5~~) and any other related regulations, directives, ~~memorandums~~ memoranda, or notifications from ~~DPHCCC~~. In addition, as conditions of issuing or maintaining its RMDMTC Permit, the Board of Health may require other, reasonable surveillance operations and security (e.g., an off-site backup system). Furthermore, the RMDMTC must allow for immediate viewing of video surveillance by the Board of Health or its designated agents, upon request. A copy of a requested recording shall be provided as soon as practicable to these officials. All video recordings shall be retained for a minimum of 90 days. Furthermore, as soon as the RMDMTC is aware of any recording that might relate to a criminal, civil or administrative investigation or legal proceeding of any kind, the RMDMTC shall not alter or destroy the recording without the written permission of both the Director and the Chief of Police for the Town of Needham. A violation of this provision constitutes a MAJOR violation of these regulations.
- C. Issuance and maintaining a RMDMTC Permit is conditioned on maintaining all records outlined in ~~935 CMR 501.105~~ 935 CMR 501.105(4)(9) and other ~~DPHCCC~~ regulations, directives, ~~memoranda~~ memoranda, and notifications, along with any other documents reasonably required by the Board of Health in writing. Following closure of an RMDMTC, all records must be kept for at least two (2) years at the expense of the RMDMTC and in a form and location acceptable to the Board of Health. Moreover, as a condition of issuing and maintaining a RMDMTC Permit, the Board of Health may reasonably require that the new owner of a RMDMTC retain records generated by the previous RMDMTC at the expense of the new RMDMTC. A violation of this provision constitutes a MINOR violation of these regulations.

20.4.4 – Other Restrictions for ~~Registered Marijuana Dispensaries~~ Marijuana Treatment Centers

- A. For RMDMTCs that cultivate marijuana, the cultivation and processing facility shall not adversely affect the health or safety of the nearby residents or businesses by creating dust, glare, heat, noise, nuisance odors, noxious gases, materials, processes, products or wastes. Growing areas shall be within a self-contained, locked structure, with a 1-hour firewall assembly made of green board or other construction specifically approved by the Town's building inspector, well ventilated with odor control, and shall not create humidity or mold issues within the establishment. A violation of this provision constitutes a MAJOR violation of these regulations.
- B. No RMDMTC is permitted to sell or distribute alcoholic beverages or tobacco products and may not hold either a tobacco sales permit or a liquor license. A violation of this provision constitutes a MAJOR violation of these regulations.
- C. No RMDMTC is permitted to hold a Common Victualler license for on-premises food consumption. A violation of this provision constitutes a MAJOR violation of these regulations.

- D. No ~~RMDMTC~~ is permitted to be a Massachusetts lottery dealer or to engage in any gaming activities. A violation of this provision constitutes a MAJOR violation of these regulations.

SECTION 20.5 ~~PLAN REVIEWS OF REGISTERED MARIJUANA DISPENSARIES~~MARIJUANA TREATMENT CENTERS

20.5.1 – Off-Site Cultivation ~~and /MIP Marijuana-Infused Product~~ Preparation Plan Review

An applicant who wishes to sell edible marijuana-infused products (MIPs) at a ~~RMDMTC~~ must, prior to beginning operations, undergo a plan review of any MIP processing and preparation facilities, regardless of their location, for any MIP that will, at some point, be delivered, distributed, produced, sold, or stored within the Town. The Board of Health and its designated agents will conduct the plan review, which may include a facilities inspection, to ensure sanitary handling and processing conditions and practices.

20.5.2 – Plan Review for MIP Storage, ~~and Handling, and Labeling~~ at ~~RMDMTC~~ Retail Location

An applicant who wishes to sell edible marijuana-infused products (MIPs) at a ~~RMDMTC~~ must, prior to beginning operations, undergo a plan review of all MIP storage, handling, and sale locations within the ~~RMDMTC~~. The Board of Health and its designated agents will conduct the plan review, which may include a facilities inspection, to ensure sanitary handling and storage conditions and practices in line with the requirements outlined in the 105 CMR 590.000, the State Sanitary Code.

The requirements of 105 CMR 590.000 include specific actions to prevent the growth of bacteria. *Clostridium botulinum* is a bacterium whose spores are present on plant material and in soil. Spores are present in many plant material extractions and can survive cooking ~~and~~ ~~/~~pasteurization temperatures. These spores can spontaneously germinate (grow into bacteria) given the right conditions ~~or~~ ~~/~~substrate. The bacteria can produce a powerful toxin which can cause severe illness or death. Specific actions required of a ~~RMDMTC~~ selling MIP are:

- A. Except during preparation, cooking, or cooling, time ~~and~~ ~~/~~temperature control for safety (TCS) items shall be maintained at 5°C (41°F) or less to prevent the growth of bacteria. This shall apply, unless specifically permitted by the Board of Health or its agents, to all:
 - (i) marijuana extractions and concentrates intended for non-smoking oral consumption (i.e., eating, drinking);
 - (ii) infusions made from those extractions, such as infused oils, butters, honey, etc.; and
 - (iii) foods that have such infusions ~~or~~ ~~/~~extractions as an ingredient.
- B. If a marijuana extraction, concentrate, or infusion has been continuously refrigerated and is then added as an ingredient into baked goods that have a low water activity, such as most cookies and brownies, these baked products may be considered shelf-stable if

explicitly reviewed and permitted by the Board of Health or its agents.

- C. If the extracted marijuana concentrate is immediately infused into a 190/200 proof alcohol with no additional ingredients (including flavorings or other additives) and the tincture is homogenous, then the growth of *C. botulinum* spores may have been prevented. Homogenous 190/200 proof alcohol tinctures may be safe to store outside of refrigerated temperatures if explicitly reviewed and permitted by the Board of Health or its agents.
- D. Approvals for any variance from the safe and sanitary storage requirements outlined above will be based upon:
 - (i) a review of written procedures that are followed to make the product;
 - (ii) the use of control measures described above; and
 - (iii) any other scientific evidence submitted by the manufacturer from a certified laboratory or process authority that demonstrates the safety of the product in question. For example:
 - a) pH and/or water activity testing must be conducted by an accredited laboratory;
 - b) three samples from separate batches must be tested; and
 - c) all samples must meet the criteria for a non-potentially hazardous food as described in Tables A and B of the 2013 *FDA Food Code*.
- E. At any time, the Board of Health or its agents may require a Hazard Analysis and Critical Control Points (HACCP) plan before approving the distribution of MIPs.
- F. Photos or images of food are not allowed on MIP product labels.
- G. All MIP must be contained in an opaque package.
- H. If the MIP is identified on the label using a common food name (i.e. ~~Brownie~~brownie, ~~Honey~~honey, ~~Chocolate~~chocolate, ~~Chocolate~~chocolate ~~Chip~~chip ~~Cookie~~cookie, or ~~Green~~green ~~Tea~~tea), the phrase "MEDICAL MARIJUANA" must be written before the common food name. This phrase must be as easy to read as the common food name (i.e., same font size).
- I. As per 935 CMR 501.105 (6) (b), packaging is explicitly prohibited from
 - a. Imitating or having a semblance to any existing branded consumer products, including foods and beverages, that do not contain marijuana
 - b. Featuring cartoons
 - c. Featuring a design, brand or name that resembles a non-cannabis consumer product of the type that is typically marketed to minors
 - d. Featuring symbols or celebrities that are commonly used to market products to minors

e. Featuring images of minors

f. Featuring words that refer to products that are commonly associated with minors or marketed to minors

Commented [LS3]: This section is new for Article 20

H.J. Only generic food names may be used to describe the MIP. As an example, using “Snickerdoodle” to describe a cinnamon cookie is prohibited.

H.K. All MIP labels must state the following:

- (i) A batch number, sequential serial number, and bar code when used, to identify the batch associated with manufacturing and processing;
- (ii) A statement that the product has been tested for contaminants, that there were no adverse findings, and the date of testing in accordance with ~~105 CMR 725.105(C)(2)~~ 935 CMR 501.105 (5);
- (iii) The manufacture date as well as a “Best by” or “Use by” or expiration date;
- (iv) Net weight of Medical Marijuana and the THC level in the MIP, and the net weight of Medical Marijuana and the THC level contained per dose/serving (if the MIP is not a single serving/dose);
- (v) A list of ingredients as well as the cannabinoid profile of the marijuana contained within the MIP;
- (vi) A warning if nuts or other known allergens are contained in the product;
- (vii) Directions for use of the product if relevant;
- (viii) The statement “For Medical Use Only”; and
- (ix) The statement, including capitalization: “This product has not been analyzed or approved by the FDA. There is limited information on the side effects of using this product, and there may be associated health risks. Do not drive or operate machinery when under the influence of this product. KEEP THIS PRODUCT AWAY FROM CHILDREN.”

L. Labels and packaging of edible and non-edible products may be reviewed by a Board of Health agent for compliance with all requirements stated above.

Commented [LS4]: This section is brand new.

A violation of any of the provisions of 20.5.2 (A) through (J) shall constitute a MINOR violation of these regulations.

20.5.3 – Plan Review for Safe and Secure Disposal of Waste, Refuse, or Damaged Product

An applicant for a ~~RMDMTC~~ Permit shall develop a plan for the safe and secure storage and disposal of any waste, refuse, or damaged marijuana, MIPs, and related products. Such a plan will be based on the requirements outlined in 935 CMR 501.105 (12) ~~105 CMR 725.105(J)~~ and will be subject to review and approval by the Board of Health and its designated agents prior to the ~~RMDMTC~~ beginning operations.

20.5.4 – Plan Review for Emergencies and Continuity of Operations

In accordance with emergency planning requirements specified in ~~105-CMR-725.105(A)~~⁹⁹³⁵ CMR 105 (1) (i) and similar to the responsibilities outlined in the Risk Management and Continuous Quality Improvement section of the *Guidelines for the Accreditation of Opioid Treatment Programs* which are authorized in 42 CFR 8.12(c), an applicant for a ~~RMDMTC~~ Permit shall develop an emergency management program to ensure the safety of its staff and customers and a mechanism by which to ensure the continuity of its operations (COOP) in response to inclement weather, man-made emergencies, supply chain disruptions, or discipline (including permit suspension) which result in the ~~RMDMTC~~ being unable to provide medical marijuana and MIPs to patients with a documented medical need. Such a program shall include:

- A. A detailed emergency operations plan (EOP) and a process by which staff will be trained on that plan and their knowledge of it tested via drills and exercises. The emergency operations plan will:
 - (i) Include a set of contact procedures for staff, customers, and community partners in the event of an emergency;
 - (ii) Specify a process for contacting ~~Dispensary Treatment Center~~ Agents on a 24-hour, 7-day-a-week basis through a telephone answering service or a similar service provider; and
 - (iii) Include protocols for the maintenance of life safety equipment (fire extinguishers and AEDs, for example) and the training of staff on the proper use of the same;
- B. A detailed continuity of operations (COOP) plan for the emergency administration of medication in response to inclement weather, man-made emergencies, supply chain disruptions, or discipline (including permit suspension under these regulations) which result in the ~~RMDMTC~~ being unable to provide medical marijuana and MIPs to patients with a documented medical need. This continuity of operations plan will:
 - (i) Include provisions for the notification of patients in the event that inclement weather, man-made emergencies, supply chain disruptions, or discipline under these regulations might result in a temporary disruption to medication supply; and
 - (ii) Include formal contractual arrangements to fulfill patient orders for medical marijuana and MIPs in the face of service disruption; these plans will specify order fulfillment and delivery arrangements with at least two (2) ~~RMDMTCs~~ that are not otherwise affiliated with the applicant for a Needham ~~RMDMTC~~ Permit.

Such a plan will be subject to review and approval by the Board of Health or its designated agents prior to the ~~RMDMTC~~ beginning operations, and at least annually thereafter.

20.5.5 – Safety and Security Plan Review

In accordance with the criteria specified in ~~105-CMR-725~~⁹⁹³⁵ CMR 105.110—the Security Requirements for ~~Registered Marijuana Dispensaries~~Marijuana Treatment Centers—an applicant for a ~~RMDMTC~~ Permit shall develop a comprehensive security plan. Such a plan will be subject to review and approval by the Director, the Chief of Police, and the Fire Chief prior to the ~~RMDMTC~~ beginning operations, and at least semi-annually thereafter.

**SECTION 20.6 MARIJUANA SALES BY REGISTERED MARIJUANA ~~DISPENSARY~~
TREATMENT CENTER**

20.6.1 – No person or organization shall sell marijuana or marijuana-infused products from any location other than at a ~~RMDMTC~~ that possesses a valid ~~RMDMTC~~ Permit. A violation of this provision constitutes a MAJOR violation.

20.6.2 – A sign shall be conspicuously posted on the exterior of the establishment at each entrance to the ~~RMDMTC~~, indicating that the entry to persons who do not possess either a valid Registration Card or a Personal Caregiver Registration Card is prohibited. The sign shall remain unobstructed, secured to the building at a height of no less than four (4) feet or greater than seven (7) feet from the ground, and maintained in good condition. A violation of this provision shall be considered a MAJOR violation.

20.6.3 – ~~Dispensary Treatment Center~~ Agents or organizations shall verify the Registration Card or Personal Caregiver Registration Card of the Card Holder in accordance with the procedures outlined in ~~105 CMR 725935~~ CMR 105.000 and any other directives, ~~memorandums~~ memoranda, or notifications from DPH. In addition, the Registration Card shall be verified for each and every Card Holder or Personal Caregiver, on each and every occasion that he ~~or~~ she enters the ~~RMDMTC~~, without exception. The failure to verify, regardless of the prior history of the Card Holder at the ~~RMDMTC~~, constitutes a MAJOR violation of this regulation.

20.6.4 – All retail sales of marijuana and marijuana-infused products must be face-to-face between the ~~Dispensary Treatment Center~~ Agent and the Card Holder or Personal Caregiver on the premises of the ~~RMDMTC~~, unless the Card Holder or Personal Caregiver is the proper recipient of home delivery in accordance with all applicable ~~DPH-CCC~~ regulations. A violation of this provision constitutes a MAJOR violation of these regulations.

20.6.5 – No person shall:

- A. Distribute, or cause to be distributed, any free samples of marijuana or marijuana-infused products; or
- B. Accept or redeem, offer to accept or redeem, or cause or hire any person to accept or redeem, or offer to accept or redeem, through any coupon or other method, any marijuana or marijuana-infused product for less than the listed or non-discounted price; or
- C. Sell marijuana or a marijuana-infused product through any discounts (e.g., “buy-two-get-one-free”) or otherwise provide any marijuana or marijuana-infused product for less than the listed or non-discounted price in exchange for the purchase of any other product.

- D. The provisions of 20.6.5 shall not prohibit dispensing of free or discounted marijuana or marijuana-infused products to card holders whose ability to pay for a product deemed medically necessary is limited by demonstrable financial hardship.
- E. A violation of any of the provisions of 20.6.5(A) through 20.6.5(D) shall constitute a MAJOR violation of these regulations.

20.6.6 – ~~RMDMTCs~~ are prohibited from using self-service displays. A violation of this provision shall be considered a MINOR violation.

20.6.7 – ~~RMDMTCs~~ are prohibited from using vending machines. A violation of this provision shall be considered a MINOR violation.

20.6.8 – ~~RMDMTCs~~ are prohibited from using Non-Residential Roll-Your-Own machines. A violation of this provision shall be considered a MINOR violation.

20.6.9 – A ~~RMDMTC~~ and its ~~Dispensary Treatment Center~~ agents are prohibited, in accordance with restrictions outlined in 935 CMR 501.105 (4) and (6)~~105 CMR 725.105(K) and (L)~~, from providing:

- A. Any statement, design, representation, picture, or illustration that encourages or represents the use of marijuana for any purpose other than to treat debilitating medical condition or related symptoms;
- B. Any statement, design, representation, picture, or illustration that encourages or represents the recreational use of marijuana;
- C. Any statement, design, representation, picture, or illustration related to the safety or efficacy of marijuana unless supported by substantial evidence or substantial clinical data with reasonable scientific rigor as determined by the Board of Health or its agents; or
- D. Any statement, design, representation, picture, or illustration portraying anyone under 18 years of age.
- E. A violation of any of the provisions of 20.6.9(A) through 20.6.9(D) shall constitute a MINOR violation of these regulations.

20.6.10 – A ~~RMDMTC~~, in accordance with restrictions outlined in 935 CMR 501.105 (4) and (6)~~105 CMR 725.105(K) and (L)~~, must adhere to the following Marketing and Advertising Requirements:

- A. An ~~RMDMTC~~ may develop and use a logo for labeling, signage, and other materials, but that logo may not contain medical symbols, images of marijuana and marijuana-related

paraphernalia, or colloquial references to cannabis and marijuana. Likewise, a ~~RMDMTC~~ may not offer for sale or as a promotional gift any items which contain symbol of or references to marijuana or MIPs, including the logo of the ~~RMDMTC~~.

Commented [LS5]: The CCC does allow logos on promotional products, including clothing.

- B. An ~~RMDMTC~~ may only identify the ~~MTC~~ building /~~RMDMTC~~ location by the registered name, and shall not display advertisements for marijuana or any brand name nor utilize graphics related to marijuana or paraphernalia on the building.
- C. ~~RMDMTC~~ external signage shall not be illuminated except for a period of 30 minutes before sundown until closing, and shall comply with Article 5 of the Town of Needham By-Laws which regulates signage advertising. Neon signage is prohibited at all times.
- D. No marijuana, MIPs, and other related products shall be visible or displayed in such a way as to be seen from the exterior of a ~~RMDMTC~~. Within the ~~RMDMTC~~, one sample of each marijuana strain and each MIP may be displayed in a transparent and locked case.
- E. Inside the ~~RMDMTC~~, all marijuana which is not displayed in accordance with state and local restrictions (as outlined in ~~105-CMR-725935 CMR 501.105(4)(a) (440)~~ and in Section 20.6.10(D) above) shall be stored in a locked, access-controlled space in a limited access area during non-business hours. This access-controlled space shall be inaccessible to any persons other than ~~dispensary~~ Treatment Center agents.
- F. An ~~RMDMTC~~ shall provide a catalogue or a printed list of the prices and strains of marijuana available at the ~~RMDMTC~~ to registered qualifying patients and personal caregivers upon request; may display a list of product prices within the MTC as long as it is not visible from outside the MTC; and may list product prices on the MTC website; but shall not advertise productthe prices of marijuana.
- G. A violation of any of the provisions of 20.6.10(A) through 20.6.10(F) shall constitute a MINOR violation.
- H. If, during the course of an inspection or compliance check at the ~~RMDMTC~~ Cultivation/Production Site, mold, infestation, or other diseases affecting marijuana plants is observed, then the Board of Health or its Agents may order the segregation and/or destruction of all such plants (as well as surrounding plants) to prevent a threat to the public's health.

Commented [LS6]: Added per BOH discussion

SECTION 20.7 HOME CULTIVATION

20.7.1 – Marijuana cultivation or processing of any kind is prohibited within the town of Needham without a ~~RMDMTC~~ Permit or Home Permit issued by the Needham Board of Health.

20.7.2 – Prior to any home cultivation taking place within the town, even by a qualifying patient

or caregiver under ~~105-CMR-725.000~~935 CMR 501.000, the respective individual must obtain a Home Permit. Cultivation that takes place without a permit is outside the coverage of the medical marijuana program and is subject to prosecution as a crime under Massachusetts General Laws, Chapter 94C.

20.7.3 – A Home Permit shall be granted if the Board of Health determines that:

- A. The applicant does not have access to an ~~RMDMTC~~ by any of:
 - (i) public or private transportation, or
 - (ii) a caregiver with transportation, or
 - (iii) a ~~RMDMTC~~ that will deliver to the applicant or the applicant's caregiver's primary address.

Or that:

- B. The applicant has a verified financial hardship (as defined in ~~105-CMR725.004~~935 CMR 501.002 as enrollment in either MassHealth or Supplemental Security Income, or else that an individual's income does not exceed 300% of the federal poverty level, adjusted for family size) and does not have access to an ~~RMDMTC~~ willing to provide the applicant marijuana at no or an affordable cost.

Applicants who fail to meet the above-described hardship standard will not receive a Home Permit and will be informed, in a written statement, that marijuana cultivation is prohibited in Needham without a ~~RMDMTC~~ Permit or Home Permit, and that any such cultivation is outside the coverage of the medical marijuana program and is subject to prosecution as a crime under Massachusetts General Laws, Chapter 94C.

20.7.4 – Subject to the provisions of Section 20.7.3, the Board of Health may issue a Home Permit authorizing cultivation activities at a specified address within the town, provided that the applicant:

- A. Submits to a pre-approval inspection by the Board of Health or its designated agents, which may include law enforcement officers and fire officials and building inspectors, to ensure that the location specified in the application meets all of the requirements of this regulation; and
- B. Meets all the requirements for home cultivation contained in ~~105-CMR-725.000~~935 CMR 501.000 and any related directives, memorandums or notifications. These include, but are not limited to, an enclosed, locked space, not viewable from a public location, in which cultivation and storage takes place in accordance with public health and safety requirements as determined by the Board; and
- C. Meets all applicable local regulations within the town including, but not limited, fire safety and building code provisions; and

- D. If not the property owner, the applicant has notified the public or private property owner of the specified address, and obtained from that owner consent to any alteration the property's fixtures or structure, including agreement concerning any increased utility costs likely to result from cultivation activities; and
- E. As per MGL Chapter 94I §2, Ggrows only enough marijuana to maintain a sixty (60) day supply, which has been determined by the CCC to be ~~ten (10)~~ up to 12 flowering plants and up to 12 vegetative plants~~sources~~ by CCCDPH. The Board of Health or the Director may specifically designate the number and type of plants that may be possessed at any time by the applicant in order to meet this standard; and
- F. Submits to reasonable inspections by the Board of Health or its designated agents, which may include law enforcement officers, to ensure compliance with all of the requirements in this regulation; and
- G. Agrees that a Home Permit only allows for the cultivation and processing of marijuana without the use of any fire, heat source, or gas, except for cooking on a conventional stove originally supplied with the dwelling; and
- H. Agrees that a Home Permit does not allow any method for processing marijuana that presents a risk of explosion or other property damage by any means; and
- I. All Home Permits expire on June 30 annually, regardless of the year or day and month on which there were issued.
- J. If the Board of Health determines that the conditions to achieve the hardship standard permitting a Home Permit for marijuana cultivation no longer exist, the Board of Health may, after notice and opportunity to be heard, revoke the Home Permit and disallow cultivation of marijuana in the home setting of the affected person or persons.
- K. A violation of provision 20.7.4 (B), (C), or (D) shall constitute a MINOR violation of these regulations. A violation of provision 20.7.4 (A), (E), (F), (G), or (H) shall constitute a MAJOR violation of these regulations.
- L. If, during the course of an inspection or compliance check at the Home Permit Site, mold, infestation, or other diseases affecting marijuana plants is observed, then the Board of Health or its Agents may order the segregation and/or destruction of all such plants (as well as surrounding plants) to prevent a threat to the public's health.

Commented [LS7]: This is a change. The original language (10 oz) applies to the general population. For medical marijuana it is the number of plants.

SECTION 20.8 VIOLATIONS

20.8.1 – The period of performance for violations of these regulations is three (3) years. MINOR

violations shall be rectified within 72 hours of the violation, and shall be subject to re-inspection following that period. MAJOR violations shall be rectified within 24 hours, and shall be subject to re-inspection following that period.

20.8.2 – In addition to any penalty that may be imposed under the non-criminal method of disposition as provided in General Laws, Chapter 40, Section 21D and Town of Needham By Laws, the Board of Health may, after a duly noticed hearing at which the ~~RMDMTC~~ or Home Permit holder has had an opportunity to be heard, suspend, modify, or revoke the ~~RMDMTC~~ Permit or Home Permit. The minimum suspension schedule shall be as follows:

- A. In the case of either five (5) or more MINOR violations or in the case of a MAJOR violation the ~~RMDMTC~~ Permit or Home Permit shall be suspended for seven (7) consecutive business days.
- B. In the case of a second MAJOR violation or in the case of ten (10) or more MINOR violations, the ~~RMDMTC~~ Permit or Home Permit shall be suspended for one (1) month.
- C. In the case of a third MAJOR violation or in the case of fifteen (15) or more MINOR violations, the ~~RMDMTC~~ Permit or Home Permit shall be suspended for six (6) months.
- D. In the case of a fourth MAJOR violation or in the case of twenty (20) or more MINOR violations, the ~~RMDMTC~~ Permit or Home Permit shall be suspended for twelve (12) months and may, at the Board of Health's discretion, be permanently revoked.
- E. Refusal to cooperate with the Board of Health or its designated agents is considered a separate violation of these regulations and shall result in the suspension of the ~~RMDMTC~~ Permit or Home Permit for a minimum of ninety (90) consecutive business days. This shall be in addition to any other penalty imposed for other violations observed.
- F. Any ~~RMDMTC~~ Permit Holder or Home Permit Holder who engages in or allows the sale, distribution or cultivation of marijuana or marijuana-infused products while his or her permit is suspended shall be subject to permanent revocation.

20.8.3 – The penalties mentioned in 20.8.2 represent the guidelines for action to be taken by the Board of Health for violations, and do not preclude the licensing authority from taking additional action after a duly noticed hearing at which the ~~RMDMTC~~ Permit or Home Permit holder has an opportunity to be heard.

20.8.4 – If during an inspection or a compliance check, a Board of Health Agent determines a MAJOR violation of these regulations exists or has occurred, the Director may temporarily suspend the ~~RMDMTC~~ Permit or Home Permit for a period not to exceed 96 hours while public notice of a scheduled Board of Health hearing is posted in accordance with the provisions of the Massachusetts Open Meeting Law (M.G.L. c. 30A, §§ 18-25).

20.8.5 – If an RMDMTC permit is suspended, the permit holder shall cease sale and distribution of marijuana or marijuana-infused products, and close and secure the RMDMTC premises to the satisfaction of the Director or his/her agents for the period of the suspension. Additionally, notice of the suspension must be publicly posted on the RMDMTC to the satisfaction of the Director or his/her agents.

20.8.6 – If an RMDMTC permit is revoked, the permit holder shall cease all sale, distribution or cultivation of marijuana or marijuana-infused products, and shall close and secure the RMDMTC premises to the satisfaction of the Director or his/her agents, and the RMDMTC shall submit subject to the approval of the Board or its designated agents, or the Board may order, implementation of a plan for the removal of marijuana and marijuana-infused products and related implements and equipment from the RMDMTC retail establishment. Additionally, notice of the revocation must be publicly posted on the RMDMTC to the satisfaction of the Director or his/her agents.

20.8.7 – In the case of a suspension or revocation of a Home permit, the Board may order that marijuana or marijuana-infused products and related implements and equipment be removed from the specified Home permit location. The method for removal and storage, and the deadline for compliance, may be specified in the Board's order. In the case of a Home permit, the Board may authorize immediate confiscation of all the items previously mentioned prior to, or after, the hearing, provided that any removed items are not damaged prior to the conclusion of all administrative actions and appeals. Removal and storage of live marijuana plants does not obligate the Board to assure the maintenance of the plants during the period of suspension or confiscation.

20.8.8 – In the event that a RMDMTC permit or Home permit is suspended or modified, the Permit holder may be ordered to submit a remediation plan addressing all causes for the suspension or modification and all appropriate changes to business practices and operations. That remediation plan is subject to review and approval by the Board of Health prior to reinstating the permit.

SECTION 20.9 ENFORCEMENT

20.9.1 – Enforcement of this Regulation shall be by the Board of Health and its designated agents.

20.9.2 – Whoever violates any provision of this regulation may be penalized by the non-criminal method of disposition as provided in General Laws, Chapter 40, Section 21D and Town of Needham By Laws, or by filing a criminal complaint.

20.9.3 – Each day any violation exists shall be deemed to be a separate offense.

20.9.4 – Any resident who desires to register a complaint pursuant to this Regulation may do so by contacting the Board of Health, the Public Health Department, or the Needham Police Department.

SECTION 20.10 SEVERABILITY

If any provision of these regulations is declared invalid or unenforceable, the other provisions shall not be affected thereby but shall continue in full force and effect.

SECTION 20.11 EFFECTIVE DATE

This regulation shall take effect upon March 31, 2016. Public hearings and open meetings regarding this regulation were conducted on November 20, 2015, December 16, 2015, January 8, 2016, and February 12, 2016. This regulation was approved by a unanimous vote of the Board of Health on February 12, 2016.



**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Continued Discussion of Entheogenic Plants and Their Impacts
Presenter(s)	Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	Continued discussion about entheogenic plants and the movement to decriminalize their use. Materials were submitted by Needham resident Micah Bernat in December following discussion with BOH.
2.	VOTE REQUIRED BY BOARD OF HEALTH
	No vote is required, nor is one expected.
3.	BACK UP INFORMATION:
	- Needham Resolution - How Decriminalization Serves our Criminal Justice System - LEAP Endorsement Letter

A Resolution Protecting Adult Access to Plant Medicines & Prioritizing Public Health Responses to Controlled Substance Possession

- WHEREAS:** Substance use disorders, post-traumatic stress disorder (PTSD), Persistent Traumatic Stress Environment (PTSE), depression, end-of-life anxiety, grief, cluster headaches, tendencies toward recidivism, and other ailments are plaguing Norfolk County communities, and the use of entheogenic (psychedelic) plants such as psilocybin, ayahuasca, ibogaine have been shown to be beneficial for treating these ailments via scientific and clinical studies and within continuing indigenous practices that catalyze profound experiences of personal and spiritual growth, including for marginalized people like veterans and first-responders; and
- WHEREAS:** The COVID-19 pandemic has led to a resurgence of heroin and opioid overdose deaths and depression in Massachusetts communities, two ailments that entheogenic plants have been shown to have particularly strong utility in treating according to published, peer-reviewed medical research; and
- WHEREAS:** Indigenous people have used these plants for thousands of years in spiritual and health rituals, demonstrating a critical need to preserve the ability of native peoples to access Lophophora—Southwestern cacti that are extremely slow-growing and endangered by animal farming, mining, natural gas development, and non-native poaching—including the ability for ethnobotanists to cultivate these cacti while discouraging non-native use; and
- WHEREAS:** As American popular culture promotes these compounds for spiritual growth, there exists potential for the extinction and extremely cruel treatment of Bufo Alvarius toads native to the Sonoran Desert and Phyllomedusa bicolor frogs native to the Amazon basin, and communities have a moral obligation to construct policies protecting these animals and biodiversity; and
- WHEREAS:** Decriminalization of controlled substances represents a necessary step to providing effective substance use disorder treatment, eliminating stigma so residents can seek treatment without fear of criminalization, and sending a message to the community that investment in comprehensive services in harm reduction and education leveraging American Recovery Act funds must be among Needham's top public health priorities; and
- WHEREAS:** Access to entheogenic plants and compounds such as MDMA should not be monopolized nor controlled by just a small number of corporations, which may lobby to place overbearing restrictions on use, counseling, cultivation, and transport to protect their market share; and
- WHEREAS:** The War on Drugs has led to the unnecessary penalization, arrest, and incarceration of vulnerable people, particularly people of color and people of limited financial means, rather than prioritizing harm reduction policies to treat drug use as an issue of public health; and
- WHEREAS:** The City Councils of Somerville (9-0), Cambridge (8-1), Northampton (8-0), and Easthampton (7-0) have passed substantially similar resolutions and that Portugal, Oregon, and Baltimore have deprioritized or eliminated criminal charges for possession of all controlled substances with notable benefits for public safety; and
- RESOLVED:** That the Needham Public Health Board hereby recommends that the no Needham department, agency, board, commission, officer or employee of the city, including without limitation, Needham Police Department personnel, use any city, state, or federal funds or resources to assist in the enforcement of laws imposing criminal penalties for the use and possession of any controlled substance by adults except Lophophora and animal-derived controlled substances; and be it further

Commented [JD1]: Intention: this whereas centers the issues that the resolution seeks to alleviate. Rather than providing a scientific definition of entheogens, it provides a brief overview of the four primary entheogens the city would endorse.

The Native American Church and Indigenous Peyote Conservation Initiative (IPCI) have asked that resolutions a) do not mention "peyote" b) do not decriminalized possession of peyote and c) do not mention the Native American Church or IPCI d) does not make any explicit statements against cultivating peyote, which might be necessary to ensure the species survives. The intention of the a-c are to avoid inadvertently mainstreaming the use of peyote by non-indigenous people.

This paragraph mentions entheogens as a category of plants because we feel it is useful to communicate, broadly, what the resolution endorses for physical and spiritual relief. The "Resolved" clauses make it clear ...

Commented [JD2]: Intention: Center the public health crises in the fallout from the pandemic to add urgency to the need for the resolution.

Commented [JD3]: Intention: this section has been updated to include mention the need to grow peyote because it is very much on the verge of extinction. This is a very tragic reality, and we sadly do not believe this or any resolution has the ability to stop poaching in the Southwestern United States or the devastation wrought by these industries. IPCI and NAC have voiced support for this provision because they ask that a) personal possession of peyote not be decriminalized at this point in time for non-indigenous people and that b) peyote not be explicitly mentioned in resolutions to avoid its mainstreaming (hence why we use the term ...

Commented [JD4]: Intention: these resolutions are largely statements of values to guide state and federal policymakers in a direction to adopting the ideal policy. Our coalition's state task force bill would have the experts carefully study the intention of the city resolutions passed across Massachusetts and in other states, state lawmakers will carefully look to what localities do.

The Weeknd, Mike Tyson, and all matter of pop culture have been promoting Bufo 5-Meo-DMT (which can be created artificially), which has driven these toads near ...

Commented [JD5]: There are many actors in the space, including the Greater Boston area, that will lobby for restrictions that confine psychedelics to a purely medical model – permanently denying working class people access by charging nearly \$11,000 to \$15,000 for treatment regimens. Even if covered by insurance eventually (which will take at minimum five more years and potentially decades for plants like ayahuasca to even get FDA approval or rescheduling), 30 million Americans lack health insurance, the average American cannot afford a \$500 emergency expense let alone their \$8,000 per year deductible, al ...

RESOLVED: That the Needham Public Health Board hereby maintains that the use and possession of all controlled substances should be understood first and primarily as an issue of public health by city departments, agencies, boards, commissions, and all employees of the city, that harm reduction and recovery service funding should be a top priority for the use of American Recovery Act funds, and that cost savings from reduced criminal enforcement should be used to enhance comprehensive services for people experiencing substance use disorder; and be it further

RESOLVED: That the Board recommends it should be the policy of the Town of Needham and its departments, agencies, boards, commissions, officers and employees, including without limitation, Needham Police Department, that the investigation and arrest of persons for planting, producing, purchasing, transporting, distributing, and/or engaging in ceremonial practices with entheogenic plants in Classes A-E of Chapter 94C § 31 of Massachusetts law or Schedules I-V of 21 U.S.C. § 812 of the Controlled Substances Act shall be amongst the lowest law enforcement priority for the Town of Needham; and be it further

RESOLVED: That the Board recommends it should be the policy of the Town of Needham and its departments, agencies, boards, commissions, officers and employees, including without limitation, Needham Police Department, that the arrest of persons for using or possessing pipes, syringes, needles, or testing strips as well as controlled substances except Lophophora and animal-derived controlled substances shall be amongst the lowest law enforcement priority for the Town of Needham; and be it further

RESOLVED: That this resolution does not address the enforcement of possessing or distributing any controlled substance on school grounds nor driving under the influence of controlled substances or public disturbance; and be it further

RESOLVED: That the Board calls upon the city's officials work in support of decriminalizing the use and possession of all controlled substances, except Lophophora and animal-derived controlled substances, the planting, cultivating, purchasing, transporting, distributing, and engaging in ceremonial practices of entheogenic plants, and approaching controlled substance use first and primarily through the lens of public health when representing the city in conversations with state and federal agencies as well as state and federal lawmakers; and be it further

RESOLVED: That the Board recommends the Norfolk County District Attorney cease prosecution of persons involved in the cultivation or distribution of entheogenic plants and the use or possession without the intent to distribute of any controlled substance excepting Lophophora and animal-derived controlled substances; and be further

RESOLVED: That the Board expresses support for HD1763 An Act providing easier and greater access to record sealing, which would assist in the automatic expungement and sealing of records to the benefit of generations of Massachusetts residents; and be it further

RESOLVED: A Board Member shall send a copy of this Resolution to Representative Denise Garlick, Senator Rebecca Rausch, Senator Michael Rush, Joint Committee on Mental Health, Substance Use and Recovery Chairpersons Representative Adrian Madaro and Senator Cyr, Governor Charles Baker, Attorney General Maura Healey, Norfolk County District Attorney Michael Morrissey, Needham Police Chief John Schlittler, Norfolk County Sheriff Patrick W. McDermott, Massachusetts Sheriff's Association Director Carrie Hill, Secretary of Veterans' Services Cheryl Lussier Poppe, and the Board of Registration of Allied Mental Health and Human Services Professions.

Commented [JD6]: Notice that this "Resolved" does not include possession, so it would technically allow for the cultivation of peyote (a necessary reality so it doesn't go extinct).

Important to note here is that to our knowledge, the use of peyote is already allowed for indigenous ceremony under the 1994 Religious Freedom Restoration Act. So indigenous people are still and already protected even if possession of it is not decriminalized generally.

Commented [JD7]: This would keep possession of Bufo technically criminalized as a signaling of values. I sincerely doubt that poachers care about the resolution. I sincerely doubt that BPD officers know what Bufo is. This is a statement of values to guide state and federal reform. It does not criminalize Kambo, which remains completely legal and unregulated for now but leaves open penalties for procuring those frogs if the federal government scheduled Kambo (an opioid 40x stronger than morphine that causes vomiting and hallucinations).

How Decriminalization Serves Our Justice System!



Who Are We: Bay Staters for Natural Medicine is a grassroots community group of first responders, healthcare professionals, scientists, and ordinary people whose lives have been impacted by prohibition. We have worked with the Somerville, Cambridge, Northampton, Easthampton and soon Burlington (VT), Newton, Salem, Medford, Amherst, Worcester, and Boston city councils to pass resolutions that achieve two core objectives:

1. **Allow Adults to Grow and Distribute Entheogenic Plants:** psilocybin mushrooms, ayahuasca, mescaline-containing cacti, and ibogaine are naturally-occurring and non-addictive compounds proven by clinical trials and thousands of years of tradition to treat trauma and addiction.
2. **Prioritize Transition Services Over Incarceration:** our resolutions formalize a policy that possession of any controlled substance without intent to distribute is to be treated as public health rather than criminal issue. We commit our partner cities to investing in interventions like housing, harm reduction equipment, and modern treatment facilities.

Why We Care: our first responders, including corrections personnel, suffer PTSD at rates nearly five times that of civilians & lose their lives more to their own firearms than in the line of duty. Nearly one in three heroin users pass through corrections, and half of all deaths by former inmates are opioid related. We're experiencing the deadliest years on record for overdoses, as our communities struggle with a shortage of mental health providers. Entheogenic plants are safe, cost-effective tools that solve these challenges.

Compound		Frequency of Use	Annual Cost	Addictive?
Methadone		Daily	\$6,500	Yes.
Buprenorphine (Suboxone)		Daily, 3x Per Week	\$7,200	Yes.
Naltrexone (Vivitrol)		Monthly	\$14,000	No.
Ibogaine Tree Bark		Single Use Only	\$50 - \$100	No.
Psilocybin Mushrooms		Single Use Only	\$30 - \$200	No.

What Does the Research Say?

Our Plan to Outmaneuver Big Pharma: FDA and DEA have recently fast-tracked this research, the Federal Controlled Substance Act (1971) requires Phase III trials that cost hundreds of millions of dollars for rescheduling. Corporations are thus prioritizing trials of artificial versions of these plants as well as MDMA so they can secure decades-long FDA monopolies to charges tens of thousands per treatment. Our vision is city by city decriminalization to save lives now and eventually force the U.S. attorney general to unilaterally reschedule these plants to allow their use by federally-funded providers and corrections facilities.

Luoma et al (2020). A Meta-Analysis of Placebo-Controlled Trials of Psychedelic-Assisted Therapy. *J Psychoactive Drugs*. [Web](#): "Overall, analyses support the efficacy of psychedelic-assisted therapy across four mental health conditions - post-traumatic stress disorder, anxiety/depression associated with a life-threatening illness, unipolar depression & social anxiety among autistic adults."

Pisano, V. D., et al (2017). The association of psychedelic use and opioid use disorders among illicit users in the U.S. *Journal of Psychopharmacology*. [Web](#). "Among respondents with a history of illicit opioid use, psychedelic use is associated with 27% reduced risk of past year opioid use and 40% reduced risk of past year opioid abuse." [sample size: 44,000]

Aregento et. al (2021). Psychedelic use is associated with reduced daily opioid use among people who use illicit drugs in a Canadian setting. *International Journal of Drug Policy*. [Web](#). "Recent psychedelic use was associated with 55% reduced odds of daily opioid use."

•Hendricks et al. (2014). Hallucinogen use predicts reduced recidivism among substance-involved offenders under community corrections supervision. *Journal of Psychopharmacology*. [Web](#). "In this longitudinal study, we examined the relationship between naturalistic hallucinogen use and recidivism among individuals under community corrections supervision with a history of substance involvement. We found that hallucinogen use predicted a reduced likelihood of supervision failure (e.g. noncompliance with legal requirements including alcohol and other drug use) while controlling for an array of potential confounding factors." [Southeastern United States, Felony Inmates, sample size: 25,622].

Brown, T.K., & Alper, K. (2018). Treatment of opioid use disorder with ibogaine: detoxification and drug use. *American Journal of Drug and Alcohol Abuse*. [Web](#). "Ibogaine was associated with substantive effects on opioid withdrawal symptoms and drug use in subjects for whom other treatments had been unsuccessful."

Noeller, G.E. et al (2018). Ibogaine treatment outcomes for opioid dependence from a twelve-month follow-up observational study. *The American Journal of Drug and Alcohol Abuse*. [Web](#). "A single ibogaine treatment reduced opioid withdrawal symptoms and achieved opioid cessation or sustained reduced use in dependent individuals as measured over 12 months. Ibogaine's legal availability in New Zealand may offer improved outcomes where legislation supports treatment providers to work closely with other health professionals."



LAW ENFORCEMENT ACTION PARTNERSHIP

ADVANCING JUSTICE AND PUBLIC SAFETY SOLUTIONS

121 Mystic Avenue, Suite 9
Medford, Massachusetts 02155
T: (781) 393.6985

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New Hampshire, USA

Detective Sergeant Neil Woods, Ret.
Derbyshire, England, LEAP UK

Date: August 18, 2021

Re: Deprioritizing Enforcement of Controlled Substance Possession

Dear Local Leaders,

We are writing today as Massachusetts law enforcement and as speakers for the Law Enforcement Action Partnership (LEAP) to explain why we support deprioritizing the use of justice resources for controlled substance possession. LEAP is a nonprofit group of police, prosecutors, judges, and other criminal justice professionals who speak from firsthand experience. Our mission is to make communities safer by focusing law enforcement resources on the greatest threats to public safety and restoring police-community trust.

As current and former law enforcement, we know firsthand that justice resources are limited and need to be prioritized toward the greatest threats of public safety. Oftentimes, low priority cases create a backlog and more serious cases are put on the backburner. Drug arrests are so frequent and use a substantial amount of justice system resources.

Arresting someone for drug possession not only fails to make our communities safer, it also criminalizes people at the expense of helping them. Often, an arrest means spending time in jail. When people cannot show up to work or take care of family, it can cost them employment, family relationships, and access to housing. Nothing destabilizes someone's life like an arrest, and instability and stress are key triggers for drug relapses and mental health issues.

One way to better focus justice system resources is for cities to officially deprioritize enforcement of possession of controlled substances. In 2017, a MassInc poll found that [two in three voters](#) in Massachusetts view drug addiction as a public health problem rather than a crime problem. Several jurisdictions across the country have already declined to prosecute drug possession, including Baltimore City, Maryland, King County, Washington,

and Contra Costa County, California. At the state level, Oregon has decriminalized low-level possession of all drugs.

In addition, cities should deprioritize enforcement of laws concerning the cultivation, transportation, and exchange of psychedelic plants. In the past few years, Denver, Colorado; Oakland and Santa Cruz, California; Ann Arbor, Michigan. and Washington, D.C. have deprioritized offenses related to psychedelic plants.

Massachusetts is emerging as a leader in deprioritizing drug offenses. Somerville, Cambridge, and Northampton have deprioritized all controlled substances and psychedelics. Several other jurisdictions are moving forward with deprioritization, including Boston, Salem, and Easthampton.

Police do not want to be asked to arrest people seeking solutions for mental health issues. A study from the Journal of the American Medical Association found that psilocybin mushroom use combined with therapy or counseling puts major depression in remission for one in two patients – that is [more than four times more effective](#) than conventional medication. MDMA is also in advanced stages of FDA approval. Police officers respond to many mental health crisis calls and suicide attempts. We also struggle with PTSD and depression at far higher rates than the general public, and suicide is a leading cause of officer mortality.

Deprioritizing drug enforcement can also improve police-community trust, particularly in communities of color. One study showed that at least 65 percent of Bostonians arrested for drug possession were Black or Hispanic, while these groups represent only 37 percent of the population and do not use drugs at higher rates. With decriminalization, Oregon [projects a 95 percent decrease](#) in racial inequalities in controlled-substance related arrests.

Officers are also affected by having to enforce these laws. Encounters for controlled substance possession can go tragically wrong, endangering civilians and officers alike while further eroding trust in law enforcement.

In light of the addiction and mental health crisis, made even worse by the pandemic, we believe deprioritization is the answer. Our communities would benefit by making drug possession the lowest law enforcement priority.

Thank you for the opportunity to share our experience in support of this effort.

Respectfully,

Lt. Sarko Gergerian
Winthrop Police Department, MA

LawEnforcementActionPartnership.org

Formerly known as Law Enforcement Against Prohibition

Corrections Officer Patrick Heintz (Ret.)
Hampden County Sheriff's Department
Agawam, MA

Regina Hufnagel
Federal Corrections Officer (Fmr.)
Federal Bureau of Prisons
Boston, MA

Officer Karen Hawkes (Ret.)
Massachusetts State Police
Rowley, MA

LawEnforcementActionPartnership.org

Formerly known as Law Enforcement Against Prohibition



**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Board of Health Votes: Agent Re-Designation & Charge to Educate & Inform Community re: Health Implications of Policies & Programs
Presenter	Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Annual re-designation of the agents of the Board of Health, authorized under Mass General Law and Town Charter to act on the Board's behalf, and annual re-issuance of the Board's charge to the Public Health Division to educate and inform the community.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Vote is required. Suggested motion: "I move that the Board of Health support the agent designation as outlined in the presented letter, sign such letter, and ask that the letter be filed with the Town Clerk." "I move that the Board of Health charge the Needham Public Health Division to educate and inform the community about the public health impact of policies and programs. I proposed that we make the charge as outlined in the presented letter, sign such letter, and ask that the letter be filed with the Town Clerk."	
3.	BACK UP INFORMATION ATTACHED:
Agent Re-Designation Letter Letter to Inform and Educate the Community about the Public Health Impact of Policies and Programs	



NEEDHAM BOARD OF HEALTH



March 29, 2022

Ms. Theodora Eaton, Needham Town Clerk
Needham Town Hall
1471 Highland Avenue
Needham, MA 02492

Dear Ms. Eaton,

The Needham Board of Health (the Board) is charged by the General Court of Massachusetts to protect the public's health and to safeguard the health and wellness of its community. In order to effectively discharge those responsibilities, the Board is empowered by the Massachusetts General Laws and imbued with the authority to make reasonable health regulations¹ and to "examine all nuisances, sources of filth and causes of sickness"² and to act for the destruction, removal, or prevention of the same.

To provide the most appropriate and timely response to all of the nuisances, sources of filth, and causes of sickness which may arise in Needham and to effectively enforce adopted Board of Health regulations, the Board designates, under the provisions of Mass. General Law Chapter 111, Section 30³ Director of Health & Human Services Timothy Muir McDonald as its agent and empowers him to act in its stead, including the designation of additional deputy agents, in accordance with the terms established in M.G.L. Chapter 111. Further, the Needham Board of Health designates Assistant Public Health Directors Tara Gurge and Tiffany Zike as its deputy agents and empowers them to act in its stead when Mr. McDonald is unavailable.

The designations occurred via the unanimous vote of the Board of Health at its public meeting on this day.

Sincerely,
The Needham Board of Health

Kathleen Ward Brown, ScD

Edward Cosgrove, PhD

Stephen Epstein, MD, MPP

Christina S. Mathews, MPH Robert Partridge, MD, MPH

¹ M.G.L. ch. 111, s. 31, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section31>

² M.G.L. ch. 111, s. 122, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section122>

³ M.G.L. ch. 111, s. 122, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section30>



NEEDHAM BOARD OF HEALTH



March 29, 2022

Mr. Timothy Muir McDonald
Director, Department of Health & Human Services
Rosemary Recreation Complex
178 Rosemary Street
Needham, MA 02494

Dear Mr. McDonald,

The Needham Board of Health (the Board) takes seriously its responsibility to protect the public's health and its charge to safeguard the health and wellness of its community. In order to effectively discharge those responsibilities, the Board is empowered by the Massachusetts General Laws and imbued with the authority to make reasonable health regulations¹ and to "examine all nuisances, sources of filth and causes of sickness".²

To inform its actions in defense of the public's health, the Needham Board of Health requires that its Public Health Division research best practices, and review the best available data about all issues which might affect the health of Needham and its residents. The Board further charges that you along with Ms. Tara Gurge and Ms. Tiffany Zike, acting as our agents, and the Public Health Division as a whole, endeavor to educate, inform, and empower the community, elected officials, Town Departments, and community partners about sound public health practices and about the potential impact of actions, initiatives, and policy choices on the public's health.

Thank you for your attention.

Sincerely,
The Needham Board of Health

Kathleen Ward Brown, ScD

Edward Cosgrove, PhD

Stephen Epstein, MD, MPP

Christina S. Mathews, MPH Robert Partridge, MD, MPH

¹ M.G.L. ch. 111, s. 31, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section31>

² M.G.L. ch. 111, s. 122, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section122>



**Board of Health
TOWN OF NEEDHAM
AGENDA FACT SHEET**



MEETING DATE: 3/29/2022

Agenda Item	Discussion on NEW 314 CMR 16.00: Notification Requirements to Promote Public Awareness of Sewage Pollution/Combined Sewer Overflow Notifications
Presenter	Tara Gurge, Assistant Public Health Director

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Discuss update on MassDEP's Combined Sewer Overflows (CSOs) notification requirements and how they impact the Town of Needham. Here is the link to the Mass Dept. of Environmental Protection website with the CSO info.– Sanitary Sewer Systems & Combined Sewer Overflows Mass.gov.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Vote is not required, nor is one requested.	
3.	BACK UP INFORMATION:
Below is email that was received from Michael Retzky, Water and Sewer Superintendent - From: Michael Retzky <mretzky@needhamma.gov> Sent: Thursday, March 17, 2022 6:54 PM To: Tara Gurge <TGurge@needhamma.gov>; Kimberly Donovan <kdonovan@needhamma.gov> Cc: Carys Lustig <clustig@needhamma.gov>; Robert Lewis <RLewis@needhamma.gov> Subject: RE: MassDEP Combined Sewer Overflow trainings/info Hi Tara To follow up with this and our last discussion. Needham has no Combined Sewer /Stormwater Outfalls. We do not have combined Sewer & Stormwater drainage systems. Our sanitary sewer system is completely separate from our stormwater drainage system. The Town of Needham's sewage is conveyed in our sanitary sewer system which flows and discharges into the MWRA's sewer system for treatment at MWRA's regional wastewater treatment plant. Needham does not have a Wastewater Treatment Facility. As for SSO's..... we do not have any SSOs that discharge through wastewater outfalls, either directly or indirectly, to surface waters of the Commonwealth. Our Wastewater Pumping Stations all have alarm systems. We check our wastewater pumping stations daily and have staff on call during off (non-work) hours. Should we receive an alarm notification or emergency call Our staff will respond 24/7. We also have emergency response plans (ERPs) for each of our pump station. If any failures occur we have the ability to bypass them or have them pumped with our on-call vacator/sewer pumping service. I will be reviewing these ERPs for updates in the near future. Mike	

Timothy McDonald

From: Jeremy Goodman <Jeremy.Goodman@olin.edu>
Sent: Monday, March 21, 2022 5:28 PM
To: Health Department
Subject: Plumbing variance

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello,

Olin College of Engineering is in the process of preparing a plumbing variance request to submit to State Board of Examiners of Plumbers and Gas Fitters. While we have already apprised Larry DiBona of our plans and he has confirmed that this is the proper path, the variance application requires “written documentation that the local Board of Health has been petitioned regarding this variance request.”

We plan to request a variance to allow the college to convert existing, multi-user restrooms designated as men's and women's rooms to multi-user, all gender (a.k.a. gender neutral) restrooms, which are not currently provided for in the state plumbing code. The college will not change the plumbing fixtures and facilities available in each room, other than providing appropriate receptacles for hygiene products in the rooms that do not already have them. An equal number of men's and women's rooms would be converted in each building of the college's administrative and academic buildings (a total of three buildings with four existing restroom pairs each). At least one pair of gendered restrooms would be left in place in each building.

The college believes this variance is necessary to support the ways the needs of our campus community have changed since the campus was originally designed and built. The current set up has been deemed to be potentially damaging to some of the most vulnerable members of our community. We have determined that redesigning and renovating the college's existing restrooms to all single-user rooms is cost prohibitive at this time.

If the Health Department or the Board of Health has a position on this, we would welcome it to include in our application.

Best regards,
Jeremy Goodman

Jeremy Goodman
(he/him/his)

Vice President for Administrative Services
& Innovation



Typically on campus M-F 8:30-5:30

Phone: 781-292-2373
Email: jgoodman@olin.edu

1000 Olin Way
Needham, MA 02492

OLIN.EDU



If this email arrives outside of traditional working hours, please do not feel compelled to respond immediately unless addressing a time critical issue.

An Act Promoting Drinking Water Quality For All

Please co-sponsor SD2903/HD4693 by Sen. Jamie Eldridge and Rep. Dan Sena

Article 97 of the Massachusetts Constitution established “**the right to clean air and water**” in 1972, and the United Nations declared safe and affordable drinking water as a human right in 2010, yet **over half a million Massachusetts residents on private wells** may not know if their drinking water is safe from harmful contaminants.



CONTAMINANTS IN PRIVATE WELLS

- Contaminants in private well water may be **naturally occurring or manmade**. Contaminants such as arsenic, E. coli, nitrates, PFAS, radon, and uranium may have short-term and/or long-term health impacts.
- The Private Well Program to Protect Public Health 2021 pilot found that **~27% of wells had contaminants exceeding state health standards and/or suggesting potential health risks**; towns with robust local private well regulations had lower rates of contaminated wells compared with towns with no or weak regulations.
- MassDEP’s ongoing PFAS Private Well Testing Program has found that **~5% of households have PFAS** exceeding state health standards.

CURRENT LACK OF REGULATIONS FOR PRIVATE WELLS

- Public water systems are subject to MassDEP Drinking Water Regulations and must routinely test for contaminants, but **private wells are not subject to any statewide drinking water standards or testing requirements**, despite the known presence of contaminants in some private wells.
- Regulations are determined by local Boards of Health (BOHs), leading to substantial variation statewide. Some BOHs have stringent regulations while others have outdated or nonexistent regulations.

THIS ACT WILL:

- ☒ Authorize MassDEP to develop private well regulations to ensure that private well water is safe to consume.
 - It is the first step in achieving uniform statewide private well regulations to protect health.
 - It is modeled after existing authorizing legislation for Title 5 (septic systems), which is now widely accepted as an important public health and environmental protection.

THIS ACT WILL NOT:

- ☒ Specify exactly what the regulations will be.
 - Important details about contaminants, testing requirements, reporting, etc. would be developed by MassDEP, likely with input with drinking water experts, stakeholders, and the general public.
 - There would be substantial lead time to proactively educate and train, address testing lab capacity, and develop strategies to mitigate the burden on homeowners and local health agents.

HEALTH IMPACTS OF CONTAMINATED DRINKING WATER (Source: EPA and MassDEP)

Arsenic	Cancer, skin damage, circulatory system problems	Nitrate/nitrite	Can cause death in babies younger than 6 months old
E. coli	Gastrointestinal illness	PFAS “forever chemicals”	Developmental effects in fetuses and infants, effects on the thyroid, liver, kidneys, certain hormones and the immune system, possible cancer risk at higher concentrations
Copper	Gastrointestinal distress, liver or kidney damage		
Lead	Physical and mental developmental delays, kidney problems, high blood pressure		
Manganese	Neurological effects	Radon	Cancer
		Uranium	Cancer, kidney toxicity

Questions? Contact Brian Scales at RCAP Solutions (bscales@rcapsolutions.org).

The Private Well Program to Protect Public Health is a collaborative project led by RCAP Solutions and funded by The Health Foundation of Central Massachusetts. Project partners include MassDEP, the Montachusett Public Health Network, Nashoba Associated Boards of Health, and the Massachusetts Environmental Health Association. For more information about this project, please visit: <http://www.rcapsolutions.org/ma-private-wells/>

Feb. 2022

SENATE No. 2667**The Commonwealth of Massachusetts**

PRESENTED BY:

James B. Eldridge

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act promoting drinking water quality for all.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>	
<i>Danillo A. Sena</i>	<i>37th Middlesex</i>	
<i>Michael D. Brady</i>	<i>Second Plymouth and Bristol</i>	<i>1/5/2022</i>
<i>Paul R. Feeney</i>	<i>Bristol and Norfolk</i>	<i>1/5/2022</i>
<i>Anne M. Gobi</i>	<i>Worcester, Hampden, Hampshire and Middlesex</i>	<i>1/6/2022</i>
<i>Michelle M. DuBois</i>	<i>10th Plymouth</i>	<i>1/10/2022</i>
<i>Michael O. Moore</i>	<i>Second Worcester</i>	<i>1/11/2022</i>
<i>Brian M. Ashe</i>	<i>2nd Hampden</i>	<i>1/13/2022</i>
<i>Susan L. Moran</i>	<i>Plymouth and Barnstable</i>	<i>1/13/2022</i>
<i>Sal N. DiDomenico</i>	<i>Middlesex and Suffolk</i>	<i>1/13/2022</i>
<i>John J. Cronin</i>	<i>Worcester and Middlesex</i>	<i>2/7/2022</i>
<i>Joanne M. Comerford</i>	<i>Hampshire, Franklin and Worcester</i>	<i>2/12/2022</i>

SENATE No. 2667

By Mr. Eldridge, a petition (accompanied by bill, Senate, No. 2667) (subject to Joint Rule 12) of James B. Eldridge, Danillo A. Sena, Michael D. Brady, Paul R. Feeney and other members of the General Court for legislation to promote drinking water quality for all. Environment, Natural Resources and Agriculture.

The Commonwealth of Massachusetts

In the One Hundred and Ninety-Second General Court
(2021-2022)

An Act promoting drinking water quality for all.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

1 Chapter 21G of the General Laws is hereby amended by inserting after section 20 the
2 following section:-

3 Section 21: Private Wells Drinking Water Quality

4 (a) As used in this section, the following words shall, unless the context otherwise
5 requires, have the following meanings:-

6 “Private well”, a well that provides water for human consumption and consists of a
7 system that has less than 15 service connections and either: (1) serves less than 25 individuals or
8 (2) serves an average of 25 or more individuals daily for less than 60 days of the year.

9 “Burden”, the time, effort or financial resources expended by persons to generate,
10 maintain or provide information to or for a governmental agency, including the resources
11 expended for: reviewing instructions; acquiring, installing and utilizing technology and systems;

adjusting the existing ways to comply with any previously applicable instructions and requirements; searching data sources; completing and reviewing the collection of information; and transmitting or otherwise disclosing the information.

"Department", the department of environmental protection.

"Commissioner", the commissioner of the department of environmental protection.

(b) The commissioner shall issue regulations to be known as the state private wells code. The code shall address matters affecting the environment and the well being of the public of the commonwealth over which the department takes cognizance and responsibility including, but not limited to, standards for private wells used for human consumption.

(c) A duly certified well driller registered in the commonwealth may construct or modify a private well. The department may opt to not conduct an inspection of a private well if the transfer is of residential real property, and is between the following relationships: (1) between current spouses; (2) between parents and their children; (3) between full siblings; and (4) where the grantor transfers the real property to be held in a revocable or irrevocable trust, where at least one of the designated beneficiaries is of the first degree of relationship to the grantor.

(d) With regard to the enforcement of this section, including requirements related to forms utilized by private well inspectors or local boards of health, the commissioner shall evaluate practices, which would minimize the paperwork burden for individuals, small businesses, contractors, state and local governments and their agents, and strive to ensure the greatest possible public benefit from and maximize the utility of information collected, created, maintained, used, shared and disseminated by or for the purpose of the code and to reduce the

33 number of copies required for official use. Local boards of health shall enforce said code in the
34 same manner in which local health rules and regulations are enforced.

35 (e) The department and local boards of health shall have concurrent authority to enforce
36 said code against any violator. Actions to enforce said code may be brought in the superior court.