



Needham Board of Health



AGENDA

**Friday April 14, 2023
9:00 a.m. to 11:00 a.m.**

**Public Services Administration Building – Charles River Room
500 Dedham Avenue, Needham MA 02492
& 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 **873 8015 5786** and passcode **397134** or click the link below to register:
<https://us02web.zoom.us/j/87380155786?pwd=a2FvNUM5eFBzZWRCV0loeWN1SFdPZz09>

- **9:00 – Welcome & Public Comment Period**
- **9:05 – Review of Minutes (Feb. 16th, March 13th, March 17th)**
- **9:10 – Needham Housing Authority Modernization & Redevelopment Initiative**
Reg Foster, Chair of the Needham Housing Authority

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Board of Health Vote

- **9:35 – Revise Article 11: Biosafety Regulations in Needham**

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- **9:40 – Accessory Dwelling Units – Board of Health Policy Position**
- **9:50 – Proposed Food Grading System for Needham Restaurants**
- **10:00 – Needham General By-law Banning Most Single-Use Plastic Bags**
Presenters from Green Needham
- **10:15– Update on Claxton Field and Environmental Testing Results**
- **10:20 – Staff Reports & COVID Update**
- **10:45 – Brief Updates**
 - **SAPHE Working Group**
 - **May 2023 Town Meeting, and Opioid Stabilization Fund, Town Meeting Warrant Article**

- Board of Health Letter to Select Board about Alcohol Licenses
- **10:55 – Board of Health Re-Organization**
- **Other Items**
- **Upcoming BOH meetings**
 - May 12th from 9:00 – 11:00 a.m. at Public Services Administration Building (PSAB)
 - June 9th from 9:00 – 11:00 a.m. at Public Services Administration Building (PSAB)
 - July 14th from 9:00 – 11:00 a.m. at Public Services Administration Building (PSAB)
- **Adjournment**

(Please note that all times are approximate)



Needham Public Health Division



Board of Health Meeting Minutes DRAFT

Date: February 16, 2023

Location: Rosemary Recreation Complex – Multi-Purpose Room, 178 Rosemary St., Needham MA 02494 OR via Zoom

Members: Edward Cosgrove, PhD, Chair; Kathleen Ward Brown, ScD, Member; Robert A. Partridge, MD, MPH, Member; Tejal K. Gandhi, MD, MPH, Member; Stephen Epstein, MD, MPP, Member

Staff Present: Timothy Muir McDonald, Director of Health, and Human Services; Tara Gurge, Assistant Director of Public Health; Tiffany Zike, Assistant Director of Public Health; Ginnie Chacon-Lopez; Diana Acosta; Carol Read; Julie McCarthy; Taleb Abdelrahim; Michael Lethin; Rebecca Hall; Lydia Cunningham; Cindi Melanson; and Karen Shannon.

Welcome and Public Comment Period

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

According to Chapter 107 of the Acts of 2022, as an act relative to extending certain states of emergency accommodations, as passed by the General Court, and signed into law, Acting Governor Karyn Polito, on July 16, 2022, revised Section 20 of Chapter 20, the Acts of 2001. In so doing, provided modifications to the Massachusetts Open Meeting Law, which allow for flexibility to hold remote only, and hybrid meetings, while preserving public access and, where appropriate, public participation. Currently, that additional flexibility will expire on March 31, 2023, unless additional legislative action occurs. As part of today's hybrid meeting, all votes will occur via a roll call.

There was no public comment at this time.

Review of Minutes – December 16, 2022 and January 17, 2023

The Board tabled review of the December 16, 2022, minutes until a future meeting.

Upon motion duly made by Dr. Partridge, and seconded by Dr. Brown, it was voted to approve the minutes of January 17, 2023, as amended. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove – Y, Dr. Epstein – Y, and Dr. Partridge – Y. Motion passed 5-0.



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Tobacco Compliance Violation, Underage Sale of Tobacco Product

Dr. Cosgrove opened the tobacco compliance violation hearing.

Ms. Gurge stated that compliance checks were carried out at six establishments on January 31st, with the aid of an under-aged student. One sale was made at the Shell Gas Station.

Mr. Joey Mansour, owner of the Shell Gas Station, apologized to the Board. He noted that this is not a common occurrence at his business. He thanked the Board for conducting these checks, as they are a useful tool. He noted difficulty in finding employees lately. He stated that weekly training sessions will be held with that employee to be sure he understands the correct process.

Ms. Gurge noted that it has been nearly a decade since the last compliance check issue with this business.

Mr. McDonald stated that staff can work to translate some of the tobacco materials into different languages for vendors. The Board has previously defined the penalty for the first violation to be a sales permit suspension for one week and a fine of \$300. The Board, using its discretion, has chosen in the past to forgo the fine, but has imposed a weeklong sales suspension. The Board has generally allowed Ms. Gurge to work with the vendor to determine the most appropriate time for the suspension to occur.

Upon motion duly made by Dr. Epstein, and seconded by Dr. Gandhi, it was voted to waive the \$300 fine for this violation, due to the businesses' exemplary record to date, and to institute a seven-day sales suspension. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, Dr. Epstein – Y, and Dr. Partridge – Y. Motion passed 5-0.

Staff Reports and COVID update

Traveling Meals Program – Rebecca Hall

Ms. Hall stated that the program had 28 volunteers in January. They delivered 835 to 47 clients, 40 of them Springwell clients and seven private pay consumers. The program had one new private client and one Springwell client canceled the program. There were no 911 calls initiated during the month.

Emergency Management – Michael Lethin

Mr. Lethin stated that the materials have been solidified for the active shooter joint exercise with Babson College to take place on May 25, 2023. Police and Fire are also considering internal drills during April vacation. An application has been submitted for the Hazardous Materials Emergency Preparedness Grant. This is a \$5,000 competitive grant that would be used to provide Hazmat Awareness training to staff. Requests for quotes were drafted for a contractor to write an



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emergency sheltering plan with the Emergency Management Performance Grant funds. No quotes were received by the due date, and this will be followed up.

Emergency Preparedness – Tiffany Zike & Taleb Abdelrahim

Mr. Abdelrahim stated that the Improving Trainings Program was initiated after sending out an evaluation survey to measure volunteer training interests. He met with a trainer who works through the State of Massachusetts Animal Response Team to facilitate trainings regarding pet first aid and pet shelters during emergency situations. Trainings on this will be held in the spring. Mr. Abdelrahim stated that he is attending online and in-person courses hosted by FEMA and MEMA to further his emergency preparedness management skills. He is continuing to work on the Phase 1 & 2 improvement plan portion of the COVID After-Action Reports. Mr. Abdelrahim also reported continuing work on accreditation.

Shared Services Grants – Diana Acosta

Ms. Acosta stated that Roland Abuntori and Jessica Kent continue their training. The Town of Sherborn has submitted a letter of commitment to join the Charles River Public Health District. Ms. Acosta stated that she has continued to meet with Regan Checchio of Regina Villa Associates to discuss the strategic planning project for the Shared Services Arrangement. Phase 3 of the Baseline Capacity Assessment was shared from Needham, Dover, and Medfield. Interview questions and the invitation letter for stakeholders to continue the strategic planning project were finalized. Interviews are to be scheduled in February and March with board of health members, town administrators and managers, select board chairs, and public health staff. Interviews will include a discussion of current strengths, gaps, and how a shared services approach could improve the current capacity. Participants will also be asked for recommendations for representatives to a strategic planning working group, which will discuss strategies to allow the Public Health Excellence group to meet its goal of improving capacity within the region.

Mr. McDonald explained that the working group will likely be made up of members of the board of health from each municipality and potentially a member of a select board. Needham currently has the most capacity and the hope is to create stronger public health in neighboring communities, allowing them to flourish on their own.

Accreditation Team - Cindi Melanson

Ms. Melanson stated that the team is finalizing the Senior Assessment Report and will soon be able to share the results. The Steering Committee has met a few times since the last report. In the fall, Ms. Melanson presented information specific to Needham regarding the National Public Health Workforce Interest and Needs survey. The goal was to understand workforce training needs. Staff scored positively in most categories. A deeper dive will be done into some of the less positive areas to get more feedback. Accreditation standards require measuring and addressing employee satisfaction and the follow-up survey should satisfy those requirements. The follow-up survey contained ideas related to rewards for creativity and innovation, and



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respect for employee backgrounds. The Accreditation Steering Committee generated ideas about opportunities for increased communication, information sharing among the division, facilitating more in-house trainings related to technology, and convening a work group to discuss ideas to further community building. The group has also been working to hire a consultant to work on the Needham Public Health brand strategy. Lynn Schoeff has been working on a broad array of policies to determine if there are gaps to be filled.

Public Health Nursing – Ginnie Chacon-Lopez

Ms. Chacon-Lopez stated that there were a couple of cases of foodborne illnesses last month, including one salmonella. There was also an individual case with both Legionnaires' and COVID-19. The blood pressure clinics at the Housing Authority developments have been going well. The Matter of Balance classes have also continued. The influenza count is approximately 19 confirmed cases and six suspected cases.

In response to a question from Dr. Epstein, Ms. Chacon-Lopez stated that the Legionnaires' case was a person living in their own house.

Epidemiology – Julie McCarthy

Ms. McCarthy has created a rough draft of the Community Health Assessment which is ready for the Accreditation Steering Committee to review, using the structure of other local assessments as a guide and the priority areas from the Beth Israel Deaconess 2022 Community Health Needs Assessment. COVID testing is still being done, and requests have increased since the beginning of year. Daily cases of COVID-19 are starting to decrease again. There has not been a lot of movement in vaccination percentages. Hospitalization rates due to COVID-19 have decreased since the last period but are still higher than they were a year ago. There is approximately a 44% flu vaccination rate in the State.

Substance Use Prevention MassCALL3 grant Dedham, Needham, Walpole, Westwood – Carol Read and Lydia Cunningham

Ms. Read reported on the quarterly Community Crisis Intervention Team meeting. A psychiatrist and two social workers are available through Riverside and a recovery coach is providing support to residents. The office of Local and Regional Health launched a behavioral health road map overview yesterday. Community behavioral health centers are opening across the Commonwealth, primarily for people that have Mass Health insurance.

Dr. Epstein asked if the behavioral health centers are available for those who are uninsured. He noted that the public health emergency will likely end in May, and many may lose Mass Health coverage. Ms. Read stated that she will check on this item. Ms. Chacon-Lopez stated that the helpline can be used by those uninsured.



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Dr. Epstein suggested that staff could assess how many people in Needham might lose Mass Health at end of the public health emergency and how best to help them reapply. Ms. Read noted that Quincy Family Services also helps get people back on insurance.

Ms. Cunningham explained that the group held a three session webinar series, called Equity in Action. Approximately 10-12 people attended each session. The sessions were recorded and posted to the YouTube channel and sent to many local people.

Substance Use Prevention – Karen Shannon

Ms. Shannon stated that the Positive Community Norms poster campaign has begun. The campaign is designed to reduce the misconceptions about Needham youth substance use and to promote that most high school students do not use substances. An educational event will be held at Needham High on May 2nd for Needham parents regarding the MA social host law and liability. Karen Mullen recently took ten SALSA students to attend the 84 Movement's Youth Power Summit, joining youth prevention advocates across Massachusetts. The Needham-Natick coalition team for Project ECHO presented a case study about developing prevention at the January cohort meeting.

Dr. Epstein noted that he believes recent data may show that cannabis use is increasing. When staff looks to create future messaging, it should consider keeping abreast of new developments.

Ms. Chacon-Lopez stated that she researched the community behavioral health centers, and these will take people, regardless of their insurance coverage. There are 29 of these so far that will take uninsured people, with the closest in Norwood.

Environmental Health – Tara Gurge

Ms. Gurge noted that Ally Littlefield has taken a wonderful opportunity with Harvard University.

Environmental Health staff sent the revised Food Code enforcement policy and a summary letter to all permitted food service and retail food establishments. A link to the document was placed on the Public Health Division webpage. Staff is looking at having the document translated into other languages and links to those documents will be posted once developed. Staff plans on conducting virtual trainings with food establishment owners and managers on these policy updates. Food inspectors will bring hardcopies of the policy to routine inspections so they can educate food establishment staff. Ms. Gurge has continued to work with Lynn Schoeff to review and update all Health Division policies. Ms. Gurge also continues to work on documents for accreditation.

Ms. Gurge reviewed several housing complaints being pursued for a property on High Street.



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Mr. McDonald noted that the Town may want to consider proactive housing inspections before units are rented. This would be a significant undertaking but may remove complicated situations by catching them early.

Dr. Epstein asked how many rental units there are in Town and how many have significant issues. Mr. McDonald stated that, out of hundreds of rentals, likely less than 10% have serious issues. Dr. Epstein stated that there could be equity issues regarding which units are inspected. Mr. McDonald agreed that all would need to be inspected. Most of the complicated complaints arise from single, smaller units. Housing and hoarding cases are increasing. Issues of these types require dozens of person hours from many staff members.

Dr. Gandhi asked if landlords are required to participate in training of any type. Ms. Gurge stated that the State offers training and the Town offer guidelines for landlords and tenants.

Mr. McDonald noted that preoccupancy checks would take months of discussion by the Board but may be worthwhile overall. Other towns have preoccupancy permits and he will examine those.

Dr. Gandhi suggested that research be done as to whether a preoccupancy permit would prevent many of these cases. Dr. Epstein suggested that random spot checks may be more useful.

BOARD OF HEALTH PUBLIC HEARING:

Revise Article 11: Biosafety Regulations in Needham

Dr. Cosgrove opened the hearing on the Biosafety Regulations.

Dr. Brown stated that she will be recusing herself from this item. She recently learned that the consultant for this project works for her company as a subcontractor. There is no conflict of interest, but it is likely appropriate for her to recuse herself.

Mr. McDonald stated that one set of public comments has been received and was placed in the Board's packet. Dr. Cosgrove asked for additional public comment at this time.

Mr. Stephen Brecher, 54 Border Road, stated that he spoke with someone in Natick regarding the biosafety laws in that town. He would like to know what will be done in Needham for these regulations. He would like to make sure new businesses are considered from a safety standpoint.

Ms. Betsy Gilman Duane stated that she is representing Environmental Health and Engineering of Newton. She submitted information that she hopes is practical. She called the Board's



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attention to one item that may not be practical and could drive business away from Needham. In Section 11.5.1., it states that a developer needs to obtain a registration before constructing a new building or renovating a building into a life science lab. If a tenant has not yet been identified, a landlord may not know what materials the tenant may be working with.

Mr. McDonald stated that some feedback received tonight will likely be incorporated into the draft, through discussion with the Board. He stated that feedback was received from Town Counsel regarding what information could be redacted from a Right to Know request if submitted as part of a lab's submission to the Town. There are some categories that can and some that cannot.

Dr. Epstein asked if Ms. Gilman Duane has any conflicts of interest. Ms. Gilman Duane stated that she is representing the Bulfinch Group, which is developing the Muzi property. Environmental Health & Engineering has been retained to assist in this project.

Dr. Cosgrove stated that he believes Section 11.5.1. was included to describe what type of life science lab might be moving into Town, but not necessarily specifics regarding the materials to be used.

Ms. Gilman Duane stated that biosafety level 3 labs are few and far between. They are expensive to develop, build, and operate. These are generally for pathogens more suited to an academic environment than a life science lab. Dr. Epstein noted that there are many academic environments around Needham, which is why this is specified in the regulations.

Dr. Cosgrove stated that Ms. Gilman Duane's feedback would be reviewed and considered. Mr. McDonald suggested the Board leave this item open, incorporate feedback received, and review a revised draft next month. The Board could then choose to vote on the regulations in March or April. He stated that he will reach out to people who previously submitted emails to staff to ask if they have any feedback to include.

Discuss Alcohol Compliance Challenges and Licensee Education

Ms. Shannon shared changes to the alcohol compliance chart based on 2017 and 2019 data. Several TIPS trainings were conducted during that time period and several compliance checks also occurred. It is hard to tell if there is pattern with the compliance checks. Ms. McCarthy noted that there were many changes in the process historically, but staff is working to make sure that this process is ironed out. The data will be better going forward.

Dr. Gandhi asked if there is data regarding manager training versus staff. Ms. Shannon stated that this is now part of the data and trackable.



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Ms. Shannon stated that there are typically two underage operators, recruited through the local college. These operators are generally 19-20 years of age, with some being in-state and some out-of-state. These operators present their own identification when proof of age is requested.

In 2022, 48 Needham alcohol licensee staff attended in-person TIPS trainings. Most of these employees did not sell to an underage operative during subsequent compliance checks.

Dr. Gandhi asked if it is clear if those same 48 staff members were the ones present during the compliance checks. Ms. Shannon stated that this data is not currently collected but could be considered in the future. Collecting names of staff members could put the compliance check at risk.

Dr. Epstein stated that it is unclear if the 48 employees who actually attended the TIPS trainings were the ones to then not sell to underage operatives. It may be more powerful to state that only one staff member who attended the TIPS trainings sold to an underage operative during a compliance check.

Ms. Shannon stated that data from an official TIPS survey found that 91% of respondents believe that alcohol server training should be required by law. 64% also noted that the largest alcohol-related concern was underage drinking.

Ms. McCarthy noted that additional data is being considered in order to best understand why failures are happening and how to best support businesses.

Dr. Brown noted that underage consumers appear to be getting alcohol from many other sources at this time. She asked if there is any way to track these other sources. Ms. Shannon noted that some vendors deliver, and this could be a potential policy item. There is data from surrounding towns on how few delivery vendors check for IDs.

Ms. Shannon shared a comparison of the penalties in Town to a number of other nearby communities. Dr. Epstein stated that he would like to see information on the actual penalties which have been handed down in Town. Ms. Gandhi stated that she believes every restaurant that failed had a meeting with members of the Select Board. Dr. Epstein stated that he is unaware of any penalty beyond a one-day suspension.

Dr. Partridge asked if the other communities shown on the penalty chart are under the jurisdiction of a select board or through a different organization, such as the Board of Health. Ms. Shannon stated that she would look into this.

Mr. McDonald noted that the Select Board plans to open its alcohol regulation for public comment on February 28th. The Select Board intends to specifically ask for feedback from the



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Board of Health, himself, and the Police Chief. The regulation will remain open for public comment until March 14th, and the Select Board will vote on the proposed amendments (and any additional amendments based on public comment) to the regulation on March 28th. Part of these proposed amendments will require each establishment to purchase an ID scanner, it will mandate reporting of TIPS trainings for all new hires within 6 months, and will include new language regarding training.

Dr. Cosgrove stated that he believes the Select Board's alcohol regulation has been ineffective thus far because the penalties have been too minor or unenforced. Dr. Gandhi noted that the Board of Health has directly relevant experience with this topic. Dr. Epstein stated his belief that the Board of Health could still take this over under Chapter 111.

Mr. McDonald stated that he will try to schedule a meeting the first week of March for the Board of Health to discuss the proposed changes to the regulation. The Board can then ask to meet with representatives from the Select Board to discuss proposed changes.

Ms. Shannon explained that she checked into the communities on the penalty chart and boards of health do not oversee the alcohol licenses in those towns. Mr. McDonald noted that Newton has a Commissioner of Health and Human Services who does the licensing.

Board of Health Agent Re-designation and Board of Health Directive to Director and Staff re: Educating and Informing Community about Health Implications of Policies and Programs

Upon motion duly made by Dr. Gandhi, and seconded by Dr. Partridge, it was voted to support the agent designation as outlined in the presented letter, sign such letter, and ask that the letter be filed with the Town Clerk. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, Dr. Epstein – Y, and Dr. Partridge – Y. Motion passed 5-0.

Upon motion duly made by Dr. Gandhi, and seconded by Dr. Partridge, it was voted 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. Dr. Gandhi proposed that the Board make the charge as outlined in the presented letter, sign such letter, and ask that the letter be filed with the Town Clerk. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, Dr. Epstein – Y, and Dr. Partridge – Y. Motion passed 5-0.

Brief Updates

- **Claxton Field**

Mr. McDonald stated that the MA Department of Environmental Protection (DEP) has asked for more testing and information regarding Claxton Field. A series of test borings to draw soil samples were completed today (2/16/23), and it will take several weeks to get results back. Mr.



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McDonald was surprised that there were no health-related inquiries at the community information session; the super majority of attendees were focused upon access to, and playing time on, ball fields at Claxton and at other locations in the community.

There are a number of scenarios that are possible in response to the tests results. There could be nothing found in the twelve-inches of topsoil, though this is unlikely. Alternatively, contamination could be found in the subsurface and this could be expected, with additional fill and a geotextile membrane to be installed, as was the Town's plan before MA DEP became involved. Other scenarios where a significant amount of chemicals and substances are found would include capping and bringing in more fill needed, or even more challenging chemicals could be at play that could lead to remediation over years. The cost of testing has increased with each new request from DEP, although Mr. McDonald expects to absorb the full costs within the Scientific Expertise warrant article and the Public Health Division's operating budget.

Dr. Epstein asked if this project should be put out to bid. Mr. McDonald explained that there is a state-wide master service agreement, and Weston & Sampson is already under contract for the work. Dr. Epstein asked if this should be put out to bid due to the extended scope of the project. Mr. McDonald stated that he is unclear if this can be done, due to the existing contract with Weston & Sampson.

Mr. McDonald noted that, per Town Counsel, some of the negotiations have been compartmentalized to ensure that the consultant was not setting the scope. He noted that there will likely be another community information session at a future date when the test results from the soil samples become available.

- **Regional Training Hub Grant**

Mr. McDonald stated that multiple positions are being posted through this grant, including a new Environmental Health Agent.

Other Items

None at this time.

Next BOH Meeting

The next regular Board meetings will be held on March 17, 2023, at 8:00AM, and April 14, 2023, at 9AM. Both locations TBD.

Adjournment

Upon motion duly made by Dr. Partridge and seconded by Dr. Brown, it was voted to adjourn. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, Dr. Epstein – Y, and Dr. Partridge – Y. Motion passed 5-0.



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The meeting was adjourned at 7:58PM.

Attachment:

February 16, 2023 meeting packet

DRAFT



Needham Public Health Division



Board of Health Meeting Minutes DRAFT

Date: March 13, 2023

Location: via Zoom

Members: Edward Cosgrove, PhD, Chair; Kathleen Ward Brown, ScD, Member; Member; Tejal K. Gandhi, MD, MPH, Member; Stephen Epstein, MD, MPP, Member

Staff Present: Timothy Muir McDonald, Director of Health, and Human Services; Carol Read, and Karen Shannon.

Welcome

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

According to Chapter 107 of the Acts of 2022, as an act relative to extending certain states of emergency accommodations, as passed by the General Court, and signed into law, Acting Governor Karyn Polito, on July 16, 2022, revised Section 20 of Chapter 20, the Acts of 2001. In so doing, provided modifications to the Massachusetts Open Meeting Law, which allow for flexibility to hold remote only, and hybrid meetings, while preserving public access and, where appropriate, public participation. Currently, that additional flexibility will expire on March 31, 2023, unless additional legislative action occurs. As part of today's hybrid meeting, all votes will occur via a roll call.

Needham Alcohol Compliance, Policies and Regulations Review

Mr. McDonald stated that the Board has had discussions regarding its concerns about alcohol compliance, in light of compliance checks which occurred in December where there were eleven sales to minors. The Select Board plans to overhaul their alcohol regulations. The Select Board requested public comment on this overhaul officially on February 28th through March 14th. Tomorrow evening, the Select Board will hold a public hearing and intends to vote on this item on March 28th. The Select Board asked for feedback from the Board of Health and there will be space for Board of Health members to speak during the public hearing tomorrow.

The Board reviewed the draft regulations.



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Dr. Gandhi stated that there seems to be some confusion in Section 3.4.2., Employee Roster, regarding whether it will be provided upon request versus required. In Section 10.1., Violations, Dr. Gandhi stated that this section seems to have too much variability in terms of the types of penalties and timing. The Board of Health has previously discussed suspensions and who determines when these will occur. In Section 10.4., Training, Dr. Gandhi stated that she would like for this to include managers and employees if improper sale has occurred. Section 10.5., Prior Violations, she asked if the clock is reset if there is a change of ownership.

Dr. Epstein stated that, in Section 10.1., the language should be changed to violations 'shall be grounds for action.' He agreed with Dr. Gandhi regarding the variability in this Section. He suggested that the Board of Health ask the Select Board to consider specific penalties, with the ability to take action to mitigate penalties instead of imposing them. For example, a first offense could lead to a three consecutive day suspension, but this can be reviewed on a case-by-case basis to lower the penalty, if there are reasons to do so. The penalties proposed in this regulation are the most lenient of communities in the area.

Dr. Gandhi asked about the schedule for reinspection. Ms. Shannon stated that the proposed language does not include information regarding reinspection. There was discussion regarding online versus in-person courses for those who commit violations. Dr. Cosgrove stated that he believes these should be in-person courses. Ms. Read noted that the program is 4-4.5 hours. Dr. Brown noted that these courses need to be completed within 30 days and asked how feasible this is. Mr. McDonald suggested that the frequency of these courses could be increased or that more people could be trained to teach the classes.

Ms. Shannon noted that there is a dramatic change suggested to the hours of service. Off premise businesses are stated to be open from 8am-11pm, instead of 9am-10pm. It is unclear what will occur on Sundays, as this is not set in the regulations. From an alcohol policy standpoint, controlling the days and hours of service and maintaining limits on them, is a key standpoint in prevention. Reducing access to alcohol, impacts underage drinking and those with alcohol use issues. Increasing access through additional hours is a concern. Dr. Cosgrove agreed that he does not see a point in increasing hours, except to increase sales.

Dr. Epstein asked about the potential of increasing the number of licenses for alcohol establishments in Town. Ms. Read stated that there is sponsored legislation regarding additional liquor licenses. This would allow, by Town vote, the Town to increase the number of liquor licenses consistent with State law. Dr. Epstein stated that the Board of Health may need to show the data regarding failures in compliance at the Select Board meeting. He stated that he hopes the Board of Health will be opposed to increase the number of licenses in Town until the Select Board can demonstrate it can effectively regulate the number of existing licenses.



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Dr. Gandhi agreed that she does not believe there is an issue with being able to access alcohol in Town, so much so that additional hours are needed. Dr. Cosgrove agreed that the Board of Health should oppose both additional liquor licenses and additional hours. Dr. Brown agreed that keeping establishments open until 11pm seems late and not a wise choice. Ms. Shannon asked how those hours would pertain to the delivery ordinance. Dr. Gandhi asked how deliveries are managed in terms of ID checking. Ms. Shannon noted that that is also a concern. Ms. Read stated that she would like to see a designee to inspect records of alcohol deliveries, similar to the way Tara Gurge does for tobacco.

Dr. Epstein noted that the word “secular,” should be removed in the hours-of-service section.

Ms. Read noted that it is unclear if there is anything in the regulations regarding “bring your own.”

Ms. Shannon stated that, regarding the Compliance Section, she is unclear on how the compliance language was separated from the violations and penalties language. It is unclear what the intentions are regarding consequences that come from sales to minor violations during compliance checks. Dr. Epstein stated that compliance checks are geared toward underaged drinking, but that is only one type of violation of the regulations. Section 10.2. seems to apply to any violation. It needs to be clear if there is a range for the broader violation categories, versus the violation for underaged sales. A list of violations could improve clarity.

The Board agreed that a letter to the Select Board would include recommendations on extended availability (including hours of service and increased number of licenses), in-person training, and defined penalties for each type of violation. Mr. McDonald stated that staff will draft the letter for Board comment. Dr. Epstein and Dr. Brown stated that they would plan to attend the Select Board meeting tomorrow.

Ms. Read noted that the House put “cocktails to go” into its supplemental budget bill, but the Senate released its version of the budget without this included. This item may continue past April 2023, and review of delivery records will be important.

Adjournment

Upon motion duly made by Dr. Epstein and seconded by Dr. Gandhi, it was voted to adjourn. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, and Dr. Epstein – Y. Motion passed 4-0.

The meeting was adjourned at 6:51PM.

Attachment:

March 13, 2023 meeting packet



Needham Public Health Division



Board of Health Meeting Minutes DRAFT

Date: March 17, 2023

Location: Rosemary Recreation Complex – Multi-Purpose Room 178 Rosemary Street,
Needham MA 02494 & via Zoom

Members: Edward Cosgrove, PhD, Chair; Kathleen Ward Brown, ScD, Member; Member; Tejal K. Gandhi, MD, MPH, Member; Stephen Epstein, MD, MPP, Member

Staff Present: Timothy Muir McDonald, Director of Health, and Human Services; Ginnie Chacon-Lopez; Hanna Burnett, Diana Acosta; Carol Read; Julie McCarthy; Michael Lethin; Rebecca Hall; Lydia Cunningham; Cindi Melanson; and Karen Shannon.

Welcome & Public Comment Period

Dr. Gandhi called the meeting to order at 9:00AM and initiated a roll call. Present were Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove – Y, and Dr. Epstein – Y.

According to Chapter 107 of the Acts of 2022, as an act relative to extending certain states of emergency accommodations, as passed by the General Court, and signed into law, Acting Governor Karyn Polito, on July 16 2022, revised Section 20 of Chapter 20, the Acts of 2001. In so doing, provided modifications to the Massachusetts Open Meeting Law, which allow for flexibility to hold remote only, and hybrid meetings, while preserving public access and, where appropriate, public participation. Currently, that additional flexibility will expire on March 31, 2023, unless additional legislative action occurs. As part of today's hybrid meeting, all votes will occur via a roll call.

Review of Minutes – Dec. 16th, Jan. 17th, and Feb. 16th

The Board agreed to table approval of the February 16, 2023, minutes for further edits.

Upon motion duly made by Dr. Epstein, and seconded by Dr. Cosgrove, it was voted to approve the minutes of December 16, 2023; and January 17, 2023, as amended. Motion passed 4-0.

Staff Reports & COVID Update

Emergency Management



Needham Public Health Division



Michael Lethin stated that invitations were sent out to all associated with the Active Shooter Preparedness exercise at Babson College, taking place at the end of May. Requests for quotes for contractors to write the Emergency Sheltering plan, as well as to facilitate a functional exercise of the Town's Emergency Operations Center have been sent. Those quotes are due back today. In February, there was an extreme cold weather event, and the Town response went fairly well. Three individuals needed sheltering during that time, which the Town was able to provide.

Emergency Preparedness

Mr. McDonald reported on this item. He explained that the group is working on the warming and cooling center plan. It is also using the training survey results to develop trainings for medical reserve volunteers.

Public Health Nursing

Hanna Burnett stated that the group continues to work on the blood pressure clinic to encourage more people. The Matter of Balance classes completed and were well attended. CPR classes are also continuing. There have been two Domestic Abuse Conversations at the Needham Community Council.

Ginnie Chacon-Lopez stated that there have been six confirmed influenza cases. There were also two unrelated Norovirus cases that both ate ready-to-eat meals from two different grocery stores. There was one case of pertussis, but she was unsuccessful in reaching the person, despite multiple attempts and different methods.

Dr. Epstein stated that the pertussis case is concerning, as this is a highly communicable item. He suggested more directed outreach. The Police Department could also do a drive-by to confirm this.

COVID Update

Julie McCarthy stated that the seven-day average is very low and the seven-day average for Massachusetts has also been low and appears to have plateaued. There has been an increase in younger age groups continuing to get booster doses. Hospitalization rates continue to decline. Last week the Healey Administration stated that the COVID-19 Public Health Emergency will end on May 11th. This lines up with the end of the federal public health emergency. It is unclear how this will impact the updates to COVID data.

Mr. McDonald stated that the State has sufficient COVID vaccines to last into the early fall. There is no plan for the federal government to subsidize COVID vaccines beyond this stockpile. The Town should discuss if it would like to order additional vaccines, at \$125/dose. There is a high balance of immunization funds which could be spent toward that.

Dr. Epstein stated that he would like to find a way to link this with influenza vaccines.



Needham Public Health Division



The Board discussed what type of information they would like to still receive through this report.

Epidemiology

Ms. McCarthy stated that the draft of the Community Health Assessment was sent to the Accreditation Steering Committee for review. There is a gap in data for the ages between 18 and 60. The group is discussing ways to pull in that data from the State.

There has not been much interest in COVID testing, but interest has increased a bit since advertising has increased. This has also been advertised to Dover, Medfield, and Sherborn.

Shared Services Grants

Diana Acosta stated that she and Roland Abuntori attended the MHOA Housing Code training which focused on updates in the housing code set to take effect in April 2023. Interviews were conducted by Regina Villa Associates with various Board of Health members, Town Administrators, and public health staff. Interviews continue through the first week of March. The Working Group will begin to meet in March to discuss the capacity assessment and how best to fill gaps to provide extended public health capacity throughout the whole region. The goal is to create an intermunicipal agreement among all four municipalities. Results have been received from the three-phase capacity assessment that the State had conducted. Ms. Acosta noted that engagement with racial equity training is a requirement of the Public Health Excellence grant. The Office of Local Regional Health is offering a training, *Racial Equity 101: Building Foundational Knowledge and Skills to Advance Racial Equity*. She encouraged everyone to participate.

Substance Use Prevention

Karen Shannon stated that the group is planning a lot of future initiatives. The annual progress report to has been submitted to the Substance Abuse and Mental Health Services Administration (SAMHSA) and the grant officer anticipates no issues with it. It is expected that the continuation award will be issued imminently. The upcoming schedule of compliance checks with the Police Department is being reviewed and there will be a TIPS alcohol service training in May. The SALSA (Students Advocating for Life without Substance Abuse) students have been very robust in their advocacy work, contributing 122 hours during the month.

Substance Use Prevention - MassCALL3 Grant

Lydia Cunningham stated that a virtual site visit was carried out in February. This is a requirement of the grant. A strategic planning meeting is now being prepared. There will be a hybrid community forum in April.

Carol Read stated that the regional prevention funding has shown that there can be collaboration across towns. Partnering can occur based on evidence-informed and evidence-based strategies.



Needham Public Health Division



The group is highly focused on alcohol strategies at this time, although strategies cannot be implemented until the strategic plan is finalized. April is Alcohol Awareness month. There needs to be a more proactive community education approach to alcohol access. It is hoped that everyone will attend the forum on April 13th. There is a lot of work to be done, and she expressed appreciation to this Board for its advocacy.

Traveling Meals Program

Rebecca Hall stated that 764 meals were delivered in February. No 911 calls were initiated. There were five new clients during the month, and six cancelled the program. In February, FRIENDS included boxed chocolates with a Valentine's message for each client.

Environmental Health

Mr. McDonald stated that there have been two rounds of interviews for a full-time Environmental Health Agent. An offer will hopefully be made soon, with a person in place by mid-April. Tobacco compliance checks were completed on January 31st with Tara Gurge, Ally Littlefield, Officer Schlittler, and an underage volunteer. Out of the six tobacco compliance checks, the Needham Shell Gas Station at 875 Highland Ave. sold to a minor. There are still a number of housing issues pending, one of which is very time consuming. The group is currently drafting an outdoor seating policy for food establishments, as an expansion of its pest control work. There will be discussions regarding the fees for this and certain parameters.

The Rice Barn Food Permit Discussion

Mr. McDonald explained that it has been almost a year since the Rice Barn's food permit was suspended by the Board. The owner has indicated an interest in reopening. An initial walkthrough of the restaurant found some large concerns, such as evidence of pests and lack of a regular pest service agreement. The Board has wide discretion regarding allowing reopening of this restaurant. Unless there are fairly large improvements made, staff will not be recommending the reopening of this restaurant. He will continue to update the Board on this item.

Charles River Public Health District – Capacity Assessment Resource Toolkit (CART) Report & Public Health Excellence Shared Services Working Group

Ms. Acosta explained that the toolkit uses all the data that was collected in the State's capacity assessment. It was developed to assist shared services arrangements and to inform the development of work plans. She encouraged the Board to review the data collected because corrections can be submitted to ensure the data is accurate and the results are reflected correctly. The toolkit will be used as the basis to determine funding for the next fiscal year. The mechanism to allow for additional funding is currently being discussed. The capacity assessment found that the region is achieving approximately 84% of the standards. There is still room for improvement, such as in the areas of environmental health and tobacco use prevention. Some areas require a bit more training or additional staffing. The working group will take this data and



Needham Public Health Division



consider ways to improve these numbers. This data will be used by the working group to inform an intermunicipal agreement.

Accreditation

Cindi Melanson gave a brief update on accreditation.

Discuss Alcohol Compliance and Select Board Regulations

Dr. Epstein noted that two Select Board members commented on this item. One was supportive of in person training prior to a server with a violation returning to serve again. Dr. Brown stated that she believes the Select Board was open to the viewpoint presented by the Board of Health. A retailer spoke at the meeting, supporting the Board of Health's suggestion to reduce the business hours.

Dr. Gandhi noted that there will be a League of Women Voters forum on March 20th at 4:30pm with a focus on the 2023 ballot items. This could be an opportunity to share the Board's letter regarding these regulations. Dr. Epstein suggested sharing the data regarding the MetroWest survey, showing that there is a problem in Needham, and data showing that increased access to alcohol leads to increased drinking and potential injury. The Board believes the Town is not currently doing a good job in terms of compliance with underage drinking laws and given that, the Board cannot support increased access to alcohol in the Town at this time.

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Epstein, it was voted to submit a document to the League of Women Voters for their meeting on Monday night, listing the Board of Health's statement and explanation regarding why it is opposed to the proposed change in liquor regulations. Motion passed 4-0.

BOARD OF HEALTH – PUBLIC HEARING

Revise Article 11: Biosafety Regulations in Needham

Dr. Brown recused herself from this item.

Mr. McDonald explained that the Board received one public comment since it last continued this hearing. There are also a couple of members of the public who wish to speak on this item.

Barry Pollack, 15 Pandolf Lane, stated that he believes the existing biohazard regulations are primarily registration oriented. There is currently a proposed increase of regulatory or licensing efforts underway, in terms of incoming biohazards into Town. He suggested that the Board require that registrants who receive approval to engage in certain types of the more complex biohazard work represent that they have an effective compliance program. There are seven elements to an effective compliance program, including implementing written policies and procedures for standards of conduct and ethics; designating a compliance officer and compliance



Needham Public Health Division



committee; conducting effective training and education, including compliance training; developing effective lines of communication with a promise not to retaliate against employees who would report wrongdoing; conducting internal monitoring and auditing; enforcing standards through well publicized disciplinary guidelines; and responding promptly to detected problems and undertaking corrective action. He also suggested looking into the current zoning regulations in Town. He would like these regulations to capture and perhaps encourage collaboration between the Board of Health and the Planning Board. Lastly, he commended the Board of Health on its proactive role regarding alcohol compliance issues in Town. He suggested an additional committee to monitor these items.

Betsy Gilman Duane, representing Environmental Health and Engineering of Newton, stated that she appreciates the revised draft of the regulations and seeing that it incorporated many of her comments and suggestions.

Mr. McDonald noted that Ms. Gilman Duane submitted a letter on March 14th regarding Section 11.5.1. which did not make it into the Board's packet. He asked her to summarize that letter. Ms. Gilman Duane stated that this dealt with new construction or renovation. In many cases tenants have not yet been identified, making it very difficult to have the landlord go through the registration process. The suggestion is that, if there is new construction or renovation without a known tenant, the developer would provide written notification of the construction without yet having to obtain registration. The Board agreed with this item.

Mr. McDonald noted that there was a suggestion from Town Counsel regarding what can be considered private disclosure under public record law. The Board agreed that this suggestion was reasonable.

The Board agreed to close the hearing this evening and schedule a vote on the item in April. The Board can still accept public comments at any time, prior to the vote.

The Board formally closed the public hearing regarding Article 11: Biosafety Regulations in Needham.

Brief Updates

- **Accessory Dwelling Units**

Mr. McDonald explained that a proposed zoning bylaw has been submitted for Town Meeting regarding accessory dwelling units (ADUs). He asked whether the Board wants to issue a policy position or a letter supporting the proposed changes.

Dr. Cosgrove stated that the changes seem to reflect the mood of many in Town at this time regarding ADUs.



Needham Public Health Division



Upon motion duly made by Dr. Brown, and seconded by Dr. Cosgrove, it was voted to submit a letter in support of the ADU changes as proposed. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove – Y, and Dr. Epstein – Y. Motion passed 4-0.

- **Claxton Field**

Mr. McDonald stated that test results are still not back for Claxton Field.

- **Needham Housing Authority (NHA) Preservation and Redevelopment Initiatives**

Mr. McDonald explained that the NHA would like to come before the Board to present on its Preservation and Redevelopment Initiatives.

- **Opioid Trust Fund, Town Meeting Warrant Article**

Mr. McDonald stated that a financial warrant article has been submitted for the Opioid Trust Fund. The Town is considering placing these funds into a stabilization account. Placing these funds into a stabilization account means that they would remain as appropriation and not move back into free cash at the end of the year. A stakeholder group will be convened to potentially create a five-year spending plan. An attempt will be made to gather significant community input, including from the Board of Health, on how the funding could and should be spent. The stabilization fund creation will be subject to a vote at Town Meeting.

The Board reviewed its previous votes for a roll call.

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Epstein, it was voted to submit a document to the League of Women Voters for their meeting on Monday night, listing the Board of Health's statement and explanation regarding why it is opposed to the proposed change in liquor regulations. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove – Y, and Dr. Epstein – Y. Motion passed 4-0.

Other Items

- **Public Health Division Staff Bios**

This item was not addressed at this time.

Upcoming BOH Meetings

- **April 14th from 9:00 – 11:00 a.m. at Public Services Administration Building (PSAB)**
- **May 12th from 9:00 – 11:00 a.m. at TBD**
- **June 9th from 9:00 – 11:00 a.m. at TBD**

Adjournment



Needham Public Health Division



Upon motion duly made by Dr. Epstein, and seconded by Dr. Cosgrove, it was voted to approve the minutes of December 16, 2023; and January 17, 2023, as amended, and to adjourn the meeting. Dr. Brown – Y, Dr. Gandhi – Y, Dr. Cosgrove - Y, and Dr. Epstein – Y. Motion passed 4-0.

The meeting was adjourned at 11:01AM.

Attachment:

March 17, 2023 meeting packet

DRAFT



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



MEETING DATE: 4/14/2023

Agenda Item	Needham Housing Authority Modernization & Redevelopment Initiative
Presenter(s)	Reg Foster, Chair, Needham Housing Authority Margaret Moran, Cambridge Housing Authority Nathalie Janson, Cambridge Housing Authority Dan Chen, BH+A Architect/Engineering Team Cheryl Gosman, NHA Executive Director

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Chair Foster and the project team will present the Housing Authority's high-level goals/objectives for the redevelopment of Linden Chambers.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Discussion Only.	
3.	BACK UP INFORMATION:
a. Needham Housing Authority Redevelopment of Linden and Chambers Streets Presentation	



NEEDHAM HOUSING AUTHORITY

Redevelopment of Linden and Chambers Streets

Board of Health Presentation
April 14, 2023



Bargmann Hendrie + Archetype Inc.

Project Team



Owner, Property Manager
and Developer



Affordable Senior Housing Experience

Over 800 Senior Affordable Housing Apartments over past 5 years



Experience in Needham



Rosemary Recreational Complex & Pool (RRC)

Center at the Heights
(Needham Senior Center)



Emery Grover Renovations for School
Administration Dept.

Hillside School Swing Space Office
Renovations

Pollard Modular Modifications

Temple Aliyah



Existing Conditions

Existing Conditions

- Built between 1959 and 1962 (Linden) and 1972 (Chambers)
- 152 studio units of state public housing for low-income elderly / disabled households
- Poor physical conditions (Site and Buildings)
- Accessibility compliance issues
- Undersized units
- Lack adequate parking
- Wetland and environmental challenges



Existing Conditions – Linden Street



Existing Conditions – Chambers Street

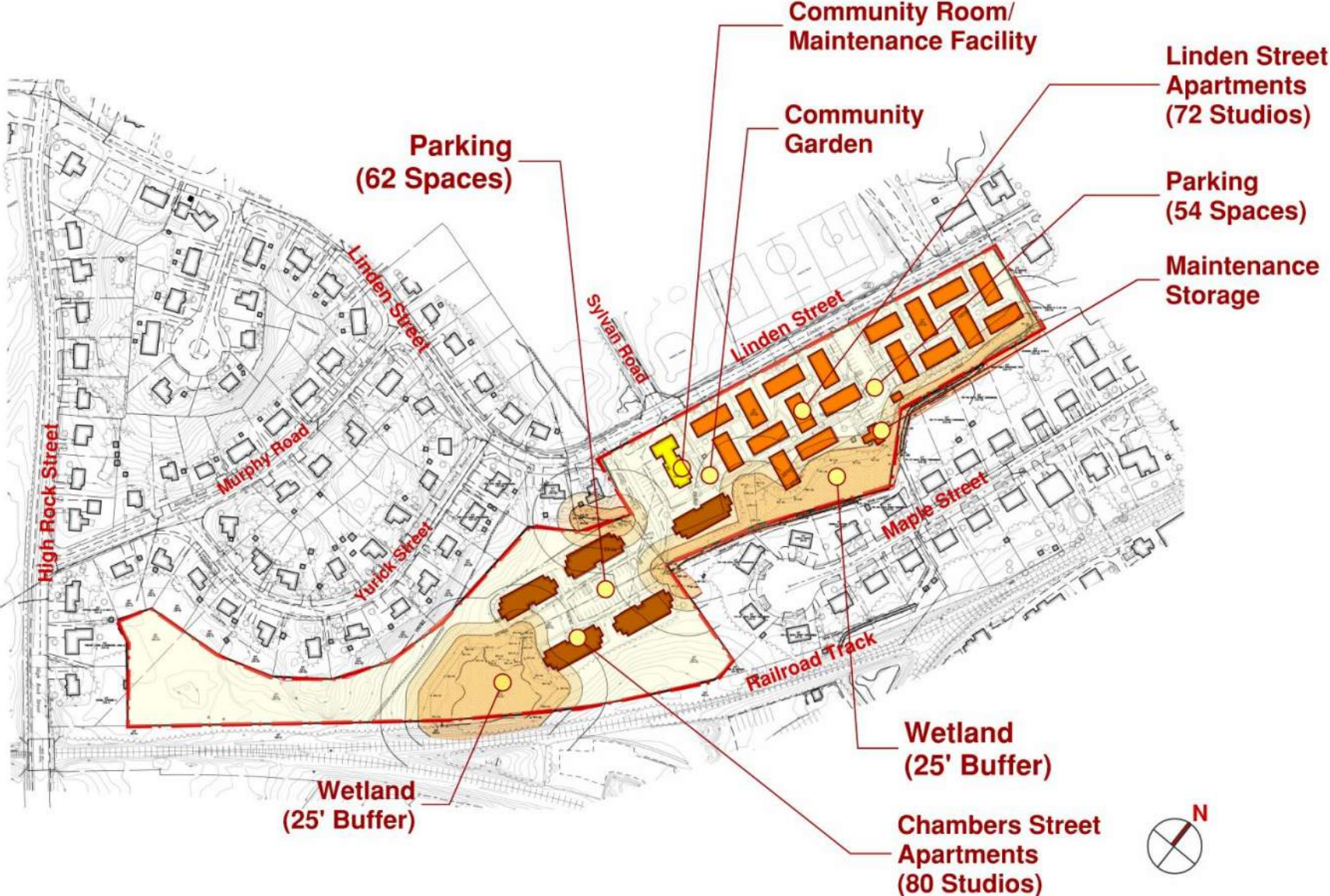


Existing Site – Wetland Conditions



Conceptual Study

Existing Linden/Chambers Community – 152 Studios



Phase 1A: 70 Units All New 1-Bedrooms



Phase 1B: 150 Units All New 1-Bedrooms



Phase 2: 240 Units All New 1-Bedrooms



Current Project Status

- Project Kickoff meeting held on Jan. 9
- Residents' kickoff meeting held on Jan. 23
- Introduction meetings with Select Board, Planning and Conservation (Feb. 2023)
- Complete feasibility study, and facility investigation by April, 2023
- Outreach and coordination with abutters, High Rock middle school, Maple street neighborhood, Board of Health, Town Select Board, Planning, Conservation and DHCD

Project Goals

- Replace existing 152 studio units and bring them up to modern-day standards by increasing unit sizes and providing adequate amenities and building systems.
- Develop additional new senior/disabled units and explore the potential increase in family units. (80-100 units additional)
- Remove barriers of access for elderly/disabled households, including ensuring that all 2+ story buildings have elevators
- Ensure resident, abutter neighbors and town involvement and buy in are critical to this redevelopment process
- A design that fits into this Linden Chambers neighborhood context and that meets Needham sustainability targets
- A redevelopment and Modernization strategy that allows the Authority to manage relocation requirements and construction costs
- Determine multi-phase approach to construction

Energy, Sustainable and Resiliency Goals

Reduce Building Energy Demand

How: Establish realistic Energy Usage Intensity (EUI) Targets early in Design and verify at Milestones (SD, DD, CD)

Harvest Onsite Energy

How: Explore PV Solar panels, and Ground Source/Geo-Thermal Heat pumps

Maximize Building Efficiency

How: Maximize Building Insulation and Building Envelop Air Tightness (<0.08ACH /sf Air Change Rates)

Selection of Highest Efficiency HVAC system through a cost and benefit analysis

Accurate Energy Modeling and verify at early key Milestones (Feasibility, SD, DD)

Minimize Carbon Footprint and Reduce Green House Gas

How: By reducing Concrete and Steel usage during building design and Construction. Wood Construction when applicable

Life Cycle Assessment (LCA) to evaluate material Embody Carbon with up-to-date Environment Product Declarations (EPD)

Minimize and/or Establish No Fossil Fuel usage

Building Commissioning

How: Confirm Building operational efficiency after occupancy. Conduct energy audits and other verification means

Federal and State Funding Opportunities

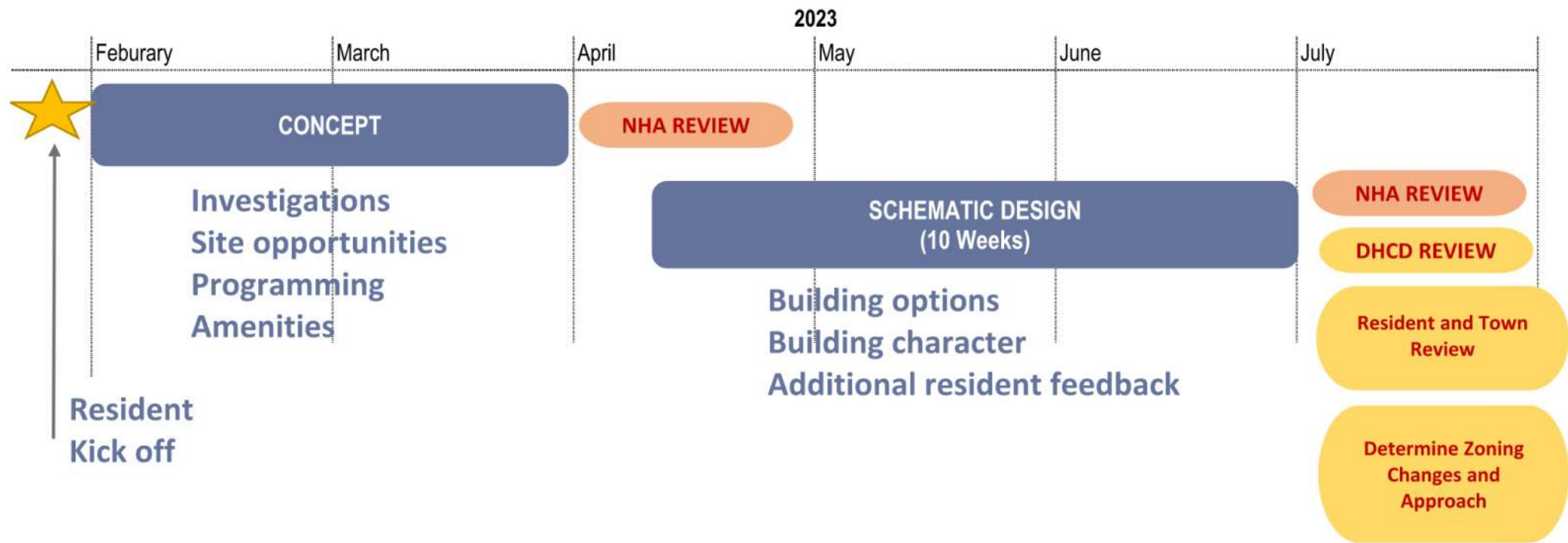
How: Assist and Explore Funding programs from HUD, DOER, EPA and Local utility rebates. Programs such as Inflation Reduction Act, Flexible Block Grants to Local Utility Rebate and incentives (Eversource Path 1 Zero Net Equivalent)

Board Of Health Topics

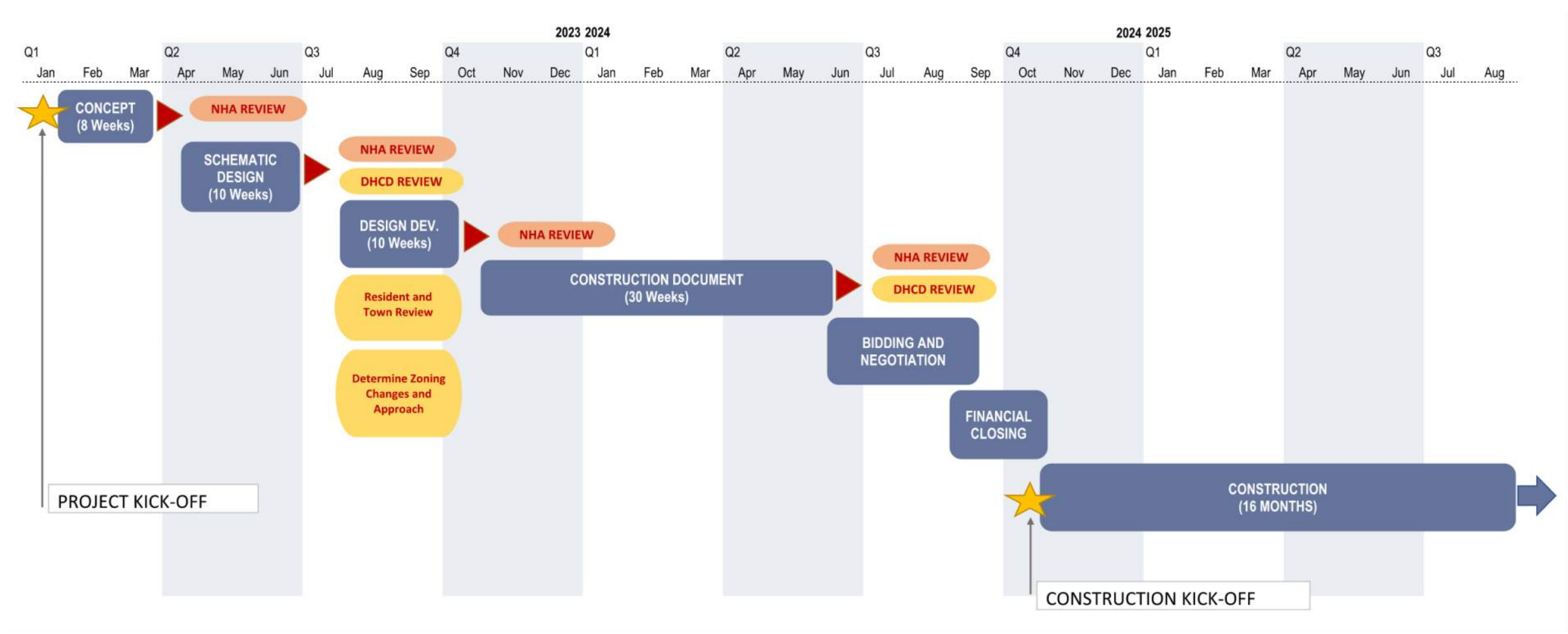
- Ambulance and EMT access to residents
- Improved Air quality with mechanical make up air system to each residential unit
- Elderly transportation pick up and drop off location
- Community room with future commercial kitchen promoting senior nutrition and healthy eating
- Community room with programs for resident mental health promotion, elder isolation and social group support programs

Project Schedule

Project Schedule – Next 6 Months



Project Schedule





Thank you



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



MEETING DATE: 04/14/2023

Agenda Item	Proposed changes to Article 11: Biosafety Regulation
Presenter(s)	Timothy McDonald, Director of Health & Human Services Julie McCarthy, Epidemiologist/Data Analyst

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	The proposed amendments and major revisions to Article 11 provide authorization and a framework for which to regulate biological laboratories in the Town of Needham, the different biosafety levels, what biosafety levels will be permitted by right or by variance in Needham, the paperwork requirements for permit registration, and the establishment of a biosafety committee that will oversee any such laboratories, and other items.
2.	VOTE REQUIRED BY BOARD OF HEALTH
	Vote is required. Suggested motion: “Mr. Chair, I move that the Board of Health approve the revisions to Article 11 as presented in the packet and posted on the Town’s website.”
3.	BACK UP INFORMATION:
	a. ARTICLE 11- Biotechnology Registration_Draft_revisions_4.10.23



Board of Health

Kathleen Ward Brown, ScD

Edward Cosgrove, PhD

Stephen Epstein, MD, MPP

Tejal K. Gandhi, MD, MPH Robert Partridge, MD, MPH

ARTICLE 11 **BIOSAFETY REGULATION**

SECTION 11.1 **AUTHORITY**

The Needham Board of Health (the “Board”), pursuant to the authority granted under Massachusetts General Laws Chapter 111 section 31 hereby adopts the following regulation to protect the-public health of the community.

SECTION 11.2 **PURPOSE**

In order to safeguard the health and welfare of the residents of the Town of Needham (the “Town”), the Board hereby promulgates this regulation governing the use of all biological agents within the Town. The use of biological agents requiring Biosafety Laboratory 3 containment shall not be permitted within the Town without a variance from the Board and the Biosafety Committee. Biosafety Laboratory 4 containment shall not be permitted in Needham.

SECTION 11.3 **DEFINITIONS**

Board: The Board of Health or its agent or designee.

Biological Agents: any microorganism (including, but not limited to, bacteria, viruses, fungi, rickettsia or protozoa) or infectious substance, or any naturally occurring, bioengineered or synthesized component of any such microorganism or infectious substance that is identified as part of any defined risk group as defined by the National Institutes of Health (NIH) Guidelines (as defined below); or requires a BSL 3 containment as determined by an Institutional Biosafety Committee (as defined below); or is identified by the United States Department of Health and Human Services (“DHHS”) or the United States Department of Agriculture (“USDA”) as a “Select Agent” (as defined below).

Biotechnology: The use of modern biological techniques for industrial or research purposes. The term Biotechnology shall include any industrial or research activities which use recombinant DNA molecules (rDNA) or organisms and viruses containing rDNA.

Needham Biosafety Committee (the Committee): The Needham Biosafety Committee shall be composed of the Chair of the Board or his/her designee, the Town's Director of Health and Human Services or her/his designee, and a up to three other members to be appointed by the Board. Members are selected through an application process based on their professional experience or advanced graduate or doctoral level studies in biotechnology, rDNA technology, public health, or another related scientific field.

Director: The Town Director of Health and Human Services.

Guidelines:

- (1) National Institutes of Health (NIH) Guidelines for Research involving Recombinant DNA or Synthetic Nucleic Acid Molecules published in the Federal Register of July 23, 1976, and any subsequent federal amendments thereto adopted by the Recombinant DNA Advisory Committee within the NIH.
- (2) Biosafety in Microbiology and Biomedical Laboratories (BMBL), newest edition as provided by the [Centers for Disease Control and Prevention \(CDC\)](#).
- (3) Any amendments, revisions or substitutions enacted subsequent to the above-referenced guidelines. In the event that there is a conflict between the NIH Guidelines and the BMBL, the Needham Biosafety Committee will review and opine on the appropriateness of next steps. It is incumbent on the IBC, however, to seek the appropriate legal advice from federal authorities concerning the conflict and present such advice to the Board.

Institution: An individual person or a group of persons, and/or a corporation, firm, partnership, association, executor, administrator, guardian, trustee, agent, organization, and any other group acting as a unit responsible for compliance with the requirements set forth in this regulation.

Institutional Biosafety Committee (IBC): A committee established in accordance with Subsection IV-B-2 (institutional biosafety committee or IBC) of the NIH Guidelines and any applicable requirements of this regulation. The IBC shall be the final arbiter within an institution with regard to the implementation of this regulation, with oversight by the Board of Health as described herein.

Select Agent: shall mean any microbial and toxic agents listed at 42 CFR §73, 7 CFR § 331 and 9 CFR §121, and the rulings made by the CDC and the USDA relative thereto, as such regulations and rulings may be amended from time to time. However, Select Agent shall not include any de minimus amount of agents or toxins which are excluded from 42 CFR 73.00 et seq.

Recombinant DNA Molecules (rDNA): As defined in the NIH guidelines, as defined above.

Substantive Change: Any change in hazard designation as identified in the NIH guidelines.

SECTION 11.4 NEEDHAM BIOSAFETY COMMITTEE

11.4.1 The Needham Biosafety Committee shall establish policies, procedures, and criteria to aid in the implementation of this regulation.

11.4.2 The Needham Biosafety Committee shall review reports, applications, and recommendations by the IBC and approving them where appropriate. This includes reviewing of all submissions required in this regulation and any special determinations as it deems necessary.

SECTION 11.5 LABORATORY REGISTRATION REQUIREMENTS

11.5.1 The use of biological agents requiring Biosafety Laboratory 3 containment shall not be permitted within the Town

without a variance from the Board and the Biosafety Committee. BSL 4 containment shall not be permitted in Town.

11.5.2 All permitted institutions proposing any use of biotechnology or rDNA technology, as defined in and not exempted by the NIH Guidelines, which seeks to operate in the Town must first register with the Board before engaging in any biotechnology or rDNA activity, and the Board must be notified prior to construction or renovation of facilities for those use(s).

11.5.3 The institution shall:

- (1) Submit an initial registration to the Needham Public Health Department before engaging in any activity that requires a biosafety level.
- (2) Renew and update the registration annually by May 30th of each calendar year.
- (3) Submit all the following documentation for new registrations and renewals:
 - A. Names and contact information for site-based personnel who may be contacted in the event of a facility emergency
 - B. Name and emergency contact information for site-based personnel who are familiar with the work involving recombinant DNA and biological agents and the institution's biosafety program
 - C. Plot plan showing the proposed location of the facility and floor plan showing internal layout
 - D. A listing of all organisms, containment levels, and decontamination procedures to be employed
 - E. The screening process to ensure the purity of the strain of host organisms used in the experiments and to test organisms resulting from such experiments for their resistance to commonly used therapeutic antibiotics. Host organisms obtained from independent laboratories shall undergo the same screening process
 - F. A plan for systematic monitoring of waste to assure that viable rDNA organisms will not be released into the environment
 - G. A description of the training program of safeguards and procedures for personnel using rDNA and a copy of the training manual
 - H. A plan for systematic pest control management in laboratories, contiguous facilities and food service establishments in the same building
 - I. A plan for systematic security of the premises
 - J. A plan for orienting representatives of the Needham health, fire, and police departments to the physical plant and to procedures to be utilized in the event of an emergency
 - K. The institution's health monitoring, health surveillance and safety manuals, together with the plan for an appropriate medical surveillance program as determined by the IBC and in accordance with NIH guidelines for all persons engaged in the use of rDNA. This includes:
 - a. Immediate reporting of any employee exposure of illness, facility spill, or release that could potentially be related to the use of rDNA or biological agents used on site from an approved IBC protocol.
 - b. A description of the training program of safeguards and procedures for personnel using rDNA and biological agents, and a copy of the training manual
 - L. Institutional Biosafety Committee (IBC):
 - a. List of members with titles, including at least one community representative from the Town of Needham
 - b. All minutes of the IBC meetings must be forwarded to the Needham Biosafety Committee
 - c. A description of each protocol approved by the IBC, including all organisms and the containment to be used, and a statement certifying the experiments conform with all applicable regulations, shall be filed with the Needham Biosafety Committee
 - M. Evidence of an effective compliance program to detect and prevent wrongdoing, in accordance with guidance from the U.S. Department of Health and Human Services' Office of the Inspector General (OIG).
 - N. An annual report summarizing the work performed over the past year and addressing any ongoing work, as well as a current list of IBC members, copies of the previous year's IBC

- minutes, and a summary of the changes in research in the past year.
- O. If applicable, sharps permit as required by Needham Public Health.

- (4) Allow inspections, at reasonable times, of both the institution's facilities and records, as related to this regulation.
- (5) Submit any major modifications to the plans (including without limitation building modifications, changes in work that would require a new registration with the institutions' IBC, or changes in any of the above plans) for a required updated registration with the Town Public Health Department. All new paperwork would need to be submitted and reviewed by the Needham Biosafety Committee 60 days before modifications or changes are made.

11.5.4 The Needham Biosafety Committee will have 60 days from the filing of an initial registration or renewal to review all documentation and requirements as laid out in this regulation and submit it approval or denial of the registration to the Public Health Department.

11.5.5 Pre-existing Institutions shall have 90 days from adoption of this regulation to register with the Board.

11.5.6 Clinical laboratories located within licensed healthcare facilities, professional analytical services that directly support clinical or healthcare services, professional analytical laboratories conducting routine air, water or food quality tests, or veterinary facilities shall not be required to obtain a permit or comply with this regulation unless these facilities are also engaged in research or production of biological agents. Educational institutions utilizing only commercially available molecular biology teaching kits that have been designated by the manufacturer for use at BSL 1 shall not be required to obtain a permit or comply with this regulation.

11.5.7 Fees:

- (1) Registration and renewal fees are \$500.00
- (2) Modification to plans and reinspection fees are \$250.00

SECTION 11.6 CONFIDENTIALITY

11.6.1 Information submitted to the Board or its agents may be subject to G.L. c.66. The Board will make good faith effort to withhold from release all maps, layout plans, security schematics and other information that may fall within the confines of G.L. c.4, §7(26)(n). Any institution seeking to qualify any record as confidential shall mark such record as "Confidential" so that the Board may inform the institution if the record is subject to a public records request and give the institution an opportunity to seek judicial relief within the 10-business day response period required by G.L. c.66.

SECTION 11.7 ANIMALS

All research institutions planning to conduct experiments on animals must first obtain an animal permit. All activities must comply with federal and state ordinances, including:

- a. Public Health Service Policy "Guide for Care and Use of Laboratory Animals"
- b. Public Health Service "US Government Principals for the Utilization and Care of Vertebrate Animals used in Testing Research and Training"
- c. Public Health Service "Animal Welfare Regulations"
- d. Public Health Service "AVMA Guidelines on Euthanasia"
- e. Punic Health Service "Program on Animal Care and Use"
- f. The Health Research Extension Act of 1985

Each institution that performs research, experiments, or biotechnical procedures using animals shall maintain or establish an Animal Care and Use Committee, which, according to federal and state ordinances, shall have a member who is not and has not been affiliated with the institution. In addition to previously listed Biosafety Permit Requirements, institutions using animals for research are required to submit:

- A. Name and contact information of a person in the organization familiar with the animals to be housed on the property and the experiments performed
- B. Names and contact information of members of Animal Care and Use Committee and dates of meetings of the Animal Care and Use Committee held the previous year

C. The results of all federal and state inspections concerning animal care and use in the previous year

SECTION 11.8 ENFORCEMENT AND PENALTIES

11.8.1 Any institution that violates the terms of this regulation shall be subject to a fine of five hundred dollars \$500 per offense. Each day shall constitute a separate offense.

11.8.2 Violations of this regulation and penalties listed in Section 11.8.1 may be subject to non-criminal disposition, M.G.L. Chapter 40, Section 21D, and Town of Needham, General By-Laws, July 1996 compilation, Section 9.2.2.6, Board Regulations, and as amended. Each day that the offense continues shall constitute a separate offense.

11.8.3 This regulation may be enforced by the Board and/or by the Town's Director of Health and Human Services or his/her designee, the Fire Chief or his/her designee, or by the Building Commissioner or his/her designee. If the enforcing official determines that an institution has violated this regulation, the official may issue a written order to the institution to correct violations within a reasonable specified time. The institution may request a hearing before the Board by filing a written request for a hearing with the Board within seven (7) days of being served with the order. Upon receipt of the request, the Board will schedule a hearing to occur no later than fourteen (14) days of receiving the request.

11.8.4 The Board may suspend or revoke a registration if it determines that the institution has failed to comply with the terms of this regulation or other permit condition. Suspension or revocation shall follow a written notice and hearing procedure as described above.

11.8.5 If the Board or its agent determines that there is an imminent threat to public health or safety, it may immediately suspend a registration without prior notice. In this instance, the Board shall schedule a hearing within five (5) days of the suspension. After the hearing, the Board may affirm, modify, or rescind the suspension or take other action it deems appropriate.

11.8.6 The Board retains the authority to designate independent consultants to review applications, perform inspections, conduct testing and investigate incidents at the institutions. The frequency of inspections will be determined by the Board. Such consultants shall act as agents of the Board.

SECTION 11.9 VARIANCE

The Board may take requests for varying the application of any provision of this regulation with respect to any particular case when, in its opinion, the enforcement thereof would do manifest injustice, provided that the decision of the Board is not in conflict with the spirit of these standards. Any request for a variance, including a change of biosafety level, must be made in writing, set forth the specific variance sought, and explain the reasons for the variance. The request for a variance will be made available for public comment and a public hearing before it is considered by the Board of Health and Biosafety Committee. Any variance granted by the Board must be in writing with a copy available to the public at all reasonable hours in the Office of the Town Clerk and in the Office of the Board. The Board may establish additional conditions in connection with the granting of such a variance when the interests of public health so requires.

SECTION 11.10 SEVERABILITY

In the event any section, subsection or provision of the regulation is held to be invalid or unenforceable, the remainder of this regulation shall remain in full force and effect.

SECTION 11.11 EFFECTIVE DATE

This regulation shall take effect on _____.

The original Article 11, Biotechnology Registration Regulation, took effect following public hearings and a Board of Health vote on July 20, 1993.

DRAFT



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



MEETING DATE: 4/14/2023

Agenda Item	Accessory Dwelling Units – Board of Health Policy Position
Presenter(s)	Board of Health

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
The Board of Health will discuss the Accessory Dwelling Units Policy and their position regarding the Town's Accessory Dwelling Units By-Law.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
The Board of Health may wish to formally take a position either supporting or opposing the draft By-law that will be considered by Town Meeting. If the Board wishes to take such a position, a vote would be required. Suggested motion, as an example: “Mr. Chair, I move that the Board of Health endorse/oppose the draft by-law as presented and authorize the Public Health Division staff to create a brief letter or memo to that effect which shall be distributed to the Planning and Select Boards and distributed widely via social media.”	
3.	BACK UP INFORMATION:
a. Policy Position: Accessory Dwelling Units DRAFT b. Town of Needham's Zoning By-Law – ADUs c. Needham ADU by-law flyer	



NEEDHAM BOARD OF HEALTH



Policy Position: Accessory Dwelling Units

In 2018, the Needham Board of Health issued a policy position advocating for a change in the Town's zoning bylaws to allow accessory dwelling units in Needham.

The Board described its belief that allowing such units would make it possible for more seniors to continue living in Needham as they age, providing options for affordable, accessible, age-friendly housing.

The Board of Health strongly supports the Planning Board's current proposal to amend the Zoning Bylaw to allow accessory dwelling units by right; to allow accessory dwelling units in unattached accessory buildings such as a garage; and to allow more flexibility about who can live in such units, including a renter.

Affordable, high-quality housing is linked to improved health for older adults. For example, when living in an affordable home, individuals can put more money towards nutritious food and health care, rather than housing. Stable, affordable housing reduces stress and improves mental health.¹ As such, the Board of Health believes that supporting accessory dwelling units is aligned with the Board's mandate from the Massachusetts General Court to protect the public health and wellness of the Town of Needham and all its residents.^{2,3}

The Needham Board of Health stands with the Center for Housing Policy, AARP, and the Metropolitan Area Planning Council, among others, in support of accessory dwelling units.⁶ The Needham Board of Health agrees with a report for Needham's Public Health Division which states accessory dwelling units "are a low-impact, high-value way to address the problem of diminishing housing options".⁴

The one exception the Board of Health takes with the proposal is the definition of who is a family member. The definition does not account for non-traditional families, those who come together by choice to form a domestic unit. Such domestic arrangements may consist of friends, extended family, or roommates, and may occur due to spousal death, infirmity, financial necessity, loneliness, or any other reason that people come together to create support. There is no one "right" definition of family, and Needham's zoning by-laws should not establish a standard definition.

This Policy Position was discussed at public meetings on Friday, March 17, 2023, and Friday, April 14, 2023, and was formally adopted following a [unanimous] vote during a noticed public meeting on [April 14, 2023].



Kathleen Ward Brown, ScD



Edward Cosgrove, PhD



Stephen Epstein, MD, MPP



Tejal Gandhi, MD, MPH



Robert Partridge, MD, MPH

¹ Maqbool N, Viveiros J, Ault M. The Impacts of Affordable Housing on Health: A Research Summary. Center for Housing Policy. 2015. Available: <https://www.rupco.org/wp-content/uploads/pdfs/The-Impacts-of-Affordable-Housing-on-Health-CenterforHousingPolicy-Maqbool.etal.pdf>

² M.G.L. ch. 111, s.31, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section31>

³ M.G.L. ch. 111, s.122, available at: <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111/Section122>

⁴ Miara C. Accessory Dwelling Units: A Report for Needham Public Health Division. 2017.

ARTICLE 19: AMEND ZONING BY-LAW – ACCESSORY DWELLING UNITS (ADUs)

To see if the Town will vote to amend the Needham Zoning By-Law as follows:

- (1) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.1 Intent, by revising the Subsection to read as follows (new language underlined):

“The intent and purpose of this section is to permit accessory dwelling units (ADUs) in single-family dwellings or in buildings accessory to single-family dwellings for occupancy by (a) an Owner (as defined in this section 3.15.2) or (b) Family (as so defined) of an Owner of the property or (c) Caregiver (as so defined) to an Owner of the property or a Family member of an Owner or (d) a Lessee (as so defined) of an Owner who resides in the ADU or the principal dwelling unit, all subject to the standards and procedures hereinafter set forth. It is also the intent to assure that the single-family character of the neighborhood will be maintained and that the ADU remains subordinate to the principal use of the property as a single-family detached dwelling.”

- (2) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.2 Definitions, by revising subparagraphs (a), (b) (c) and (d) to read as follows (new language underlined):

“(a) Accessory dwelling unit (ADU) is an apartment in a single-family detached dwelling or in a building that is accessory to a single-family detached dwelling, which apartment is a second, self-contained dwelling unit and a complete, separate housekeeping unit containing provisions for living, sleeping, cooking and eating. This unit shall be subordinate in size to the principal dwelling unit on a lot and shall be constructed to maintain the appearance and essential character of a single-family dwelling or a single-family dwelling with an accessory building.

(b) “Caregiver” shall mean an adult who regularly looks after an elderly, chronically ill or disabled Owner who needs assistance with activities of daily living or an Owner’s Family member who needs such assistance and for whom the property is such elderly, chronically ill or disabled person’s primary residence, or an adult employed by an Owner to provide childcare to one or more of an Owner’s Family members.

(c) “Family” as a capitalized word, for the purpose of specifying, pursuant to Section 3.15.3.1 who may occupy the dwelling unit that is not Owner occupied, shall mean persons who are related to an Owner, Caregiver or Lessee, by blood, adoption or marriage, and who are related to such Owner, Caregiver or Lessee as follows: spouse, parent, sibling, child, grandchild, grandparent, aunt, uncle or a spouse or child of any such resident person.”

(d) “Owner” shall mean a person who holds record title to the property directly or indirectly and for whom the property is such Owner’s primary residence. Indirect ownership includes but is not limited to a beneficiary of a trust holding record title to the property and a majority owner of the voting stock of a corporation or the membership units of a limited liability company holding record title to the property.”

- (3) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.2 Definitions, by adding a new subparagraph (e) to read as follows:

“(e) “Lessee” shall mean a person or persons who has entered into a written lease with the Owner as lessor permitting occupancy of the ADU or the principal dwelling unit for a period of time of at least six months by the Lessee and Family of the Lessee, which lease shall prohibit the Lessee from (i) subleasing, (ii) assigning the lease, or (iii) offering housing accommodations on a short-term basis using an on-line venue such as Airbnb or by any other means to persons

who are not Family of the Lessee, provided further that the Owner shall have filed a copy of such lease with the Building Commissioner as a pre-condition of the issuance of an occupancy permit for the ADU, whether to be occupied by the Owner or the Lessee.”

- (4) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.3 Use Regulations, by revising the section heading to read as follows (new language underlined):

“3.15.3.1 Use Regulations for ADU within a Single-family Dwelling”

- (5) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.3.1 Use Regulations for ADU within a Single-family Dwelling, by revising the first sentence to read as follows:

“An ADU within a single-family detached dwelling shall be permitted under the following use regulations:”

- (6) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.3.1 Use Regulations for ADU within a Single-family Dwelling, by revising subparagraphs (c), (d) (f), (g) and (h) to read as follows (new language underlined):

“(c) Occupancy of the unit that is not Owner-occupied shall be limited to a member or members of the Owner’s Family or a Caregiver and such Caregiver’s Family or a Lessee and such Lessee’s Family; provided that occupancy of the principal dwelling unit and the ADU combined shall be limited to five persons who are not Family of the Owner and occupancy of the ADU shall be limited to three persons.

(d) The size of the ADU shall be limited to 900 square feet of living space and shall have no more than one bedroom.

(f) Adequate provisions for the proper disposal of sewage and waste generated by the ADU shall be in accordance with Board of Health requirements, and the proper disposal of stormwater shall be in accordance with the Needham Stormwater By-Law as administered by the Director of Public Works, if applicable based on the size of any addition to the principal dwelling or an accessory building to accommodate the ADU.

(g) Compliance with the ingress and egress provisions of the Massachusetts State Building Code, applicable to dwelling units, shall be required. To the extent possible, exterior entrances and access ways to an ADU shall not detract from the single-family appearance of the dwelling. Where there are two or more existing entrances on the front façade of a dwelling and modifications are made to any entrance to provide access to an ADU, or a new entrance is constructed on the front façade of a dwelling to provide such access, the result shall be that the entrance to the principal dwelling unit appears to be the principal entrance to the dwelling and the entrance to the ADU appears to be secondary, so that the ADU entrance shall not detract from the single-family appearance of the property. An interior door way shall be provided between the principle dwelling unit and the ADU as a means of access for purposes of emergency response. All stairways to additional floors shall be enclosed within the exterior walls of the structure.

(h) The owner of record shall be responsible for submitting an ADU application to the Building Commissioner. Floor plans of the ADU and principal dwelling unit, along with a certified site plan, shall also be submitted with the application to the Building Commissioner.”

- (7) In Section 3.15 Accessory Dwelling Units (ADUs), Subsection 3.15.3.1 Use Regulations within a Single-family Dwelling, by deleting subparagraphs (j) and (k).
- (8) In Section 3.15 Accessory Dwelling Units (ADUs), by adding a new Section 3.15.3.2 Use Regulations for ADU within an Accessory Building, a new Section 3.15.3.3 Maintenance of Appearance of Single-family Property, and a new Section 3.15.3.4 Occupancy and Enforcement to read as follows:

“3.15.3.2 Use Regulations for ADU within an Accessory Building

An ADU within an accessory building on the same lot as a single-family detached dwelling may be permitted upon the issuance of a Special Permit by the Board of Appeals under the use regulations of Section 3.15.3.1 (b), (c), (d), (e), (f) and (i) and under the following additional use regulations:

- (a) There shall be no more than one ADU on a lot and no more than one additional accessory building larger than 200 sq. ft.
- (b) Compliance with the ingress and egress provisions of the Massachusetts State Building Code, applicable to dwelling units, shall be required for an ADU within an accessory building.
- (c) The owner of record shall be responsible for submitting an ADU application to the Building Commissioner. Floor plans of the ADU and the accessory building that it is to be within or added to, along with a certified plot plan showing the location and dimensions of the primary building and all accessory buildings on the premises, both existing and proposed, shall be submitted with the application to the Building Commissioner.
- (d) Any accessory building used as an ADU must comply with all current requirements of the Zoning By-Law applicable to accessory structures in the district in which the property is located, or be a lawfully preexisting nonconforming structure as of the effective date of this By-Law; provided that lawfully preexisting nonconforming structures may not be structurally altered in a manner that increases any existing nonconformity.
- (e) A residential lot that is lawfully nonconforming with respect to minimum lot area and/or minimum frontage may contain an accessory building used as an ADU, provided that such accessory building complies with section (d) above.
- (f) Notwithstanding any exception contained in the definition of Floor Area Ratio in Section 4.2, for purposes of this Section any finished habitable basement in an accessory building with an ADU shall count towards the maximum allowable 900 square feet of living space.

3.15.3.3 Maintenance of Appearance of Single-family Property

It is the intent of Section 3.15 as specified in Section 3.15.1 to assure that the single-family character of the neighborhood will be maintained and that the ADU remains subordinate to the principal use of the property as a single-family detached dwelling. Pursuant to the definition of Accessory Dwelling Unit (ADU) in Section 3.15.2, an ADU shall be constructed to maintain the appearance and essential character of a single-family dwelling or a single-family dwelling with an accessory building. Pursuant to the regulation at 3.15.3.1 (g), to the extent possible, exterior entrances and access ways to an ADU shall not detract from the single-family appearance of the principal dwelling and where there are two or more existing entrances on the front façade of the principal dwelling and modifications are made to any such entrance to provide access to an ADU, or a new

entrance is constructed on the front façade of a dwelling to provide such access, the result shall be that the entrance to the principal dwelling unit appears to be the principal entrance to the dwelling and the entrance to the ADU appears to be secondary.

The Building Commissioner shall not deny a building permit or occupancy permit for an Accessory Dwelling Unit within a Single-family Building under Section 3.15.3.1 solely due to concern that the above-referenced standards are not met, unless the Building Commissioner requests and obtains an advisory report as to the issue of compliance with these standards from the Design Review Board established under Section 7.7.2 of this By-Law.

3.15.3.4 Occupancy and Enforcement

- (a) Occupancy of the ADU shall not take place without proof of a recorded Special Permit, if required by Section 3.15.3.2, and an occupancy permit issued by the Building Commissioner. The initial occupancy permit shall remain in force provided that (i) there is no violation of any provision of this Zoning By-Law or the Massachusetts State Building Code or the conditions of any Special Permit, variance or other zoning relief applicable to the premises, and (ii) that ownership of the premises is not changed unless, in anticipation of a change in ownership, the prospective owner files an acknowledgement that the unit to be occupied by said prospective owner shall be said owner's primary residence and evidence that the other unit is to be occupied by a Family member, Caretaker or Lessee of the prospective owner, and such acknowledgement and evidence is satisfactory to the Building Commissioner, and (iii) the Owner files with the Building Commissioner in the month of January of each year after the anniversary of the issuance of the occupancy permit, a certification that the unit occupied by the Owner continues to be said Owner's primary residence, together with evidence that the other unit is occupied by a Family member, Caretaker or Lessee of the Owner, and such certification and evidence is satisfactory to the Building Commissioner. Furthermore, at any time upon written request from the Building Commissioner, the Owner will provide evidence that the ADU and the principal dwelling unit are being occupied in accordance with the By-Law. In the event the Owner fails to comply with the requirements in (i) above or fails to provide the acknowledgement required by (ii) above or the certification required by (iii) above or fails to provide such evidence to the Building Commissioner within thirty (30) days of a written request, the Building Commissioner may revoke the occupancy permit for the ADU, and if the ADU is within an accessory building pursuant to Section 3.15.3.2 the Building Commissioner may also revoke the Special Permit for the ADU.
- (b) In the case that the ADU is in violation of the terms of this By-Law or the lawful use of such unit has expired or been terminated, the Building Commissioner may, in addition to other remedies, order the removal of any one or more of the provisions that create a separate dwelling unit, such as living, sleeping, cooking and eating."
- (9) In Section 7.7.2 Design Review Board, Subsection 7.7.2.2 Authority and Specific Powers, by adding after the first sentence of the second paragraph a new sentence to read as follows:
- "The Design Review Board shall review requests from the Building Commissioner, as required under Section 3.15.3.3 of the By-Law."
- (10) In Section 7.7.2 Design Review Board, Subsection 7.7.2.2 Authority and Specific Powers, by revising the second sentence of the third paragraph to read as follows (new language underlined:
- "Such advisory reports of the Design Review Board shall be transmitted to the Building Commissioner and applicant in all other instances as described in the two paragraphs above for

“Minor Projects” under Site Plan Review, building permits in all non-residential districts, requests from the Building Commissioner under Section 3.15.3.3 and sign permits.”

Or take any other action relative thereto.

INSERTED BY: Planning Board
FINANCE COMMITTEE RECOMMENDS:

Article Explanation: Article 19 seeks to amend Needham’s current Accessory Dwelling Units (ADUs) zoning By-Law provisions by expanding the circumstances under which ADU’s would be permitted in Town with the goal of further diversifying the Town’s housing stock through the production of additional smaller, more affordable housing units.

Background

The October 2019 Special Town Meeting approved a zoning By-Law amendment to permit the creation of ADUs in single-family homes by Special Permit of the Board of Appeals subject to specified standards and procedures. The By-Law limited the units to single-family homes where the units are occupied “by the Owner; Family members related to the Owner by blood, adoption or marriage (spouse, parent, sibling, child, or a spouse of such persons); and Caregivers of Family members who look after an older, chronically ill or disabled Owner who needs assistance with activities of daily living or a Family member who needs such assistance.” The By-Law also defined the ADU as “an apartment in a single-family detached dwelling that is a second, self-contained dwelling unit and a complete, separate housekeeping unit containing provisions for living, sleeping, cooking and eating. The ADU must be subordinate in size to the principal dwelling unit on a lot and constructed to maintain the appearance and essential character of the single-family dwelling.”. Over the course of approximately three years, twelve ADUs have been permitted as of March 2023.

Major provisions of the current By-Law include the following: (1) ADUs are available by Special Permit from the Board of Appeals, good for 3 years, renewable by Special Permit. If there is a new owner of the home, they have to go through the Special Permitting process to keep the ADU. (2) At least one of the units (the primary residence or the ADU) must be owner-occupied and occupancy of the second residence must be limited to a member of the owner’s family or a caregiver and such caregiver’s family. (3) No more than five persons who are not family members of the owner can live in the primary residence and the ADU combined. (4) There can be no more than one ADU on a lot, and it must be located within the single-family detached dwelling and not in a separate building. (5) To the extent possible, exterior entrances and access ways shall not detract from the single-family appearance of the dwelling. No stairs for access to upper floors of the ADU shall be on the outside. There must be an interior doorway between each living unit for safety purposes in an emergency. (6) The size of the ADU is limited to 900 square feet, and it can have no more than one bedroom and occupancy of the ADU is limited to three persons. (7) Off-street parking must be provided with at least one parking space per dwelling unit.

Amendment Description

Article 19 proposes the following changes to the current use and permitting framework of the By-Law: (1) Allows ADUs in a single-family dwellings by-right rather than by Special Permit, while still requiring that the building and design guidelines contained in the current By-Law be met. ADUs located in a single-family dwelling will continue to be required to meet all zoning dimensional requirements for a single-family home as specified in the underlying zoning district. Needham homeowners who want to add an ADU to their home under the current By-Law must obtain a Special Permit, which involves considerable and unnecessary time for both the applicant and the Zoning Board of Appeals. Review of proposed building plans for attached or interior ADUs by the Building Commissioner should suffice to ensure compliance with the By-

Law both dimensionally and in terms of maintaining the general appearance of a single-family dwelling. In circumstances where the Building Commissioner is in doubt as to compliance with the above-noted design guidelines, the By-Law further provides for the issuance of an advisory report as to the issue of compliance from the Design Review Board upon the Building Commissioner's request. (2) Expands the residency requirements of an ADU as contained in the definition of "Caregiver" to include "an adult employed by an Owner to provide childcare to one or more of an Owner's Family members" for use by example of a Nanny or Au-Pair, etc. (3) Expands the residency requirements of an ADU as contained in the definition of "Family" to include "a grandparent, aunt or uncle". (4) Allows a homeowner to rent the ADU with a minimum 6-month written lease, subject to owner occupancy of the property. The minimum 6-month lease term is designed to prevent short-term high frequency leases. (5) Increases the size limit for an ADU from a maximum of 850 square feet of living space to a maximum of 900 square feet of living space.

Additionally, Article 19 would allow ADUs in detached accessory buildings on the same lot as a single-family detached dwelling upon the issuance of a Special Permit by the Board of Appeals subject to the following conditions. (1) There shall be no more than one ADU on a lot and no more than one additional accessory building larger than 200 square feet. (2) Compliance with the ingress and egress provisions of the Massachusetts State Building Code, applicable to dwelling units, shall be required for an ADU within an accessory building. (3) The owner of record shall be responsible for submitting an ADU application to the Building Commissioner. Floor plans of the ADU and the accessory building that it is to be within or added to, along with a certified plot plan showing the location and dimensions of the primary building and all accessory buildings on the premises, both existing and proposed, shall be submitted with the application to the Building Commissioner. (4) Any accessory building used as an ADU must comply with all current requirements of the Zoning By-Law applicable to accessory structures in the district in which the property is located or be a lawfully preexisting nonconforming structure as of the effective date of this By-Law; provided that lawfully preexisting nonconforming structures may not be structurally altered in a manner that increases any existing nonconformity. In the residential districts, such stand-alone accessory detached ADU units are required to be setback a minimum of five (5) feet from the side and rear lot lines of the lot unless the structure exceeds fifteen (15) feet in height in which case the setback must comply with the underlying district's increased rear or side setback requirements. A minimum distance of ten (10) feet is required between the ADU detached dwelling and any other structure or building on the lot. (5) A residential lot that is lawfully nonconforming with respect to minimum lot area and/or minimum frontage may contain an accessory building used as an ADU, provided that such accessory building complies with item (4) above. (6) Any finished basement in an accessory building with an ADU shall count towards the maximum allowable 900 square feet of living space. The purpose of the Special Permit requirement for a detached ADU is a) to provide notice to abutters, and, b) to provide an opportunity for the Board of Appeals to evaluate impacts within the scope of the Special Permit criteria set out in Section 7.5.2.1 of the By-Law as a result of the construction and use of the ADU.

Finally, the article establishes occupancy and enforcement standards. Occupancy of the detached ADU shall not take place without proof of a recorded Special Permit and an occupancy permit issued by the Building Commissioner. The initial occupancy permit shall remain in force provided that (1) there is no violation of any provision of this Zoning By-Law or the Massachusetts State Building Code or the conditions of any Special Permit, variance or other zoning relief applicable to the premises, and (2) that ownership of the premises is not changed unless, in anticipation of a change in ownership, the prospective owner files an acknowledgement that the unit to be occupied by said prospective owner shall be said owner's primary residence and evidence that the other unit is to be occupied by a Family member, Caretaker or Lessee of the prospective owner, and such acknowledgement and evidence is satisfactory to the Building Commissioner, and (3) the Owner files with the Building Commissioner in the month of January of each year after the anniversary of the issuance of the occupancy permit, a certification that the unit occupied by the Owner continues to be said Owner's primary residence, together with evidence that the other unit is occupied by a Family member, Caretaker or Lessee of the Owner and a copy of any current lease, and such

certification and evidence is satisfactory to the Building Commissioner. Furthermore, at any time upon written request from the Building Commissioner, the Owner will provide evidence that the ADU and the principal dwelling unit are being occupied in accordance with the By-Law. In the event the Owner fails to comply with the above requirements the Building Commissioner within thirty (30) days of a written request may revoke the occupancy permit for the ADU, and if the ADU is within an accessory building may also revoke the Special Permit for the ADU.

Public Policy Objective

ADUs provide a number of important benefits to the community while diversifying the housing stock and allowing Needham to be part of a regional effort to contribute to the urgent need for additional smaller, more affordable housing unit production. As documented in the December 2022 Needham Housing Plan, Needham's housing is increasingly less affordable without a sufficient range of housing choices that offer smaller unit sizes with more affordable rental costs for employees, new residents or families, or for existing, mostly senior, residents. While the current By-Law which limited occupancy to family members or caregivers promoted greater housing diversity in the community by allowing small apartments in existing dwellings, enabling extended family members to live together, and also providing opportunities for live-in support for people with disabilities, much more can be accomplished. The goal of this amendment is to now expand this opportunity to a larger population base so that more local housing needs can be met.

It is anticipated that the proposed amendment could address the following local housing needs: (1) ADUs could provide additional, affordable studio and one-bedroom rentals, by expanding the housing opportunities for older adults and other residents to remain in their homes, young adults who want to stay in or return to Needham, employees of Needham businesses, and potential newcomers to the Needham community. (2) ADUs could allow homeowners to stay in their homes by providing needed rental income to assist with housing costs including taxes, utilities and other housing expenses. (3) Homeowners of small homes that cannot easily be enlarged could benefit from ADU income by converting a smaller building on their lot, such as a detached garage, into an ADU. (4) ADUs could provide additional housing while maintaining existing single-family neighborhoods. (5) Owners will be responsible landlords because they must reside in the property and always provide emergency egress freely through the main unit from the ADU. (6) ADU occupants can provide important services for the owner such as snow removal or errands for older adults or babysitting for families for example. Furthermore, ADUs are encouraged by the Massachusetts Executive Office of Energy and Environmental Affairs and advocated for by the Needham Council on Aging, Board of Health and Department of Public Health and Human Services.

ADUs are allowed in many Massachusetts communities. For example, of the 100 cities and towns in the Metropolitan Area Planning Council (MAPC) region outside the City of Boston, 37 allow a homeowner to create an accessory apartment and rent it to persons other than family members or caregivers. Moreover, in the last decade, almost half of the 100 Boston-area municipalities have adopted either a master plan or a housing production plan that recommends allowing ADUs with fewer restrictions. For example, Belmont and Hudson voted to allow ADUs unrestricted to relatives. Arlington, Carlisle, Dedham, Lexington, Lincoln, Newton, Wayland, Wellesley and Weston, and other municipalities voted to allow ADUs in detached structures. Burlington, Bedford, and Acton, among other towns, allow ADUs by-right. Most recently, Wellesley's Town Meeting voted to adopt an ADU By-Law without any residency restrictions, allowing both attached and detached ADUs by right with a maximum unit size of 900 square feet.

Amending Needham's ADU bylaw

The reasons for creating or living in an ADU are as varied as the potential uses:

- ~ Provide financial flexibility
- ~ Empty nester opportunity to age in place
- ~ New home buyers can supplement income
- ~ Individuals in need of a caregiver or nanny
- ~ A child with a disability to live nearby
- ~ Starter home option for young adults
- ~ Local work force to live in town



Accessory dwelling units (or ADUs) come in many shapes and styles.



1.

ADUs make use of the existing infrastructure and housing stock and are environmentally friendly and respectful of a neighborhood's pace and style.

"Given the shortage of smaller homes, most of our friends who have already downsized have moved out of town. While we would prefer to remain in Needham, we are, sad to say, probably going to be forced to follow that option. Needham has yet to consider the needs of all of its citizens."

Needham senior resident quote (2018)

ADUs are flexible. Over time, a single ADU might be used in many ways as an owner's needs and life circumstances change.

"Communities that understand the benefits of ADUs allow homeowners to create them."

AARP - The ABCs of ADUs - A Guide to Accessory Dwelling Units

- ~ ADUs are an economical housing option.
- ~ ADUs are community compatible.
- ~ ADUs are good for the environment.
- ~ ADUs are just the right size.
- ~ ADUs are able to house people of all ages. ¹

The appearance and essential character of the neighborhood will be maintained by keeping the essential character of a single-family dwelling or a single-family dwelling with an accessory structure.

Can you find the Accessory Dwelling Unit? (ADU)



1. "The ABCs of ADUs: A Guide to Accessory Dwelling Units and How They Expand Housing Options for People of All Ages." Edited by Eli Spevak and Melissa Stanton, AARP.org, 2021, <https://www.aarp.org/content/dam/aarp/livable-communities/housing/2021/ADU-2021-WEB%20singles-1109.p>



2.

ADU benefits for Needham

- Housing options for seniors to age in place, adult children, small families, young professionals, people with disabilities, and the Town's work force.
- Increasing housing supply through focused, small-scale development, utilizing energy, water, materials, and the Town's infrastructure more efficiently, thereby decreasing our residential carbon footprint.
- Low-impact, sustainable housing production, diversity, and affordability in the Town's neighborhoods that preserves the single-family feel of Needham and doesn't require expansions of Town infrastructure.
- Providing opportunities for both employees and new customers of local businesses to live in Needham.

2. Graphic acknowledgment to Building a Better Wellesley Wellesley 2022 ADU campaign

Specifics of Needham's Proposed Bylaw Amendment³

Code Compliance	All	ADUs must satisfy ALL of the requirements of the Needham Zoning Bylaws, as well as state building and health codes.
Attached ADUs	By Right	Attached ADUs could now be built "as of right", providing easier access to a straightforward, less expensive approval process.
Detached ADUs	Special Permit	Some residents may want to convert old garages and accessory buildings, or build new. Either way, a special permit process is required that will allow abutter participation and redress with a public hearing.
Owner Occupancy	Yes	To give stability to the neighborhood, there must be owner occupancy either in the ADU or in the principal unit. The owner supervises the use of the unit and its impact on the neighborhood.
Appearance	Match in style	An ADU shall be constructed to maintain the appearance and essential character of a single-family dwelling or a single-family dwelling with an accessory building.
Entrances		An ADU exterior door will present as a side entrance or, if facing the public street, as a secondary entrance, subordinate to the primary entrance for the principal dwelling.
ADUs Per Lot	One	Only one ADU can be built per lot.
ADU Unit Size	Up to 900 sq. ft.	An ADU can be no larger than 900 gross square feet, and accommodate no more than one bedroom.
Occupancy Limit	As per zoning	Occupancy of the unit that is not owner-occupied shall be limited to a member(s) of the owner's family, or a caregiver and their family, or a lessee and their family, provided that occupancy of the principal dwelling unit and the ADU combined shall be limited to five persons who are not family of the owner.
Parking	Off-street parking	Off-street parking shall be provided for residents of both units, with a minimum of one parking space per dwelling unit.
Minimum Rental Period	6 months	An ADU owner as lessor may permit the occupancy of the ADU or principal dwelling by the lessee (and family) for a period of time no less than six (6) months. Subletting and/or assignment are prohibited.
Certification	Yes	An ADU owner must file annually with the building department, certifying that one of the units continues to be their primary residence, and that the other unit is occupied by a family member, caretaker, or lessee of the owner.

3. Needham Planning Department



Attached apartment



Attached garage conversion



Detached garage conversion



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



MEETING DATE: 3/14/2023

Agenda Item	Proposed Food Grading System for Needham Restaurants
Presenter(s)	Tara Gurge, Assistant Public Health Director Ecom Lu, Intern/Food Regulatory Program Analyst

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Ms. Gurge will present, on behalf of Ecom Lu, his Certificate of Excellence Restaurant Grading initiative, along with the finalized draft of the grading document. The target audience for this document will be the food establishment owners and managers. We aim to receive your comments and feedback on the following points: • Thoughts on the official name 'Needham Comprehensive Food Safety Program' and the goals this program aims to accomplish for Needham. • Suggestions about community outreach and other methods we can use to educate the public in Needham regarding the new grading initiative.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Discussion Only.	
3.	BACK UP INFORMATION:
a. PowerPoint on Proposed Food Grading System for Needham Restaurants. b. Finalized draft of restaurant grading document entitled, 'Needham Comprehensive Food Safety Program: A Guide for Food Service Permit Holders.' c. Boston and NYC Grading Program summary information. d. Westborough, MA Grading Program* (*Which we are basing Needham's program on.)	

Proposed Food Grading System for Needham Restaurants

APRIL 14, 2023



Foodborne Illness Statistics

- According to the CDC, approximately **48 million people** get sick, **128,000** are hospitalized, and **3,000** die each year from a foodborne illness in the United States.
- A global health issue: **600 Million people** sickened

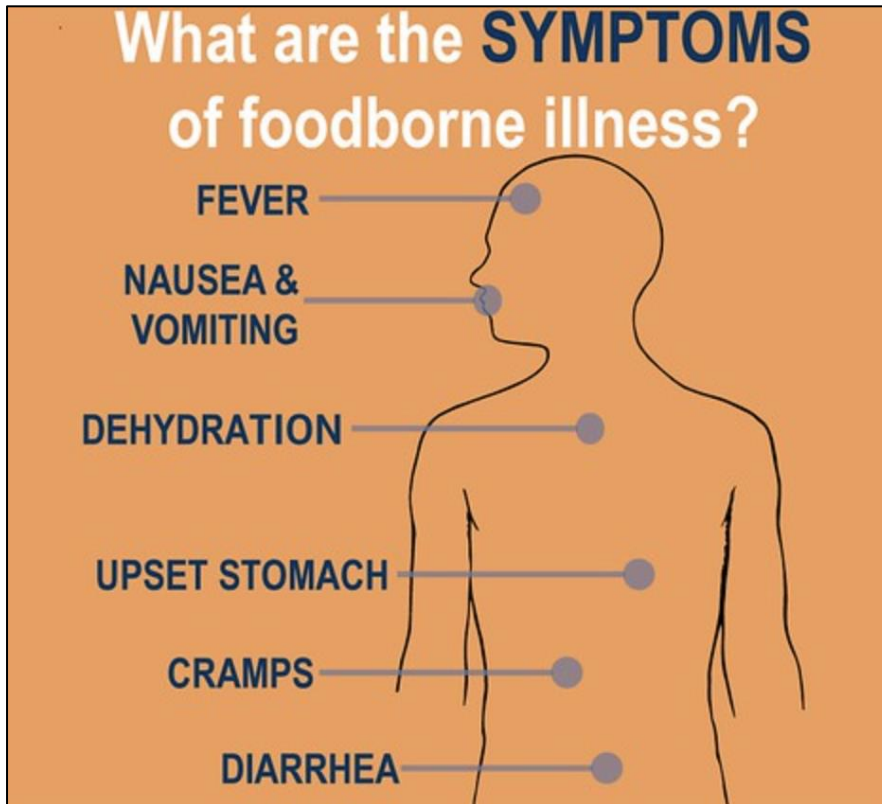


Source: Center for Foodborne Illness Research and Prevention

Who is Impacted?



RISK GROUPS



Source: U.S. Department of Agriculture

- Adults aged 65 and older
- Children younger than 5 years
- Immunocompromised individuals
- Pregnant women

THE 4 RULES OF FOOD SAFETY

1. CLEAN



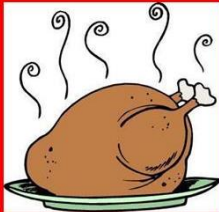
WASH HANDS AND SURFACES
OFTEN

2. SEPARATE



SEPARATE RAW MEATS FROM
OTHER FOODS

3. COOK



COOK TO THE RIGHT
TEMPERATURE

4. CHILL



REFRIGERATE FOOD PROMPTLY

A Standardized Food Safety Program

- Incentivize food establishments to maintain compliance w/routine health inspections
- Raise awareness about proper food safety practices in the Needham public

Program Logistics

The program will have three components:

- A food safety grading system will be shared only with the restaurants and other food establishments, measuring their performance against food safety standards.
- Restaurants and other food establishments that consistently meet the requirements for food safety will receive a Certificate of Excellence.
- NPHD will conduct community outreach.

Certificate of Excellence

This certificate is proudly awarded to

For maintaining excellent **sanitation** and **food safety** practices, observed at the most recent food inspection conducted by the Needham Public Health Division

Timothy McDonald
*Director of Health and
Human Services*



Date

Certificate of Excellence

Grading Scale

- Run reports on previous inspections to determine most common violations
- Internal grading scale will be conducted by setting up grading parameters in the **FoodCode Pro** electronic inspection software
- NPHD plans to use this scale to avoid scenarios where establishments with serious violations could still earn a total score of 90 which is essentially equivalent to an “A” internal grade.
- For example, an establishment that has one priority and priority foundation would be deducted 12 points and left with 88 points, resulting in a “B” internal grade. (examples explained in ticketing guide, FoodCode Enforcement policy)

The grading scale will be as follows:

Priority = 7 points

Priority Foundation = 5 points

Core = 2 points

Other Existing Grading Programs

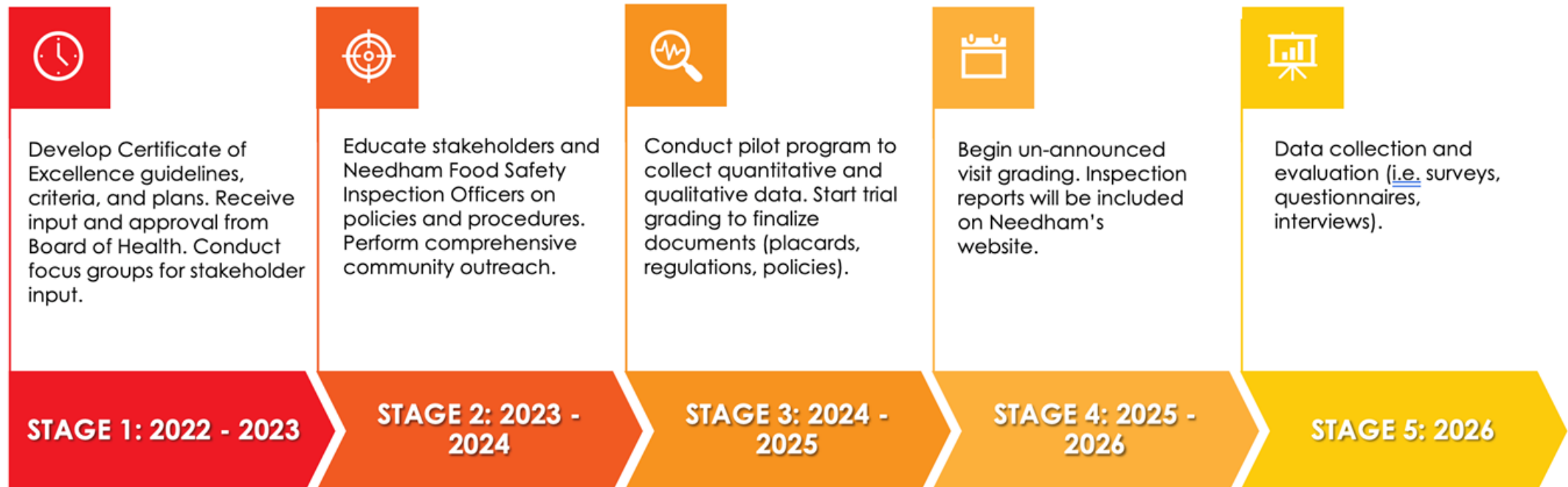
Newton: Adapted toolkit as a reference on how to structure food grading initiatives optimally

Westborough: Learned more about opting for awarding a Certificate of Excellence corresponding to food establishment grading

Boston: Uses 100 point decreasing scale and requires establishments to post grade placards to the public

New York: Uses 0-28+ increasing point scale based on violations upon inspection, also uses grade placards

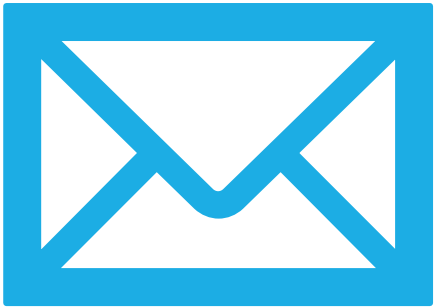
Certificate of Excellence Timeline



Feedback Points

1. Thoughts on the official name 'Needham Comprehensive Food Safety Program' and the goals this program aims to accomplish for Needham?
2. Any suggestions about community outreach or methods to educate the public in Needham about the grading system?





Questions?

TARA GURGE: TGURGE@NEEDHAMMA.GOV
ECOM LU: ELU@NEEDHAMMA.GOV

Needham Comprehensive Food Safety Program:

A Guide for Food Service Permit Holders

The Needham Public Health Division has been providing regular food safety inspections of restaurants, grocery stores, and other food establishments for many years. Food safety regulations in Needham are guided by the Food and Drug Administration (FDA) Voluntary National Retail Food Standards to ensure that food establishments are safe for residents and visitors.

Among the goals of Needham Public Health is to strengthen its comprehensive food safety program to more effectively regulate food establishments and to prevent foodborne illnesses. Needham Public Health aims to eliminate the most common violations found during inspections of food establishments, those related to cleaning surfaces and utensils, date-marking ready-to-eat foods, and pest control.

Goal: To work with food permit holders to achieve excellence in food safety

To achieve the goal of excellence in food safety, Needham Public Health, Environmental Health Unit will use four strategies, as follow.

The program will be rolled out with training provided to restaurateurs and retail store managers, followed by inspections that incorporate the grading, and two-way feedback between inspectors and restaurant management. The program will be evaluated six months and one year after implementation.

Education

Needham Public Health Division (NPHD) will continue to provide mandatory annual training to food permit-holders, supplemented by written material about national guidelines for food safety and the prevention of foodborne illness.

NPHD will also provide educational materials and presentations about the newer aspects of the Comprehensive Food Safety Program. Those include, and will be described below, consistent enforcement with ticketing for infractions; a grading system and certificate for high performance; and public notification of food service standard violations.

At the same time, NPHD will increase public awareness of food safety practices so people can consider food safety as they choose where they will eat and purchase food.

Enforcement

The 2023 NPHD policy, based on the Food and Drug Administration food safety standards, focuses on identifying risks during inspections, ticketing when violations are found, and issuing fines.

The frequency of inspections is determined by types of food establishment.

- Convenience stores which offer pre-packaged food, coffee shops, and food carts are inspected annually and receive check-in calls at the half-year.
- Retail food stores receive twice-yearly inspections.
- Full-service restaurants are inspected every four months.
- Hospitals, nursing homes, and food processing operations are inspected every three months.

NPHD is enacting a disciplinary approach to promote food safety. Food establishments will be charged fees when repeat inspections are necessary due to safety infractions. Establishments will also be fined for repeat violations.

If a food establishment has poor inspection results, health agents will provide education to management regarding violations and necessary remediation and will return for additional inspections. If a food establishment has a pattern of continuing violations despite repeat inspections, management will be required to meet with NPHD to develop an improvement plan and. If issues persist, a public hearing with the Needham Board of Health will be held where consequences will be determined, including the possibility of suspension or revocation of the food service permit.

Incentive

To encourage food establishments to comply, and to exceed, food safety standards NPHD will also roll out a new grading system along with a certificate of excellence award to high-performing food service establishments.

Needham Public Health Division will establish a grading system that measures performance against safety standards and avoids unnecessarily harsh grading criteria by using a system with clear standards. Grading will be weighted to show serious and repeat violations.

Initially, food safety grades will be shared only with the food establishments. During this early period, NPHD will solicit feedback from the food establishments and may adjust the program.

After the first year, food establishments that have consistently met the requirements for food safety will be eligible for a Certificate of Excellence as public recognition of safe practices.

Public information

While these food safety programs are being introduced to food providers, NPHD will increase public awareness of food safety practices so people can consider food safety as they choose where they will eat and purchase food.

Information about food safety and about the Certificate of Excellence program will be distributed at events such as the Needham Farmers Market, the summer street fair, and the annual Harvest Fair.

NPHD will provide regular updates to the community regarding this initiative through the Town website and social media.

Evaluating the program

NPHD will evaluate the Comprehensive Food Safety Program by looking at the results of inspections, grading, and the number of certificates awarded, and by soliciting feedback from permit holders through a survey and interviews, and from the public through surveys and focus groups. Progress will be reported to the Board of Health monthly, and a full report will be submitted to the Board of Health and available to the public in _____.

DRAFT

Boston

The Health Division of Inspectional Services inspects restaurants and mobile food trucks at least once a year. The inspections check for compliance with health and sanitation codes. Each establishment is scored individually with a letter grade of A, B, or C. A restaurant begins an inspection with 100 points but points are deducted for each violation that an inspector observes. The inspector adds up the score and the restaurant's performance is determined based on how high the score is after completing the inspection. Violations fit into three categories, including a foodborne critical violation (10 point penalty), a critical violation (7 point penalty), and a non-critical violation (2 points). Officially, a score of 94 – 100 points results in an A, a score of 81 – 93 points results in a B, and a score of 80 or fewer points results in a C. A restaurant can pass an inspection with up to three non-critical violations while higher grades are reserved for restaurants with fewer critical violations. If a restaurant earns a drastically low score, it is crucial to work with them to improve their practices in complying with sanitary codes. If significant improvement is not made, a temporary closure of a restaurant may be enforced for public safety. If a restaurant earns an A on its initial inspection, the grade is posted to the City's website. If a restaurant does not earn an A on its initial inspection, the establishment is re-inspected within 30 days and the grade earned on the second inspection is posted to the City's website. After the first year of the program, a restaurant is required to post its grade placard immediately. In terms of frequency, restaurants that earned an A are inspected at least once a year, restaurants that earned a B are inspected at least once every six months, and restaurants that earned a C are inspected at least once every three months.

NYC

Since 2010, NYC required restaurants to post letter grades corresponding to scores received from sanitary inspections. An inspection score of 0 – 13 points is an A, 14 – 27 points is a B, and 28 or more points is a C. Grade cards must be posted publicly in restaurants for the public eye. If the establishment scores 0 – 13 points upon initial inspection, then the next cycle will not occur until 11 to 13 months later. Reinspection is required if the establishment scores 14 or more points during initial inspection. If the establishment scores 0 – 13 points during reinspection, then the next cycle of inspection will either be 5 – 7 months later if the initial score was 14 – 27 points, or 3 – 5 months later if the initial score was 28 or more points. If the establishment scores 14 – 27 points during reinspection, then the next cycle of inspection will either be 5 – 7 months later if the initial score was 14 – 27 points, or 3 – 5 months later if the initial score was 28 or more points. The establishment has an option to post a "B" grade or a "Grade Pending" sign to the public until the final grade is determined at an OATH hearing. If the establishment scores 28 or more points during reinspection, then the next cycle of inspection must be within 3 – 5 months. The establishment still has an option to post a "C" grade or a "Grade Pending" sign to the public until the final grade is determined at an OATH hearing. The Health Department can order a restaurant to close to correct a public health hazard that cannot be corrected immediately or when a restaurant is operating without a valid permit.

From: Ray Gauthier <rgauthier@town.westborough.ma.us>
Sent: Monday, June 27, 2022 10:21 AM
To: Ecom Lu <elu@needhamma.gov>
Cc: Tara Gurge <TGurge@needhamma.gov>; Ally Littlefield <alittlefield@needhamma.gov>
Subject: Re: Food Establishment Grading vs. Certificate of Merit

Good morning,

About 4-5 years ago our Board wanted us to look into Grading of restaurants. My Director at the time had me reach out to communities that were grading to discuss their policies and procedures. We started a program based on Newton's grading system but it didn't work for us. We decided to do a year of internal grading (just to have a baseline). It worked well, we were able to grade restaurants using a point system that reflected grades A, B, C, Fail.

In trying to grade everyone fairly and evenly, we found that the grading was either too harsh or too lenient. We were unable to find a 'happy medium'. There were also other things to consider. We found that ethnic facilities where English was a second language scored lower and were always in the C or fail category just due to misunderstandings. Our Board did not like that so we changed the scoring to account for those situations then we found that some of our 'problem children' were scoring high numbers.

As a staff we decided to come up with our own system. We introduced a Certificate of Merit. Restaurant facilities that have an inspection that has no Pf or P violations and under 5 Core violations will receive a Certificate signed by our Board that they may display until the next inspection. We also post on our Town website. We used to post on 2 electronic billboards in Town, but during the pandemic we used that space for advisories and clinic/testing info. We hope to be using that space again soon.

We have restaurants that are so excited to receive these. We have one that received it every inspection since he got off his year's grace period and he has them all posted in his front window. (Facilities cannot earn the Certificate until they have been open for one year)

On the flip side we have a probationary process. Every Town has one or two restaurants that no matter how much you coach them, they still are not able to meet the minimum standards. If someone has a poor inspection, we complete re-inspections and try to educate them on the issues. If they have a pattern of issues that they do not correct or are repeat issues they come in for an administrative meeting and if it still continues, they are brought in front of the Board at a public meeting where the Board can decide to put them on probation. If put on probation, their permit fee doubles, and they get inspected 4 times per year with an expectation of better reports. They cannot earn Certificates of Merit while on probation, but they need to strive for that rating. If they show improvement over that year, The Board can then vote to release them from probation or if they continue to struggle the Board can keep them on probation and order them to get outside help such as a consultant to help them improve. consultants must visit the store monthly for a specified period of time and turn in reports to the Board.

It's not the best program but it works for us. One thing that we took into account is the businesses themselves. Luckily, we are staffed decently so we can get out to our facilities twice per year while some of our neighboring communities are at 1 time per year due to staffing issues. We are also strict. So, a B in our Town may be an A somewhere else. We felt that unless the whole State or at least the County did grading we would do a disservice to our restaurants. If we grade and have a lot of B's and C's there are 4 other Towns that are within a short drive where customers can go to eat and leave our restaurants struggling to make ends meet. As a former restaurant owner and cook I think grading would work if we had County Health departments where all inspectors follow the same guidelines, that is why grading works in counties/cities like Los Angeles and New York. In these areas there are thousands of restaurants while in our comparatively smaller communities might have a couple hundred. If we grade and no one else around us does, is that fair to the restaurants? That is why we chose the Certificate/Probation system.

When we started to do a number/letter based we score P's as a -5, Pf's as a -3, and Cores as a -1.

Don't hesitate to contact me with any specific questions.

Ray

--

Ray Gauthier RS
Sanitarian
Westborough Board of Health
508-366-3045



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



MEETING DATE: 4/14/2023

Agenda Item	Needham General By-law Banning Most Single-Use Plastic Bags
Presenter(s)	Green Needham Volunteers Kathy Raiz and Rob Fernandez

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
This draft bylaw is scheduled for discussion at Annual Town Meeting in May 2023; it would ban all thin and thick, plastic, single-use, check-out bags. Check-out bags are provided to a customer at the point of sale. The following bags would still be allowed: produce bags, dry cleaning bags, newspaper sleeves/bags, bags containing live animals sold in pet or bait stores (fish, crickets, etc.).	
2.	VOTE REQUIRED BY BOARD OF HEALTH
The Board of Health may wish to formally take a position either supporting or opposing the draft By-law that will be considered by Town Meeting. If the Board wishes to take such a position, a vote would be required. Suggested motion, as an example: “Mr. Chair, I move that the Board of Health endorse/oppose the draft by-law as presented and authorize the Public Health Division staff to create a brief letter or memo to that effect which shall be distributed via social media.”	
3.	BACK UP INFORMATION:
a. Text of draft General By-law Banning Most Single-Use Plastic Bags in Needham b. Frequently Asked Questions about the proposed By-law c. Map of the Commonwealth with highlights showing which communities have what type of plastic bag ban	

To see if the Town will vote to amend the General By-laws by adding a new Section 3.12 to read as follows:

SECTION 3.12: PLASTIC BAGS

3.12.1 Definitions.

The following words shall, unless the context clearly requires otherwise, have the following meanings:

- (a) "Department" means the Town of Needham Public Health Department.
- (b) "Health Agent" shall mean the Director of Health and Human Services or his/her designee.
- (c) "Checkout bag" means a carryout bag provided by a retail establishment to a customer at the point of sale for the purpose of transporting groceries, prepared food, or retail goods. "Checkout bag" shall not include:
 - (i) a paper bag provided by a pharmacy to a customer purchasing a prescription medication;
 - (ii) a bag without handles in which loose produce or products are placed by a consumer to deliver such items to the point of sale or checkout area of a retail establishment;
 - (iii) a bag without handles that is used to protect items from damaging or contaminating other items, (e.g. raw meats, wine bottles);
 - (iv) laundry or dry-cleaner bags;
 - (v) plastic newspaper sleeves;
 - (vi) a bag used solely to contain live animals, such as fish or insects sold in a pet store or bait shop;
 - (vi) a bag used to contain unwrapped food, (e.g. deli meats).
- (d) "Recyclable Paper Bag" means a paper bag that is 100% recyclable and contains at least 40% post-consumer recycled content, and displays in a visible manner on the outside of the bag (1) the word "recyclable" or a symbol identifying the bag as recyclable and (2) a label identifying the bag as being made from post-consumer recycled content and the percentage of post-consumer recycled content in the bag.
- (e) "Reusable Checkout Bag" means (1) a sewn bag with handles that are stitched and not heat fused that is (2) specifically designed and manufactured for at least 175 uses and that

(3) can carry 25 pounds over a distance of 300 feet; (4) is made of either (a) natural fibers (such as cotton, hemp, linen) or other machine washable fabric; or (b) made of plastic other than high-density polyethylene (HDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), polyvinyl chloride (PVC), polyethylene terephthalate (PET), polypropylene, etc. that is durable, non-toxic, and generally considered a food grade material.

- (f) "Retail Establishment" shall mean any business facility that sells goods directly to the consumer whether for or not for profit in the Town of Needham including, but not limited to retail stores, restaurants, pharmacies, food or ice cream truck, convenience, grocery stores, supermarket, liquor stores, seasonal and temporary businesses.
- (g) "Single-Use Plastic Checkout Bags" shall mean those bags typically with handles, constructed of high-density polyethylene (HDPE), low density polyethylene (LDPE), linear low density polyethylene (LLDPE), polyvinyl chloride (PVC), polyethylene terephthalate (PET), or polypropylene (other than woven and non-woven polypropylene fabric) that is not a Reusable Checkout Bag.

3.12.2 Regulated Conduct.

- (a) No Retail Establishment in the Town of Needham shall provide or sell a Single-Use Plastic Checkout Bag to a customer.
- (b) If any Retail Establishment provides or sells a Checkout Bag to customers, the bags must be one of the following:
 - 1. Recyclable Paper Bag; or
 - 2. Reusable Checkout Bag.
- (c) Each Retail Establishment as defined herein shall comply with this section.

3.12.3 Effective Date.

This by-law shall take effect on January 1, 2024 for Retail Establishments with retail space of 3,500 square feet or larger, or with at least two locations under the same name within the Town of Needham with retail space that totals 3,500 square feet or larger. This by-law shall take effect on July 1, 2024 for all Retail Establishments less than 3,500 square feet.

3.12.4 Penalties and Enforcement.

- (a) Needham Public Health Department and its Health Agent shall have the authority to administer and enforce this by-law.
- (b) Fines. Any Retail Establishment which violates any provision of this section will be liable for a fine as follows: First offense, warning; second offense, \$100.00; third offense, \$200.00;

fourth and subsequent offenses, \$300.00. Each day a violation occurs shall constitute a separate offense. Multiple violations on the same day shall constitute a single offense.

3.12.5 Regulations.

The Needham Public Health Department may adopt and amend rules and regulations to effectuate the purposes of this by-law.

3.12.6 Severability.

Each separate provision of this section shall be deemed independent of all other provisions herein, and if any provision of this section be declared to be invalid by the Attorney General or a court of competent jurisdiction, the remaining provisions of this section shall remain valid and enforceable.

Or take any other action relative thereto.

Article Information: Every year, the United States produces between 40 - 50 million tons of plastic waste. Much of this waste comes from single-use plastic items. Single-use plastic items are used once, for a short period of time and disposed of quickly; but they leave a legacy of pollution for generations to come.

Most single-use plastic shopping bags are either not recycled or not recyclable. Instead, they will either be buried in a landfill, burned in an incinerator, or scattered throughout the environment. Plastic checkout bags have a significant impact on the marine and terrestrial environment, including but not limited to: 1) harming animals through ingestion and entanglement; 2) polluting and degrading parks and ecosystems ; 3) clogging storm drainage infrastructure; 4) creating a burden for solid waste disposal and recycling facilities; 5) requiring the use of non-renewable fossil-fuel in their composition 5) breaking down into microplastics which pollute drinking water and have negative effects on human health.

Many single-use items are unnecessary because we have reusable alternatives. The best way to solve the plastic pollution crisis is to reduce the amount of plastic we produce. One way we can do that is by phasing out needless single-use plastic items like bags. By banning these items, we can lower demand for plastic, limit plastic pollution, and help create a culture of reuse.

The purpose of this Bylaw is to protect the Town's unique natural beauty and reduce the Town's plastic waste. The Bylaw will end the use of single-use plastic checkout bags that are being distributed, used, discarded and littered, and promote the use of reusable checkout bags in the Town of Needham.



Green Needham

FAQ about the Proposed Needham Plastic Bag Ban

What types of plastic bags does this apply to?

- This bylaw would ban all thin and thick, plastic, single-use, check-out bags. Check-out bags are provided to a customer at the point of sale.
- The following bags are still allowed: produce bags, dry cleaning bags, newspaper sleeves/bags, bags containing live animals sold in pet or bait stores (fish, crickets, etc.).

What is a Reusable Bag?

- A reusable bag is a sewn bag with handles that are stitched and not heat fused.
- Reusable bags are specifically designed and manufactured for at least 175 uses and that can carry 25 pounds over a distance of 300 feet.
- Reusable bags can be made of either natural fibers (such as cotton, hemp, linen) or durable, non-toxic plastic (not polyethylene or polyvinyl chloride)
- They must be machine washable.

What does the new bylaw say about paper bags?

- Paper bags must be labeled to show that the bag is 100 percent recyclable and is made of 40 percent recycled material.

When would the new bylaw take effect?

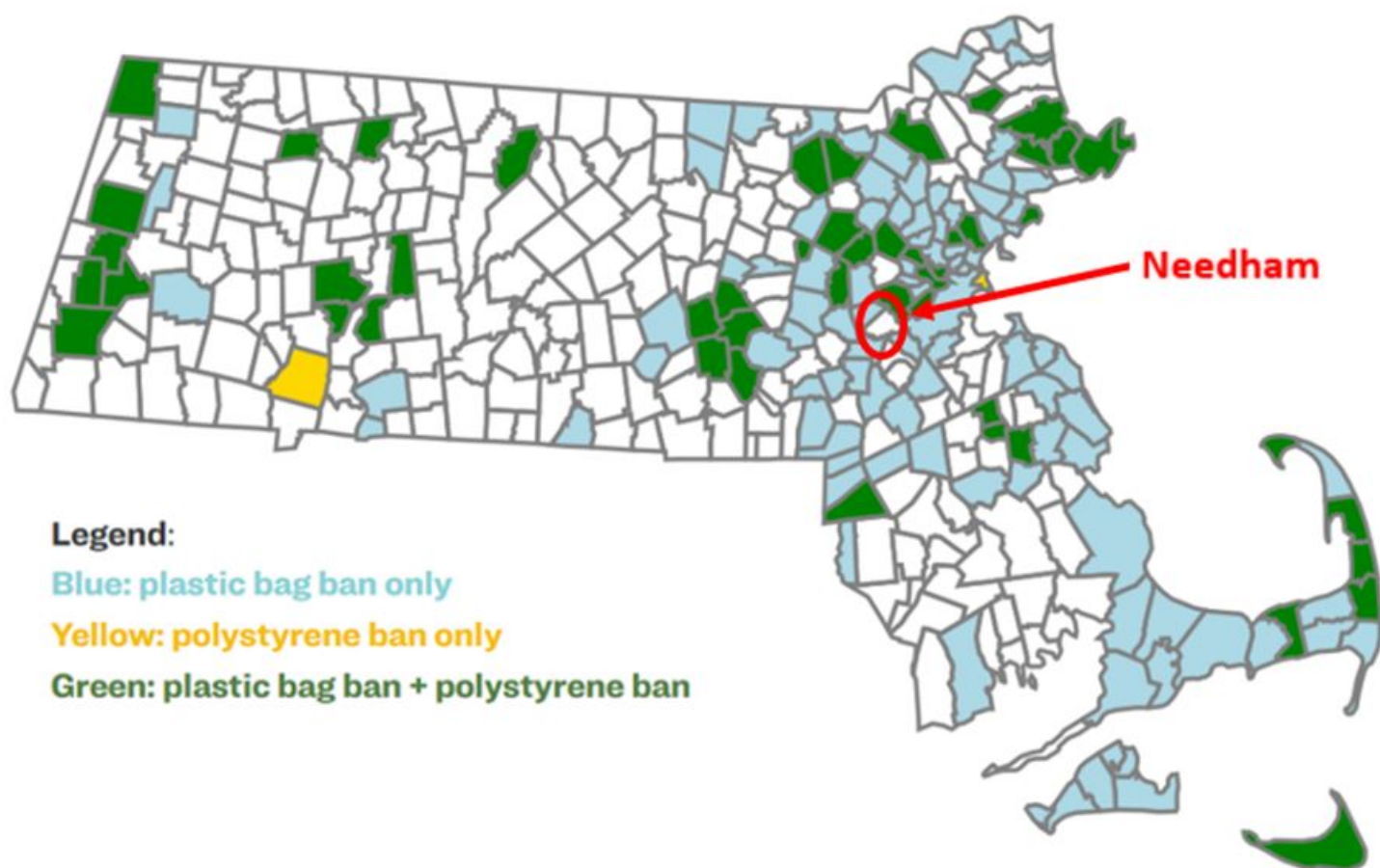
- For stores 3,500 square feet or larger, the bylaw will take effect on January 1, 2024.
- For stores smaller than 3,500 square feet, the bylaw takes effect on July 1, 2024.

How will the bylaw be enforced?

The Needham Public Health Department will enforce the bylaw. Businesses not in compliance will initially receive a written warning notice, followed by a \$100 fine for a second offense, a \$200 fine for a third violation and a \$300 fine for any subsequent violations.

Why does Needham need a new bylaw for shopping bags?

Plastic bags harm the environment and are not accepted at the Needham Transfer Station. In fact, most single-use plastic shopping bags are not recyclable. Instead, they will either be buried in a landfill, burned in an incinerator, or scattered throughout the environment. The purpose of this Bylaw is to protect the Town's unique natural beauty and reduce the Town's plastic waste. The Bylaw will end the use of single-use plastic checkout bags that are being distributed, used, discarded and littered, and promote the use of reusable checkout bags in the Town of Needham. Reusable bags are the best solution for our environment.





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



MEETING DATE: 4/14/2023

Agenda Item	Claxton Field Update
Presenter(s)	Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Mr. McDonald will give an update on the status of the Claxton Field environmental sampling project.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Discussion Only.	
3.	BACK UP INFORMATION:
a. Claxton field Update Memo b. Claxton Field Environmental Samling and Analysis Memo, Weston & Sampson	



MEMORANDUM

TO: Select Board, Park & Recreation Commission, Board of Health, School Committee, Finance Committee, and Community Preservation Committee

FROM: Katie King, Assistant Town Manager/Director of Operations; Carys Lustig, Director of Public Works; Timothy McDonald, Director of Health and Human Services; Stacey Mulroy, Director of Park & Recreation

CC: Kate Fitzpatrick, Town Manager; David Davison, Assistant Town Manager/Director of Finance; Dan Gutekanst, Superintendent of Schools; Christopher Heep, Town Counsel

RE: Claxton Field Update

DATE: March 31, 2023

Board and Committee Members:

The Select Board is holding a special meeting on Tuesday, April 4th. We have added to the agenda a report on the status of the Claxton Field testing. The Board is meeting at 6:00 p.m. at the Rosemary Recreation Center, and the testing update will be the second item. This meeting will be available on Zoom.

This memo is aimed to provide updated information in advance of that meeting.

Background

Claxton Field at 1380 Central Avenue includes two softball fields with an overlapping multi-purpose field, trail access, picnic tables, restrooms, and a parking lot. It had a playground area, which was recently removed. This site served as a burn dump prior to the development of the Recycling and Transfer Station in the 1950s/1960s. Claxton was redeveloped as a recreational facility approximately 60 years ago, when additional soil fill was brought to the site and leveled to create the existing fields.

At the request of the Massachusetts Department of Environmental Protection (MassDEP) the Town of Needham engaged Weston & Sampson Inc (W & S) to provide sampling and analysis of the soil composition at Claxton Field. The Town's testing plan was submitted to MassDEP by W & S on February 9, 2023 and was approved on February 14, 2023.

A joint meeting of the Select Board, the Park and Recreation Commission, the Finance Committee, the Board of Health, the School Committee, and the Community Preservation Committee was held on February 15, 2023 to discuss the issue and provide public information about the potential risks at this property and provide contingency planning should the facility need to be closed.

Borings were conducted and completed on February 16, 2023 with samples sent out to a certified laboratory for the testing of:

- Polycyclic Aromatic Hydrocarbons (PAH);
- MCP 14 Metals;
- Asbestos; and
- Dioxins.

Summary of results

Final results from the soil analysis were received on March 29, 2023 and then discussed internally and with W & S on March 30, 2023.

The testing results are consistent with our anticipated outcome scenario #2, the testing finds some contamination¹ at Claxton in the subsurface material, but low levels of contamination² in the surficial soil³, allowing the surface to continue to be used. The results for soil⁴ did indicate that the Town will trigger the Massachusetts Contingency Plan (MCP) which is administered through a Licensed Site Professional (LSP). The Town will continue to engage W & S as an LSP on their behalf to work on potential follow-up testing and reporting requirements. The Town will be working with W & S to file with MassDEP within the 120 days of notification of test results as required.

Continued Usage of Claxton

The results of the testing are consistent with the assumed contamination that W & S and the Town discussed after boring samples were taken in January of 2022. The testing found that the topsoil on the field is clean fill⁵, and that usage as an athletic field would not carry any inherent risk. At this time the Town has no data to indicate that usage of the field is unsafe and will be keeping the fields open.

The Town will need to work with MassDEP and file information with them accordingly. The Town would work with W & S and MassDEP to ensure that appropriate safeguards are in place during the renovation project. Materials would be kept on site and appropriately capped.

The detailed drafted memo is attached with results.

Stockpiled Materials and Laydown Space

The material that was in this area is permissible to remain on site and can be placed back in the area of generation and is not required to be removed from the site. The Town will be coordinating with the contractor as this project is completed to ensure that these appropriate measures are taken during the closeout of the project in restoring this area.

Renovation & Reporting

In the next few weeks, the Town will be working with W & S and MassDEP to provide more clarity on the site conditions and any modifications that may be needed to the intended field improvements. At this time, the only major change to the design will include the expansion of the installation of the geotextile membrane to go beyond the field limits to areas that were identified through sampling as having contaminated materials in the subsurface soil. This may also trigger additional permitting requirements through the Conservation Commission.

¹ Concentrations that require reporting to MassDEP

² Concentrations similar to natural soils which do not reporting to MassDEP

³ Top 12 inches

⁴ Greater than 12 inches below surface

⁵ Contaminant concentrations similar to natural soils

Based on current information, the Town will be moving forward with the project as designed and with the modifications added to the geotextile membrane. The Town will be requesting that the Community Preservation Committee (CPC) review this project for funding in the Fall of 2023. Should this project be funded by the CPC and at Town Meeting this project would go out to bid in the Winter of 2024, with construction anticipated to start in the Spring of 2024.

Based on the data collected to date, W & S has indicated that the Town will be able to close this site under the MCP at the conclusion of the construction project until such a time as the Town decides to do more construction work on this site.

Conclusions

While there are still more unknowns on this site that will be investigated by the Town, W & S, and MassDEP in the upcoming weeks, the Town understands that this facility is safe for athletics and recreation activities. The Town will work proactively to make any necessary alterations to the design of the renovation project, with the goal of keeping this project on its original timeline. As in any location, there are always unknowns that could affect the use of this property, but the information available, along with the consultation of W & S, would indicate that the Claxton Field can continue to function as an athletic facility now and into the future.

M E M O R A N D U M

TO: Ed Olsen – Superintendent, Parks and Forestry Division, Carys Lustig – Director of Public Works, Stacey Mulroy – Director of Park and Recreation (Town of Needham)

FROM: Lee Koska, PE, Prasanta Bhunia, LSP (Weston & Sampson)

DATE: March 29, 2023

SUBJECT: Claxton Field Environmental Sampling and Analysis

As requested by the Massachusetts Department of Environmental Protection (MassDEP), Weston & Sampson performed soil sampling and analysis at Claxton Field, located at 1421 Central Avenue (the Site). MassDEP required this sampling because its historical use as a burn dump and a recent resident complaint regarding excavation and stockpiling of topsoil over a portion of the Site for use as a contractor laydown area.

Previous Investigations – 2021 and 2022

As part of a geotechnical investigation to design potential new sports lighting foundations, eleven soil borings were advanced across the Site on December 7, 2021. Ash and various solid waste materials (glass, metal fragments, ceramic and wood) were observed intermixed with granular fill materials underneath topsoil up to 15.5 feet below grade surface (bgs). A significant increase in ash and solid waste materials was observed at four feet bgs and deeper, consistent with the known Site history as a municipal burn dump. During this investigation, samples were not collected for laboratory analysis, but based on field observations (i.e., ash and solid waste in deeper samples), Weston & Sampson recommended shallow test pits to address potential exposure to park users.

On March 15, 2022, Weston & Sampson excavated twenty-one test pits throughout the Site. In general, topsoil throughout the Site was at least 10 to 12 inches thick, transitioning to soil intermixed with solid waste material at greater depths, except for a play yard where 4 to 7 inches of topsoil were identified over a landscaping fabric. As solid waste components (primarily glass) were identified at shallow depths beneath the landscaping fabric, this area was closed as a conservative measure and the playground equipment removed. Samples of the materials were not collected for laboratory analysis at the time of test pit excavations.

Use of a Portion of the Site as Contractor Laydown Area

In the Summer of 2022, the contractor of the Central Avenue Water Main Improvement Project stripped the topsoil from the construction laydown area and stockpiled the material on Site. We understand a resident submitted a complaint to MassDEP, and MassDEP subsequently required soil sampling and analysis to address potential contamination at the Site. As required, a sampling plan was submitted to MassDEP for approval. A summary of the subsurface investigation methodology, findings and recommendations for additional response actions under the MCP are presented below.

Site Investigation – 2023

In March 2023, Weston & Sampson advanced six soil borings (identified as SB-201 through SB-206) using a Geoprobe drill rig. Boring locations are depicted on Figure 1 – Sampling Plan. Soil conditions were logged in the field by an environmental engineer and field screened using a Photoionization Detector (PID) for the presence of Total Organic Vapors (TOV). Three samples were collected from each boring for the following intervals: 0 to 1-foot bgs, 2 to 4 feet bgs and 4 to 6 feet bgs. Location SB-206 encountered refusal (bedrock)

at 5 feet bgs so the third interval sampled was 4 to 5 feet bgs. Samples collected were submitted for laboratory analysis of:

- Polycyclic Aromatic Hydrocarbons (PAHs) via EPA Method 8270;
- MCP 14 Metals via EPA Method 6010 / 7417;
- Asbestos via Polarized Light Microscopy (PLM); and
- Dioxins via EPA Method 8290 (nine samples total).

In addition, one duplicate sample was collected from B-203 from 4 to 6 feet bgs for PAHs, MCP 14 Metals, and Asbestos for quality assurance / quality control (QA/QC) purposes.

One 10-point composite sample was also collected from the stockpile located within the contractor laydown area for laboratory analysis of the same constituents of concern (COCs) identified above. Each grab was collected with hand tools from excavations 1 to 2 feet into the stockpile surface and field screened with a PID. Note that location B-202 was also located within the construction laydown area close to the existing stockpile.

At the request of MassDEP, Weston & Sampson also advanced a series of perimeter borings (PER-1 through PER-8) to visually assess the potential presence of solid waste materials at the park boundaries. These locations were advanced approximately five feet from the existing tree line. Analytical samples were not collected from the PER- boring series. Limited quantities of solid waste components were encountered in all locations with the exception of PER-7, which encountered shallow refusal on bedrock. Boring logs from all locations assessed during this investigation round are presented as Attachment A.

Soil Sampling Results

Topsoil: Twelve inches of topsoil was consistently observed with the exception of location B-206, where ash and solid waste materials were observed at approximately eleven inches bgs. Asbestos containing materials were not detected in topsoil. Laboratory analytical results of topsoil (0 – 1' interval) were below RCS-1 standards with the exception of lead at B-206 (330 mg/kg) and Dioxins at B-203 (30 ng/kg) which slightly exceeded their respective RCS-1 standards of 200 mg/kg and 20 ng/kg, respectively. Based on our visual observations, this exceedance appears to be associated with the presence of solid waste materials and ash at approximately eleven inches bgs. PAHs and Dioxins were below RCS-1 standards in topsoil. PID headspace readings were non-detect in the topsoil material.

Deeper Soil: Deeper soil from 1' to 6' bgs contained solid waste materials (brick, glass, wood, metal, porcelain) and ash intermixed with soil. Elevated concentrations of lead (up to 4,650 mg/kg), zinc (up to 1,630 mg/kg) and various PAHs were detected above RCS-1s. These elevated concentrations were generally detected at depths where ash and solid waste were observed. Similar to topsoil, asbestos was not detected in the submitted samples. PID headspace readings were non-detect in the deeper soil material.

Dioxin 2,3,7,8-TCDD exceeded RCS-1 in 5 of the 6 deeper samples. Note that only 2,3,7,8-TCDD has a published RCS-1 standard under the MCP. The maximum concentration detected was 74 nanograms/kilogram (ng/kg), which is below the Upper Concentration Limit (UCL) of 500 ng/kg and may require removal under the MCP. Full analytical results for all dioxins analyzed are presented in Table 2 – Soil Analytical Results: Dioxins for reference.

Stockpile: Results from the topsoil stockpile sample (CF-Stockpile) included detections of various metals and PAHs, slightly above RCS-1 standards for acenaphthylene, benzo(a)pyrene and lead. Soil results however were generally lower than the concentrations in deeper soil. PID headspace readings were non-detect in the stockpile material.

Based on the data, Weston & Sampson performed a preliminary risk assessment and indicated soil from 0 – 1' bgs does not pose a significant risk for a park user or a resident. However, deeper soil (greater than 1' bgs) does pose a condition of significant risk, mainly due to the presence of lead and to a lesser extent of Dioxin (2,3,7,8-TCDD).

Summary and Recommendations

Concentrations of metals (lead and zinc), PAHs, and Dioxins exceeded RCS-1 standards, which requires a 120-day notification to MassDEP under the MCP. Therefore, the Town should notify MassDEP within this timeframe of their knowledge of the data. Following notification, MassDEP will assign a Release Tracking Number (RTN) and the Site will be regulated going forward under the MCP. Please note that the MCP will require additional response actions, including further assessment, detailed risk characterization and reports for park construction and Site closure.

Attachments:

Figures

Tables

Boring Logs

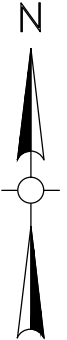
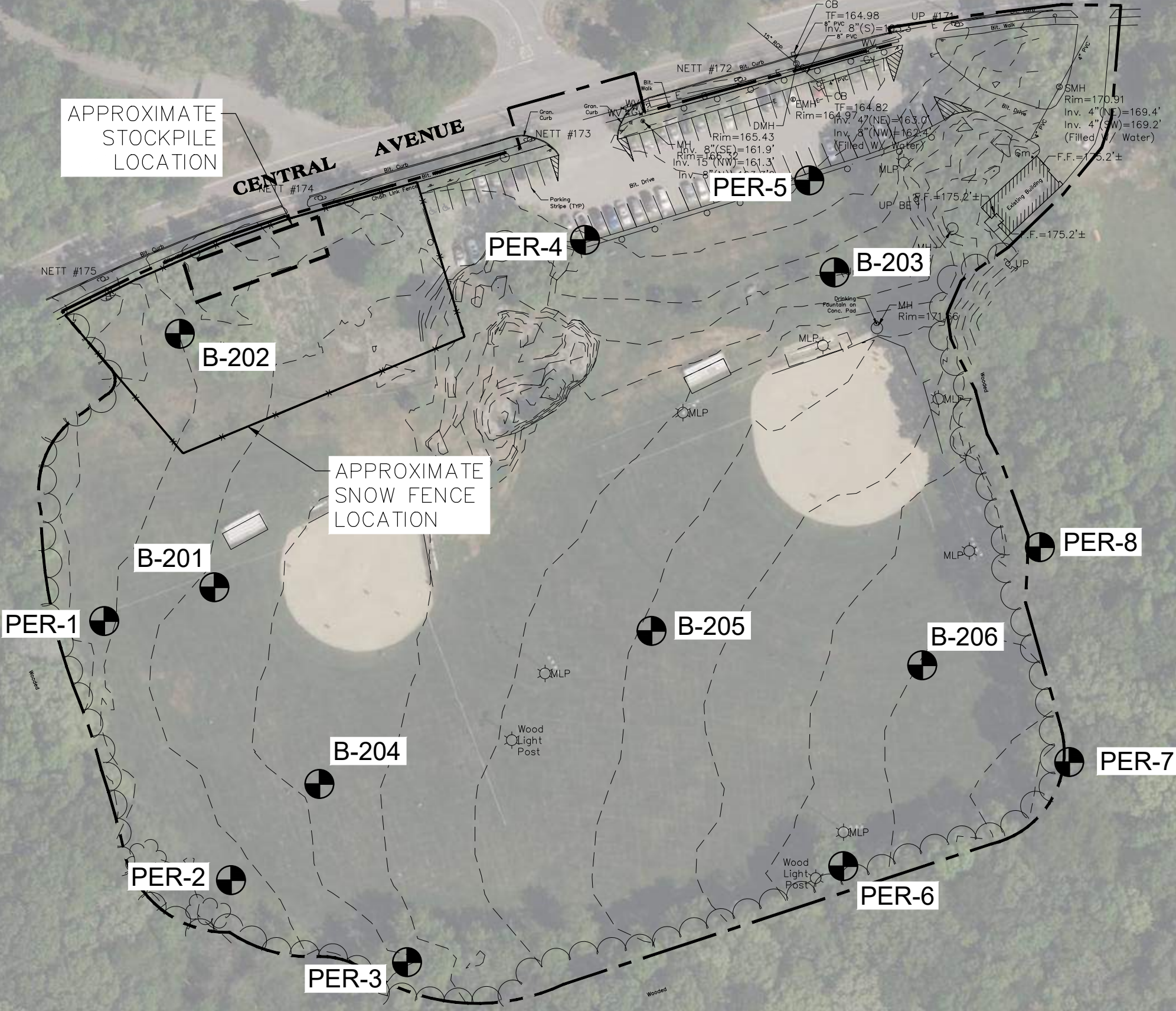
Laboratory Analytical Reports

Figures

APPROXIMATE
STOCKPILE
LOCATION

CENTRAL
AVENUE

APPROXIMATE
SNOW FENCE
LOCATION



LEGEND:

 APPROXIMATE BORING LOCATION

NOTES:

1. STOCKPILE, SNOW FENCE, AND BORING LOCATIONS ARE APPROXIMATE AND FOR DEPICTION PURPOSES ONLY.

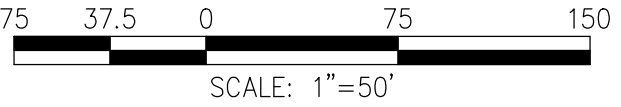


FIGURE 1

NEEDHAM, MA
CLAXTON FIELD

SITE PLAN

DESIGNED BY: MDM CHECKED BY: LK DATE: MARCH 2023



Tables

Soil Analytical Results
Claxton Field
Needham, MA

Parameter	RCS-1 Concentration	Units	Location, Sample Date, Lab Sample ID, Sample Depth (feet)								
			B-201			B-202		B-203			DUPLICATE
			23B0634-01	23B0634-02	23B0634-03	23B0634-04	23B0634-05	23B0634-06	23B0634-07	23B0634-08	23B0634-18
			02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023
			0-1	2-4	4-6	0-1	2-4	0-1	2-4	4-6	4-6
Polycyclic Aromatic Hydrocarbons (PAHs)											
2-Methylnaphthalene	0.7	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Acenaphthene	4	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Acenaphthylene	1	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Anthracene	1000	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Benzo(a)anthracene	7	mg/kg	<0.287	0.523	0.827	0.871	<0.307	<0.378	0.457	0.856	0.911
Benzo(a)pyrene	2	mg/kg	<0.287	0.517	0.79	0.85	<0.307	<0.378	0.472	0.911	0.83
Benzo(b)fluoranthene	7	mg/kg	<0.287	0.338	<0.645	0.667	<0.307	<0.378	0.417	0.788	0.802
Benzo(g,h,i)perylene	1000	mg/kg	<0.287	0.402	<0.645	<0.498	<0.307	<0.378	<0.332	0.514	0.428
Benzo(k)fluoranthene	70	mg/kg	<0.287	0.321	<0.645	0.623	<0.307	<0.378	0.378	0.729	0.486
Chrysene	70	mg/kg	<0.287	0.763	1.16	0.975	<0.307	<0.378	0.539	0.961	0.922
Dibenzo(a,h)Anthracene	0.7	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Fluoranthene	1000	mg/kg	<0.287	0.729	0.927	1.82	<0.307	<0.378	0.9	1.59	1.56
Fluorene	1000	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Indeno(1,2,3-cd)Pyrene	7	mg/kg	<0.287	0.319	<0.645	<0.498	<0.307	<0.378	<0.332	0.58	0.492
Naphthalene	4	mg/kg	<0.287	<0.302	<0.645	<0.498	<0.307	<0.378	<0.332	<0.330	<0.278
Phenanthrene	10	mg/kg	<0.287	0.791	0.663	1.17	<0.307	<0.378	0.546	0.645	0.956
Pyrene	1000	mg/kg	<0.287	1.1	1.49	1.6	<0.307	<0.378	0.752	1.3	1.59
Total Metals											
Antimony	20	mg/kg	<5.03	<5.24	<5.74	<5.10	<5.94	<1.36	<6.18	11.9	<5.62
Arsenic	20	mg/kg	4.84	8.29	5.45	3.13	40.6	8.88	7.17	10.9	8.13
Barium	1000	mg/kg	44.7	409	78	46.3	304	72.5	167	155	287
Beryllium	90	mg/kg	0.29	<0.12	<0.13	0.34	0.27	0.65	0.33	0.63	0.33
Cadmium	70	mg/kg	<0.50	8.91	0.63	<0.51	3.11	<0.68	1.27	<0.63	1.85
Chromium	100	mg/kg	12.7	104	19.5	11.7	35.5	27.1	22.2	8.12	20.2
Lead	200	mg/kg	112	399	302	129	1030	50.2	319	147	455
Mercury	20	mg/kg	0.042	0.271	0.107	0.085	0.647	0.114	0.193	0.37	0.406
Nickel	600	mg/kg	9.46	107	27.8	8.2	32.8	16.5	13.2	18.2	23.6
Selenium	400	mg/kg	<5.03	<1.05	<1.15	<5.10	<1.19	<6.82	<6.18	<6.31	<5.62
Silver	100	mg/kg	<0.5	2.62	<2.87	<0.51	2.97	<0.68	<0.62	<0.63	<0.56
Thallium	8	mg/kg	<5.03	<5.24	<5.74	<5.10	<5.94	<0.68	<6.18	<6.31	<5.62
Vanadium	400	mg/kg	20.8	39.8	13.9	15.4	25.1	34.7	21.9	24.7	18.9
Zinc	1000	mg/kg	63	1630	356	76.8	639	75.1	443	613	926
Dioxins											
2,3,7,8-TCDD TEQ	20	ng/kg	NT	NT	NT	NT	NT	30	74	16	NT
Asbestos											
Total Asbestos	~	%	ND	ND	ND	ND	ND	ND	ND	ND	ND

QC by:

NOTES:

~ = No standard available.

<VALUE = value not detected above laboratory reporting limit

VALUE = value detected above laboratory reporting limit

VALUE = value detected above RCS-1 Criteria

ABBREVIATIONS:

mg/Kg = Milligram per kilogram

ng/kg = Nanograms per kilogram

RCS-1 = Reportable Concentration in Soil, Category S-1 (2014)

TCDD = tetrachlorodibenzo-p-dioxin

ND = Non-detect

NT = Not tested

Soil Analytical Results
Claxton Field
Needham, MA

Parameter	RCS-1 Concentration	Units	Location, Sample Date, Lab Sample ID, Sample Depth (feet)									
			B-204			B-205			B-206			CF-STOCKPILE
			23B0634-09	23B0634-10	23B0634-11	23B0634-12	23B0634-13	23B0634-14	23B0634-15	23B0634-16	23B0634-17	23B0634-19
			02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023	02/16/2023
			0-1	2-4	4-6	0-1	2-4	4-6	0-1	2-4	4-5	N/A
Polycyclic Aromatic Hydrocarbons (PAHs)												
2-Methylnaphthalene	0.7	mg/kg	<0.295	<0.255	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	<0.338
Acenaphthene	4	mg/kg	<0.295	<0.255	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	<0.338
Acenaphthylene	1	mg/kg	<0.295	1.56	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	1.46
Anthracene	1000	mg/kg	<0.295	0.601	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	0.891
Benzo(a)anthracene	7	mg/kg	<0.295	2.29	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	2.36
Benzo(a)pyrene	2	mg/kg	<0.295	2.99	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	2.19
Benzo(b)fluoranthene	7	mg/kg	<0.295	1.96	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	1.85
Benzo(g,h,i)perylene	1000	mg/kg	<0.295	1.77	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	1.32
Benzo(k)fluoranthene	70	mg/kg	<0.295	1.99	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	1.4
Chrysene	70	mg/kg	<0.295	3.55	<0.319	<0.295	0.318	<0.346	<0.315	<0.284	<0.263	2.69
Dibenzo(a,h)Anthracene	0.7	mg/kg	<0.295	0.447	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	<0.338
Fluoranthene	1000	mg/kg	<0.295	2.89	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	3.92
Fluorene	1000	mg/kg	<0.295	<0.255	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	0.487
Indeno(1,2,3-cd)Pyrene	7	mg/kg	<0.295	1.7	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	1.42
Naphthalene	4	mg/kg	<0.295	<0.255	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	<0.338
Phenanthrene	10	mg/kg	<0.295	1.77	<0.319	<0.295	<0.281	<0.346	<0.315	<0.284	<0.263	4.14
Pyrene	1000	mg/kg	<0.295	5.05	<0.319	<0.295	0.36	<0.346	<0.315	<0.284	<0.263	4.57
Total Metals												
Antimony	20	mg/kg	<5.79	<4.89	14.7	<5.61	<5.45	<5.85	<5.86	6.85	<4.98	<6.4
Arsenic	20	mg/kg	<2.89	<2.45	8.31	<2.81	3.15	10.6	5.03	13.9	<2.49	4.97
Barium	1000	mg/kg	31.8	23.7	336	23.7	47.9	155	104	85.9	57.2	88.7
Beryllium	90	mg/kg	0.32	0.18	<0.14	0.25	0.25	0.67	0.39	0.33	0.34	0.26
Cadmium	70	mg/kg	<0.58	<0.49	3.05	<0.56	<0.55	<0.58	<0.59	<0.53	<0.5	0.7
Chromium	100	mg/kg	14.1	14	88.3	14.5	14.9	10.4	17.4	16	12	14
Lead	200	mg/kg	14.6	19.1	4650	22.1	50.6	1650	330	319	<9.97	206
Mercury	20	mg/kg	0.061	0.091	0.145	0.065	0.409	0.654	0.088	0.223	0.034	0.433
Nickel	600	mg/kg	9.64	7.33	68.7	8.15	12	16.8	16.4	37.4	8.75	9.97
Selenium	400	mg/kg	<5.79	<4.89	<1.15	<5.61	<5.45	<5.83	<5.86	<1.06	<4.98	<6.4
Silver	100	mg/kg	<0.58	<0.49	<5.76	<0.56	<0.55	<0.58	<0.59	<1.06	<0.5	<0.64
Thallium	8	mg/kg	<5.79	<4.89	<5.76	<5.61	<5.45	<5.83	<5.86	<5.3	<4.98	<6.4
Vanadium	400	mg/kg	25.3	17.4	23.8	18.7	35.1	38.2	24.3	21.5	21.7	17.2
Zinc	1000	mg/kg	32.7	35.5	1120	29.2	69	329	199	341	24.9	199
Dioxins												
2,3,7,8-TCDD TEQ	20	ng/kg	5.2	62	27	3.4	54	27	NT	NT	NT	NT
Asbestos												
Total Asbestos	~	%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

QC by:

NOTES:

~ = No standard available.

<VALUE = value not detected above laboratory reporting lim

VALUE = value detected above laboratory reporting limit

VALUE = value detected above RCS-1 Criteria

ABBREVIATIONS:

mg/Kg = Milligram per kilogram

ng/kg = Nanograms per kilogram

RCS-1 = Reportable Concentration in Soil, Category S-1 (2014)

TCDD = tetrachlorodibenzo-p-dioxin

ND = Non-detect

NT = Not tested

Table 2
Soil Analytical Results: Dioxins
Claxton Field
Needham, MA

Parameter	MCP Method 1 Standards		Units	Sample ID, Sample Date, Sample Depth (feet)								
	S-1/GW-2	S-1/GW-3		B-203			B-204			B-205		
				2/16/2023 0-1	2/16/2023 2-4	2/16/2023 4-6	2/16/2023 0-1	2/16/2023 2-4	2/16/2023 4-6	2/16/2023 0-1	2/16/2023 2-4	2/16/2023 4-6
Dioxins												
2,3,7,8-TCDF	~	~	ng/Kg	0.99	1.9	3.7	0.49	2.8	6.3	< 0.29	34	8.5
Total TCDF	~	~	ng/Kg	12	33	48	7.0	140	170	2.8	560	300
2,3,7,8-TCDD	~	~	ng/Kg	0.54	0.46	0.39	0.21	0.28	0.51	< 0.069	3.3	0.69
Total TCDD	~	~	ng/Kg	5.8	13	14	1.7	30	21	<0.069	120	26
1,2,3,7,8-PeCDF	~	~	ng/Kg	1.3	1.6	2.1	0.57	47	5.1	< 0.23	9.6	4.7
2,3,4,7,8-PeCDF	~	~	ng/Kg	2.1	2.7	3.2	1.1	14	9.9	0.35	22	11
Total PeCDF	~	~	ng/Kg	28	29	37	18	140	110	7.3	230	130
1,2,3,7,8-PeCDD	~	~	ng/Kg	4.8	2.0	0.89	0.39	1.5	1.3	0.19	3.1	1.4
Total PeCDD	~	~	ng/Kg	16	16	14	3.0	35	21	1.0	51	19
1,2,3,4,7,8-HxCDF	~	~	ng/Kg	3.8	2.2	3.2	0.81	9.3	8.0	0.53	6.2	5.8
1,2,3,6,7,8-HxCDF	~	~	ng/Kg	4.1	1.2	2.7	0.67	9.1	6.4	0.37	5.6	5.4
2,3,4,6,7,8-HxCDF	~	~	ng/Kg	2.2	2.4	3.1	1.2	12	7.9	0.49	8.7	7.0
1,2,3,7,8,9-HxCDF	~	~	ng/Kg	0.77	0.92	0.92	0.51	2.6	2.5	0.29	1.5	1.0
Total HxCDF	~	~	ng/Kg	54	53	36	16	120	81	7.4	110	74
1,2,3,4,7,8-HxCDD	~	~	ng/Kg	5.5	2.6	1.3	0.50	1.9	1.2	0.39	1.4	1.3
1,2,3,6,7,8-HxCDD	~	~	ng/Kg	9.3	17	2.6	1.1	3.4	2.6	0.66	3.3	0.80
1,2,3,7,8,9-HxCDD	~	~	ng/Kg	9	8.2	1.9	0.80	2.1	1.9	0.52	2.6	0.53
Total HxCDD	~	~	ng/Kg	74	120	27	9.3	56	28	6.7	42	11
1,2,3,4,6,7,8-HpCDF	~	~	ng/Kg	25	39	22	6.7	120	26	3.4	46	33
1,2,3,4,7,8,9-HpCDF	~	~	ng/Kg	1.6	2.8	1.2	0.48	1.7	2.8	< 0.11	1.4	0.63
Total HpCDF	~	~	ng/Kg	60	180	40	12	130	42	6.8	57	37
1,2,3,4,6,7,8-HpCDD	~	~	ng/Kg	120	500	41	12	22	33	16	19	3.3
Total HpCDD	~	~	ng/Kg	310	940	82	24	56	59	32	39	7.5
OCDF	~	~	ng/Kg	45	83	18	6.6	25	14	5.0	24	4.0
OCDD	~	~	ng/Kg	1600	3700	270	95	160	160	140	80	10
TCDD TEQ	20	20	ng/Kg	30	74	16	5.2	62	27	3.4	54	27

NOTES:

~ = No standard available.

<VALUE = value not detected above laboratory reporting limit

VALUE = value detected above laboratory reporting limit

VALUE = value detected above RCS-1 Criteria

ABBREVIATIONS:

ng/kg = Nanograms per kilogram

RCS-1 = Reportable Concentration in Soil, Category S-1 (2014)

TCDD TEQ = Total 2,3,7,8-TCDD Toxic Equivalent Using MADEP Factors

Boring Logs

		PROJECT Claxton Field Needham, MA		BORING No. <u>B-201-2</u>	
				SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>	

BORING Co. <u>Bronson Drilling</u>		BORING LOCATION <u>See attached plan</u>	
FOREMAN <u>Dan Bronson</u>		GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u>	
WSE REP. <u>Matthew McGuire, Laura McGovern</u>		DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>	

SAMPLER: <u>Geoprobe</u>		GROUNDWATER OBSERVATIONS				
		DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
CASING: <u>2" inside diameter with 5' sleeve</u>		<u>2/16/23</u>	<u>NR</u>	<u>NR</u>	<u>NA</u>	<u>NA</u>
CASING SIZE: <u>2"</u> OTHER: _____						

DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
		No.	REC/PEN (in)	DEPTH (ft.)	BLOWS/6"				
0	NA						0"-12" Dark brown F SAND with some silt, trace organics; moist		TOPSOIL
2		S-1	20/72	0-6	NA	0.0	12'-72" Light brown F-C SAND with some gravel, some ash, trace debris (glass, porcelain); moist	(1)	FILL
4									
6									
8							End of Boring at 6'		
10									
12									
14									
16									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES:

1. Samples B-206 (0-1), B-206 (2-4), and B-206 (4-6) collected across B-206-1 and B-206-2 for PAHs, MCP 14 metals, and asbestos.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.

ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

	BORING No. <u>B-201-2</u>
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		PROJECT Claxton Field Needham, MA		BORING No <u>B-202-1</u>	
				SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>	

BORING Co. <u>Bronson Drilling</u>		BORING LOCATION <u>See attached plan</u>	
FOREMAN <u>Dan Bronson</u>		GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u>	
WSE REP. <u>Matthew McGuire, Laura McGovern</u>		DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>	

SAMPLER: <u>Geoprobe</u>		GROUNDWATER OBSERVATIONS				
		DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
CASING: <u>2" inside diameter with 5' sleeve</u>		<u>2/16/23</u>	<u>NR</u>	<u>NR</u>	<u>NA</u>	<u>NA</u>
CASING SIZE: <u>2"</u> OTHER: _____						

DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
		No.	REC/PEN (in)	DEPTH (ft.)	BLOWS/6"				
0	NA						0"-10.5" Dark brown F-M SAND with little gravel, little rock; moist		TOPSOIL
2		S-1	32/48	0-4	NA	NR	10.5"-27" Light gray sandy GRAVEL with ash; moist	(2)	FILL
4						0.1	27"-48" Brown to dark brown F-C SAND with little gravel, trace silt, trace debris (glass, metal, brick, porcelain); moist		
6							End of Boring at 4' (Refusal)	(1)	
8									
10									
12									
14									
16									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES:

1. Refusal at 4' (suspect bedrock).

2. Samples B-202 (0-1) and B-202 (2-4) collected across B-202-1 and B-202-2 for PAHs, MCP 14 metals, and asbestos.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.

ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.	<u>B-202-1</u>
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		PROJECT Claxton Field Needham, MA		BORING No <u>B-202-2</u> SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>																					
BORING Co. <u>Bronson Drilling</u> FOREMAN <u>Dan Bronson</u> WSE REP. <u>Matthew McGuire, Laura McGovern</u>		BORING LOCATION <u>See attached plan</u> GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u> DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>																							
SAMPLER: <u>Geoprobe</u> CASING: <u>2" inside diameter with 5' sleeve</u> CASING SIZE: <u>2"</u> OTHER: _____		GROUNDWATER OBSERVATIONS																							
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2/16/23	NR	NR	NA	NA																					
DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION																
0	NA						0" - 5" Dark brown F-M SAND, little gravel, little rock	(2)	TOPSOIL																
2		S-1	32/54	0-4.5	NA	0.0	5" - 27" Light brown to light gray F-C SAND with some gravel; moist		FILL																
4							27" - 46" Dark brown to black F-C SAND with little gravel, trace debris (glass, brick, wood); moist																		
6							46" - 50" ASH, trace debris (burnt wood)																		
8							50" - 54" Dark brown SILT; moist																		
10							End of Boring at 4.5' (Refusal)	(1)																	
12																									
14																									
16																									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES:
 1. Refusal at 4.5' (suspect bedrock).
 2. Samples B-202 (0-1) and B-202 (2-4) collected across B-202-1 and B-202-2 for PAHs, MCP 14 metals, and asbestos.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
 ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG.
 FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.	<u>B-202-2</u>
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		PROJECT Claxton Field Needham, MA		BORING No <u>B-203-1</u>																																																																																													
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								BORING No. <u>B-203-1</u>																																																																																									

		PROJECT Claxton Field Needham, MA		BORING No. <u>B-203-2</u>	
				SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>	
BORING Co. <u>Bronson Drilling</u> FOREMAN <u>Dan Bronson</u> WSE REP. <u>Matthew McGuire, Laura McGovern</u>		BORING LOCATION <u>See attached plan</u> GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u> DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>			
SAMPLER: <u>Geoprobe</u>			GROUNDWATER OBSERVATIONS		
CASING: <u>2" inside diameter with 5' sleeve</u>			DATE	TIME	WATER AT
			2/16/23	NR	NR
CASING SIZE: <u>2"</u> OTHER: _____			CASING AT	STABILIZATION TIME	
			NA	NA	

DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
		No.	REC/PEN (in)	DEPTH (ft.)	BLOWS/6"				
0	NA						0" - 12" Dark brown F SAND with some silt, trace organics; moist		TOPSOIL
2		S-1	19/72	0-6	NA	0.0	12" - 72" Dark brown to black F-C SAND with some silt, some gravel, some ash, trace debris (wood); moist	(1)	FILL
4									
6									
8							End of Boring at 6'		
10									
12									
14									
16									

GRANULAR SOILS		COHESIVE SOILS		NOTES:	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY		
0-4	V. LOOSE	0-2	V. SOFT		1. Samples B-203 (0-1), B-203 (2-4), and B-203(4-6) collected across B-203-1 and B-203-2 for PAHs, MCP 14 metals, asbestos, and dioxins. 2. Duplicate sample collected at (4-6') for PAHs, MCP 14 metals, and asbestos.
4-10	LOOSE	2-4	SOFT		
10-30	M. DENSE	4-8	M. STIFF		
30-50	DENSE	8-15	STIFF		
> 50	V. DENSE	15-30	V. STIFF		
		> 30	HARD		

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 FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. B-203-2

		PROJECT Claxton Field Needham, MA		BORING No. <u>B-204-1</u>																																																																																				
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FOREMAN Dan Bronson		GROUND SURFACE ELEV. NR DATUM NR								
WSE REP. Matthew McGuire, Laura McGovern		DATE START 2/16/23 DATE END 2/16/23								
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0	NA									
2		S-1	31/72	0-6	NA	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION	
							0.0	0"-12" Light to dark brown F-M SAND with some silt, trace organics; moist	(1)	TOPSOIL
						12"-36" Light to dark brown F-C SAND with some gravel; moist				
4						36"-42" Light brown C SAND with trace gravel				
		42"-66" Dark brown to black F-C SAND, some gravel, some glass, trace brick; moist								
6							66"-72" White ASH, trace glass; moist		FILL	
		End of Boring at 6'								
8										
10										
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BORING Co. <u>Bronson Drilling</u> FOREMAN <u>Dan Bronson</u> WSE REP. <u>Matthew McGuire, Laura McGovern</u>		BORING LOCATION <u>See attached plan</u> GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u> DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>																					
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2	11"-24" Light brown F-C SAND with some silt, trace gravel; moist						FILL																
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BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
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10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES:

1. Refusal at 5' (suspect bedrock).

2. Samples B-206 (0-1), B-206 (2-4), and B-206 (4-6) collected across B-206-1 and B-206-2 for PAHs, MCP 14 metals, and asbestos.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.

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BORING No. B-206-1

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				SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>	

BORING Co. <u>Bronson Drilling</u>		BORING LOCATION <u>See attached plan</u>	
FOREMAN <u>Dan Bronson</u>		GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u>	
WSE REP. <u>Matthew McGuire, Laura McGovern</u>		DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>	

SAMPLER: <u>Geoprobe</u>		GROUNDWATER OBSERVATIONS				
CASING:	<u>2" inside diameter with 5' sleeve</u>	DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
		<u>2/16/23</u>	<u>NR</u>	<u>NR</u>	<u>NA</u>	<u>NA</u>
CASING SIZE:	<u>2"</u> OTHER: _____					

DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
		No.	REC/PEN (in)	DEPTH (ft.)	BLOWS/6"				
0	NA						0"-18" Light to dark brown F SAND with some silt, trace roots; moist		TOPSOIL
2		S-1	27/72	0-6	NA	NR	18"-36" Light to dark brown F-M SAND with some silt, trace gravel; moist		
4							36"-46" Gray to light brown C SAND with some gravel, trace silt; moist		
6							46"-72" Dark brown to gray F-C SAND with some gravel, some ash, some silt, trace glass; moist		
8							End of Boring at 6'		
10									
12									
14									
16									

GRANULAR SOILS		COHESIVE SOILS		NOTES:
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	
0-4	V. LOOSE	0-2	V. SOFT	
4-10	LOOSE	2-4	SOFT	
10-30	M. DENSE	4-8	M. STIFF	
30-50	DENSE	8-15	STIFF	
> 50	V. DENSE	15-30	V. STIFF	
		> 30	HARD	

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
 ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG.
 FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. <u>PER-5</u>

		PROJECT Claxton Field Needham, MA		BORING No. <u>PER-6</u>																																																																																															
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		PROJECT Claxton Field Needham, MA		BORING No. <u>PER-7</u>	
				SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>	

BORING Co. <u>Bronson Drilling</u>		BORING LOCATION <u>See attached plan</u>	
FOREMAN <u>Dan Bronson</u>		GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u>	
WSE REP. <u>Matthew McGuire, Laura McGovern</u>		DATE START <u>2/16/23</u> DATE END <u>2/16/23</u>	

SAMPLER: <u>Geoprobe</u>		GROUNDWATER OBSERVATIONS				
		DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME
CASING: <u>2" inside diameter with 5' sleeve</u>		<u>2/16/23</u>	<u>NR</u>	<u>NR</u>	<u>NA</u>	<u>NA</u>
CASING SIZE: <u>2"</u> OTHER: _____						

DEPTH (feet)	CASING (blows/ft)	SAMPLE				PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
		No.	REC/PEN (in)	DEPTH (ft.)	BLOWS/6"				
0	NA	S-1	13/24	0-2	NA	NR	0"-12" Light to dark brown F SAND with some silt, trace roots; moist		TOPSOIL
2							12"-24" Tan F-M SAND, some rock, little silt; fractured rock starting at 20"		FILL
4		End of Boring at 2' (Refusal)							
6									
8									
10									
12									
14									
16									

GRANULAR SOILS		COHESIVE SOILS		NOTES:
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	
0-4	V. LOOSE	0-2	V. SOFT	
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	BORING No. <u>PER-5</u>
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		PROJECT Claxton Field Needham, MA	BORING No. <u>PER-8</u> SHEET <u>1</u> OF <u>1</u> Project No. <u>ENG23-0164</u> CHKD BY <u>ACE</u>
BORING Co. <u>Bronson Drilling</u>		BORING LOCATION <u>See attached plan</u>	
FOREMAN <u>Dan Bronson</u>		GROUND SURFACE ELEV. <u>NR</u> DATUM <u>NR</u>	
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0	NA						0"-12" Light to dark brown F SAND with some silt, trace roots; moist		TOPSOIL
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4									
6							End of Boring at 6'		
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BORING No. <u>PER-5</u>

Laboratory Analytical Reports



CERTIFICATE OF ANALYSIS

Lee Koska
Weston and Sampson Engineers, Inc.
5 Centennial Drive
Peabody, MA 01960

RE: Claxton Field (N/A)
ESS Laboratory Work Order Number: 23B0634

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:37 pm, Mar 14, 2023

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

Subcontracted Analyses

Aerobiology Boston - Woburn, MA
Pace Analytical, Inc. - Minneapolis, MN

Asbestos
Dioxin



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

SAMPLE RECEIPT

The following samples were received on February 17, 2023 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Question I: All samples for SVOA were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
23B0634-01	B-201 - 0-1	Soil	6010C, 7471B, 8270D, SUB
23B0634-02	B-201 - 2-4	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-03	B-201 - 4-6	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-04	B-202 - 0-1	Soil	6010C, 7471B, 8270D, SUB
23B0634-05	B-202 - 2-4	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-06	B-203 - 0-1	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-07	B-203 - 2-4	Soil	6010C, 7471B, 8270D, SUB
23B0634-08	B-203 - 4-6	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-09	B-204 - 0-1	Soil	6010C, 7471B, 8270D, SUB
23B0634-10	B-204 - 2-4	Soil	6010C, 7471B, 8270D, SUB
23B0634-11	B-204 - 4-6	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-12	B-205 - 0-1	Soil	6010C, 7471B, 8270D, SUB
23B0634-13	B-205 - 2-4	Soil	6010C, 7471B, 8270D, SUB
23B0634-14	B-205 - 4-6	Soil	6010C, 7471B, 8270D, SUB
23B0634-15	B-206 - 0-1	Soil	6010C, 7471B, 8270D, SUB
23B0634-16	B-206 - 2-4	Soil	6010C, 6020A, 7471B, 8270D, SUB
23B0634-17	B-206 - 4-5	Soil	6010C, 7471B, 8270D, SUB
23B0634-18	B-207F - 4-6	Soil	6010C, 7471B, 8270D, SUB
23B0634-19	CF-STOCKPILE	Soil	6010C, 7471B, 8270D, SUB



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

PROJECT NARRATIVE

Total Metals

23B0634-02 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)
Silver

23B0634-05 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)
Silver

23B0634-11 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)
Silver

23B0634-16 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)
Silver

23B0634-17 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)
Lead

DB32002-BSD1 [Blank Spike recovery is below lower control limit \(B-\).](#)
Cadmium (79% @ 80-120%), Selenium (79% @ 80-120%), Zinc (77% @ 80-120%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **23B0634-01 through 23B0634-19**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

☐ 8260 VOC CAM II A	☒ 7470/7471 Hg CAM III B	☐ MassDEP VPH (GC/PID/FID) CAM IV A	☐ 8082 PCB CAM V A	☐ 9014 Total Cyanide/PAC CAM VI A	☐ 6860 Perchlorate CAM VIII B
☒ 8270 SVOC CAM II B	☐ 7010 Metals CAM III C	☐ MassDEP VPH (GC/MS) CAM IV C	☐ 8081 Pesticides CAM V B	☐ 7196 Hex Cr CAM VI B	☐ MassDEP APH CAM IX A
☒ 6010 Metals CAM III A	☒ 6020 Metals CAM III D	☐ MassDEP EPH CAM IV B	☐ 8151 Herbicides CAM V C	☐ Explosives CAM VIII A	☐ TO-15 VOC CAM IX B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes ☒ No ☐
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes ☒ No ☐
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes ☒ No ☐
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes ☒ No ☐
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes ☐ No ☐
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes ☒ No ☐

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.	Yes ☐ No ☒ *
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ☐ No ☒ *
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ☐ No ☒ *

***All negative responses must be addressed in an attached laboratory narrative.**

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: March 14, 2023

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 0-1
Date Sampled: 02/16/23 10:45
Percent Solids: 86

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.03)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Arsenic	4.84 (2.52)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Barium	44.7 (2.52)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Beryllium	0.29 (0.11)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Cadmium	ND (0.50)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Chromium	12.7 (1.01)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Lead	112 (5.03)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Mercury	0.042 (0.033)		7471B		1	YIV	02/23/23 10:41	0.69	40	DB32003
Nickel	9.46 (2.52)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Selenium	ND (5.03)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Silver	ND (0.50)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Thallium	ND (5.03)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Vanadium	20.8 (1.01)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002
Zinc	63.0 (2.52)		6010C		1	CEV	02/21/23 11:00	2.3	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 0-1
Date Sampled: 02/16/23 10:45
Percent Solids: 86
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Acenaphthene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Acenaphthylene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Anthracene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Benzo(a)anthracene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Benzo(a)pyrene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Chrysene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Fluoranthene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Fluorene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Naphthalene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Phenanthrene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111
Pyrene	ND (0.287)		8270D		1	02/21/23 20:51	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	73 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	69 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	89 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-201 - 0-1

Date Sampled: 02/16/23 10:45

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-01

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 2-4
Date Sampled: 02/16/23 10:45
Percent Solids: 84

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Antimony	ND (5.24)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Arsenic	8.29 (2.62)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Barium	409 (2.62)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Beryllium	ND (0.12)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Cadmium	8.91 (0.52)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Chromium	104 (5.24)		6010C		5	CEV	02/22/23 16:19	2.27	100	DB32002
Lead	399 (26.2)		6010C		5	CEV	02/22/23 16:19	2.27	100	DB32002
Mercury	0.271 (0.039)		7471B		1	YIV	02/23/23 10:43	0.61	40	DB32003
Nickel	107 (2.62)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Selenium	ND (1.05)		6020A		1	BJV	02/23/23 16:50	2.27	100	DB32002
Silver	EL ND (2.62)		6010C		5	CEV	02/22/23 16:19	2.27	100	DB32002
Thallium	ND (5.24)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Vanadium	39.8 (1.05)		6010C		1	CEV	02/21/23 11:02	2.27	100	DB32002
Zinc	1630 (26.2)		6010C		10	CEV	02/22/23 16:17	2.27	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 2-4
Date Sampled: 02/16/23 10:45
Percent Solids: 84
Initial Volume: 19.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Acenaphthene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Acenaphthylene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Anthracene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Benzo(a)anthracene	0.523 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Benzo(a)pyrene	0.517 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Benzo(b)fluoranthene	0.338 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Benzo(g,h,i)perylene	0.402 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Benzo(k)fluoranthene	0.321 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Chrysene	0.763 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Fluoranthene	0.729 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Fluorene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	0.319 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Naphthalene	ND (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Phenanthrene	0.791 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111
Pyrene	1.10 (0.302)		8270D		1	02/21/23 21:21	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	67 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	78 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	69 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	85 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 2-4
Date Sampled: 02/16/23 10:45

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-02
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 4-6
Date Sampled: 02/16/23 10:45
Percent Solids: 79

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.74)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Arsenic	5.45 (2.87)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Barium	78.0 (2.87)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Beryllium	ND (0.13)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Cadmium	0.63 (0.57)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Chromium	19.5 (5.74)		6010C		5	CEV	02/23/23 10:36	2.2	100	DB32002
Lead	302 (28.7)		6010C		5	CEV	02/23/23 10:36	2.2	100	DB32002
Mercury	0.107 (0.036)		7471B		1	YIV	02/23/23 10:45	0.69	40	DB32003
Nickel	27.8 (2.87)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Selenium	ND (1.15)		6020A		1	BJV	02/23/23 16:56	2.2	100	DB32002
Silver	ND (2.87)		6010C		5	CEV	02/23/23 10:36	2.2	100	DB32002
Thallium	ND (5.74)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Vanadium	13.9 (1.15)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002
Zinc	356 (2.87)		6010C		1	CEV	02/21/23 11:04	2.2	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-201 - 4-6
Date Sampled: 02/16/23 10:45
Percent Solids: 79
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Acenaphthene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Acenaphthylene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Anthracene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Benzo(a)anthracene	0.827 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Benzo(a)pyrene	0.790 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Chrysene	1.16 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Fluoranthene	0.927 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Fluorene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Naphthalene	ND (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Phenanthrene	0.663 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111
Pyrene	1.49 (0.645)		8270D		2	02/21/23 21:51	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	80 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	87 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	80 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	89 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-201 - 4-6

Date Sampled: 02/16/23 10:45

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-03

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-202 - 0-1
Date Sampled: 02/16/23 10:15
Percent Solids: 97

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.10)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Arsenic	3.13 (2.55)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Barium	46.3 (2.55)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Beryllium	0.34 (0.11)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Cadmium	ND (0.51)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Chromium	11.7 (1.02)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Lead	129 (5.10)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Mercury	0.085 (0.030)		7471B		1	YIV	02/23/23 10:51	0.69	40	DB32003
Nickel	8.20 (2.55)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Selenium	ND (5.10)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Silver	ND (0.51)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Thallium	ND (5.10)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Vanadium	15.4 (1.02)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002
Zinc	76.8 (2.55)		6010C		1	CEV	02/21/23 11:06	2.03	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-202 - 0-1
Date Sampled: 02/16/23 10:15
Percent Solids: 97
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Acenaphthene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Acenaphthylene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Anthracene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Benzo(a)anthracene	0.871 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Benzo(a)pyrene	0.850 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Benzo(b)fluoranthene	0.667 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Benzo(k)fluoranthene	0.623 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Chrysene	0.975 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Fluoranthene	1.82 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Fluorene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Naphthalene	ND (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Phenanthrene	1.17 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111
Pyrene	1.60 (0.498)		8270D		2	02/21/23 22:21	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichlorobenzene-d4	77 %		30-130
Surrogate: 2-Fluorobiphenyl	83 %		30-130
Surrogate: Nitrobenzene-d5	82 %		30-130
Surrogate: p-Terphenyl-d14	86 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-202 - 0-1
Date Sampled: 02/16/23 10:15

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-04
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-202 - 2-4
Date Sampled: 02/16/23 10:15
Percent Solids: 79

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.94)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Arsenic	40.6 (2.97)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Barium	304 (2.97)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Beryllium	0.27 (0.13)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Cadmium	3.11 (0.59)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Chromium	35.5 (5.94)		6010C		5	CEV	02/23/23 10:38	2.14	100	DB32002
Lead	1030 (29.7)		6010C		5	CEV	02/23/23 10:38	2.14	100	DB32002
Mercury	0.647 (0.040)		7471B		1	YIV	02/23/23 10:54	0.63	40	DB32003
Nickel	32.8 (2.97)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Selenium	ND (1.19)		6020A		1	BJV	02/23/23 17:01	2.14	100	DB32002
Silver	EL ND (2.97)		6010C		5	CEV	02/23/23 10:38	2.14	100	DB32002
Thallium	ND (5.94)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Vanadium	25.1 (1.19)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002
Zinc	639 (2.97)		6010C		1	CEV	02/21/23 11:08	2.14	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-202 - 2-4
Date Sampled: 02/16/23 10:15
Percent Solids: 79
Initial Volume: 20.7g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Acenaphthene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Acenaphthylene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Anthracene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Benzo(a)anthracene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Benzo(a)pyrene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Chrysene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Fluoranthene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Fluorene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Naphthalene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Phenanthrene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111
Pyrene	ND (0.307)		8270D		1	02/21/23 22:51	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>73 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>79 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>75 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>86 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-202 - 2-4

Date Sampled: 02/16/23 10:15

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-05

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 0-1
Date Sampled: 02/16/23 13:30
Percent Solids: 68

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (1.36)		6020A		1	BJV	02/23/23 17:07	2.14	100	DB32002
Arsenic	8.88 (3.41)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Barium	72.5 (3.41)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Beryllium	0.65 (0.30)		6010C		2	CEV	02/22/23 16:21	2.14	100	DB32002
Cadmium	ND (0.68)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Chromium	27.1 (1.36)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Lead	50.2 (6.82)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Mercury	0.114 (0.048)		7471B		1	YIV	02/23/23 10:56	0.6	40	DB32003
Nickel	16.5 (3.41)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Selenium	ND (6.82)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Silver	ND (0.68)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Thallium	ND (0.68)		6020A		1	BJV	02/23/23 17:07	2.14	100	DB32002
Vanadium	34.7 (1.36)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002
Zinc	75.1 (3.41)		6010C		1	CEV	02/21/23 11:20	2.14	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 0-1
Date Sampled: 02/16/23 13:30
Percent Solids: 68
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Acenaphthene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Acenaphthylene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Anthracene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Benzo(a)anthracene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Benzo(a)pyrene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Chrysene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Fluoranthene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Fluorene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Naphthalene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Phenanthrene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111
Pyrene	ND (0.378)		8270D		1	02/21/23 23:21	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>79 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>88 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 0-1
Date Sampled: 02/16/23 13:30

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-06
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 2-4
Date Sampled: 02/16/23 13:30
Percent Solids: 79

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (6.18)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Arsenic	7.17 (3.09)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Barium	167 (3.09)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Beryllium	0.33 (0.14)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Cadmium	1.27 (0.62)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Chromium	22.2 (1.24)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Lead	319 (6.18)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Mercury	0.193 (0.036)		7471B		1	YIV	02/23/23 10:58	0.69	40	DB32003
Nickel	13.2 (3.09)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Selenium	ND (6.18)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Silver	ND (0.62)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Thallium	ND (6.18)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Vanadium	21.9 (1.24)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002
Zinc	443 (3.09)		6010C		1	CEV	02/21/23 11:22	2.05	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 2-4
Date Sampled: 02/16/23 13:30
Percent Solids: 79
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Acenaphthene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Acenaphthylene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Anthracene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Benzo(a)anthracene	0.457 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Benzo(a)pyrene	0.472 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Benzo(b)fluoranthene	0.417 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Benzo(k)fluoranthene	0.378 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Chrysene	0.539 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Fluoranthene	0.900 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Fluorene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Naphthalene	ND (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Phenanthrene	0.546 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111
Pyrene	0.752 (0.332)		8270D		1	02/21/23 23:52	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	83 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	79 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	85 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-203 - 2-4

Date Sampled: 02/16/23 13:30

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-07

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 4-6
Date Sampled: 02/16/23 13:30
Percent Solids: 77

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	11.9 (1.26)		6020A		1	BJV	02/23/23 17:13	2.05	100	DB32002
Arsenic	10.9 (3.16)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Barium	155 (3.16)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Beryllium	0.63 (0.14)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Cadmium	ND (0.63)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Chromium	8.12 (1.26)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Lead	147 (6.31)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Mercury	0.370 (0.043)		7471B		1	YIV	02/23/23 11:00	0.6	40	DB32003
Nickel	18.2 (3.16)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Selenium	ND (6.31)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Silver	ND (0.63)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Thallium	ND (6.31)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Vanadium	24.7 (1.26)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002
Zinc	613 (3.16)		6010C		1	CEV	02/21/23 11:24	2.05	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-203 - 4-6
Date Sampled: 02/16/23 13:30
Percent Solids: 77
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Acenaphthene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Acenaphthylene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Anthracene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Benzo(a)anthracene	0.856 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Benzo(a)pyrene	0.911 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Benzo(b)fluoranthene	0.788 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Benzo(g,h,i)perylene	0.514 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Benzo(k)fluoranthene	0.729 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Chrysene	0.961 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Fluoranthene	1.59 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Fluorene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	0.580 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Naphthalene	ND (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Phenanthrene	0.645 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111
Pyrene	1.30 (0.330)		8270D		1	02/22/23 0:22	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	76 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	81 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	78 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	83 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-203 - 4-6

Date Sampled: 02/16/23 13:30

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-08

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 0-1
Date Sampled: 02/16/23 12:00
Percent Solids: 81

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.79)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Arsenic	ND (2.89)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Barium	31.8 (2.89)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Beryllium	0.32 (0.13)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Cadmium	ND (0.58)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Chromium	14.1 (1.16)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Lead	14.6 (5.79)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Mercury	0.061 (0.035)		7471B		1	YIV	02/23/23 11:02	0.69	40	DB32003
Nickel	9.64 (2.89)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Selenium	ND (5.79)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Silver	ND (0.58)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Thallium	ND (5.79)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Vanadium	25.3 (1.16)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002
Zinc	32.7 (2.89)		6010C		1	CEV	02/21/23 11:26	2.13	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 0-1
Date Sampled: 02/16/23 12:00
Percent Solids: 81
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Acenaphthene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Acenaphthylene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Anthracene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Benzo(a)anthracene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Benzo(a)pyrene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Chrysene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Fluoranthene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Fluorene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Naphthalene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Phenanthrene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111
Pyrene	ND (0.295)		8270D		1	02/22/23 0:52	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>78 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>76 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>87 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-204 - 0-1

Date Sampled: 02/16/23 12:00

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-09

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 2-4
Date Sampled: 02/16/23 12:00
Percent Solids: 96

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (4.89)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Arsenic	ND (2.45)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Barium	23.7 (2.45)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Beryllium	0.18 (0.11)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Cadmium	ND (0.49)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Chromium	14.0 (0.98)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Lead	19.1 (4.89)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Mercury	0.091 (0.030)		7471B		1	YIV	02/23/23 11:04	0.69	40	DB32003
Nickel	7.33 (2.45)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Selenium	ND (4.89)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Silver	ND (0.49)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Thallium	ND (4.89)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Vanadium	17.4 (0.98)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002
Zinc	35.5 (2.45)		6010C		1	CEV	02/21/23 11:28	2.14	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 2-4
Date Sampled: 02/16/23 12:00
Percent Solids: 96
Initial Volume: 20.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Acenaphthene	ND (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Acenaphthylene	1.56 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Anthracene	0.601 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Benzo(a)anthracene	2.29 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Benzo(a)pyrene	2.99 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Benzo(b)fluoranthene	1.96 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Benzo(g,h,i)perylene	1.77 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Benzo(k)fluoranthene	1.99 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Chrysene	3.55 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Dibenzo(a,h)Anthracene	0.447 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Fluoranthene	2.89 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Fluorene	ND (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	1.70 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Naphthalene	ND (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Phenanthrene	1.77 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111
Pyrene	5.05 (0.255)		8270D		1	02/22/23 1:22	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichlorobenzene-d4	75 %		30-130
Surrogate: 2-Fluorobiphenyl	81 %		30-130
Surrogate: Nitrobenzene-d5	80 %		30-130
Surrogate: p-Terphenyl-d14	85 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 2-4
Date Sampled: 02/16/23 12:00

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-10
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 4-6
Date Sampled: 02/16/23 12:00
Percent Solids: 78

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	14.7 (1.15)		6020A		1	BJV	02/23/23 17:18	2.24	100	DB32002
Arsenic	8.31 (2.88)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Barium	336 (2.88)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Beryllium	ND (0.13)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Cadmium	3.05 (0.58)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Chromium	88.3 (11.5)		6010C		10	CEV	02/22/23 16:23	2.24	100	DB32002
Lead	4650 (57.6)		6010C		10	CEV	02/22/23 16:23	2.24	100	DB32002
Mercury	0.145 (0.039)		7471B		1	YIV	02/23/23 11:18	0.65	40	DB32003
Nickel	68.7 (2.88)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Selenium	ND (1.15)		6020A		1	BJV	02/23/23 17:18	2.24	100	DB32002
Silver	EL ND (5.76)		6010C		10	CEV	02/22/23 16:23	2.24	100	DB32002
Thallium	ND (5.76)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Vanadium	23.8 (1.15)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002
Zinc	1120 (2.88)		6010C		1	CEV	02/21/23 11:38	2.24	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 4-6
Date Sampled: 02/16/23 12:00
Percent Solids: 78
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Acenaphthene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Acenaphthylene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Anthracene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Benzo(a)anthracene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Benzo(a)pyrene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Chrysene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Fluoranthene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Fluorene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Naphthalene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Phenanthrene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111
Pyrene	ND (0.319)		8270D		1	02/22/23 1:52	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>83 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>86 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>84 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>85 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-204 - 4-6
Date Sampled: 02/16/23 12:00

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-11
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 0-1
Date Sampled: 02/16/23 14:30
Percent Solids: 87

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.61)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Arsenic	ND (2.81)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Barium	23.7 (2.81)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Beryllium	0.25 (0.12)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Cadmium	ND (0.56)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Chromium	14.5 (1.12)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Lead	22.1 (5.61)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Mercury	0.065 (0.035)		7471B		1	YIV	02/23/23 11:20	0.66	40	DB32003
Nickel	8.15 (2.81)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Selenium	ND (5.61)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Silver	ND (0.56)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Thallium	ND (5.61)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Vanadium	18.7 (1.12)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002
Zinc	29.2 (2.81)		6010C		1	CEV	02/21/23 11:46	2.06	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 0-1
Date Sampled: 02/16/23 14:30
Percent Solids: 87
Initial Volume: 19.6g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Acenaphthene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Acenaphthylene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Anthracene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Benzo(a)anthracene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Benzo(a)pyrene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Chrysene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Fluoranthene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Fluorene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Naphthalene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Phenanthrene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111
Pyrene	ND (0.295)		8270D		1	02/22/23 2:22	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>74 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>79 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>75 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>87 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-205 - 0-1

Date Sampled: 02/16/23 14:30

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-12

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 2-4
Date Sampled: 02/16/23 14:30
Percent Solids: 91

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-13
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.45)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Arsenic	3.15 (2.73)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Barium	47.9 (2.73)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Beryllium	0.25 (0.12)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Cadmium	ND (0.55)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Chromium	14.9 (1.09)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Lead	50.6 (5.45)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Mercury	0.409 (0.034)		7471B		1	YIV	02/23/23 11:22	0.64	40	DB32003
Nickel	12.0 (2.73)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Selenium	ND (5.45)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Silver	ND (0.55)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Thallium	ND (5.45)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Vanadium	35.1 (1.09)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002
Zinc	69.0 (2.73)		6010C		1	CEV	02/21/23 11:48	2.01	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 2-4
Date Sampled: 02/16/23 14:30
Percent Solids: 91
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Acenaphthene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Acenaphthylene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Anthracene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Benzo(a)anthracene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Benzo(a)pyrene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Chrysene	0.318 (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Fluoranthene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Fluorene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Naphthalene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Phenanthrene	ND (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111
Pyrene	0.360 (0.281)		8270D		1	02/22/23 2:52	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	85 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	83 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	91 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-205 - 2-4

Date Sampled: 02/16/23 14:30

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-13

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 4-6
Date Sampled: 02/16/23 14:30
Percent Solids: 76

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.83)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Arsenic	10.6 (2.92)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Barium	155 (2.92)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Beryllium	0.67 (0.13)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Cadmium	ND (0.58)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Chromium	10.4 (1.17)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Lead	1650 (5.83)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Mercury	0.654 (0.040)		7471B		1	YIV	02/23/23 11:25	0.66	40	DB32003
Nickel	16.8 (2.92)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Selenium	ND (5.83)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Silver	ND (0.58)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Thallium	ND (5.83)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Vanadium	38.2 (1.17)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002
Zinc	329 (2.92)		6010C		1	CEV	02/21/23 11:50	2.27	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 4-6
Date Sampled: 02/16/23 14:30
Percent Solids: 76
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Acenaphthene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Acenaphthylene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Anthracene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Benzo(a)anthracene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Benzo(a)pyrene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Chrysene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Fluoranthene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Fluorene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Naphthalene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Phenanthrene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111
Pyrene	ND (0.346)		8270D		1	02/22/23 3:22	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	84 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	82 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	92 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-205 - 4-6
Date Sampled: 02/16/23 14:30

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-14
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								
Dioxin	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 0-1
Date Sampled: 02/16/23 15:15
Percent Solids: 80

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.86)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Arsenic	5.03 (2.93)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Barium	104 (2.93)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Beryllium	0.39 (0.13)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Cadmium	ND (0.59)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Chromium	17.4 (1.17)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Lead	330 (5.86)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Mercury	0.088 (0.036)		7471B		1	YIV	02/23/23 11:27	0.69	40	DB32003
Nickel	16.4 (2.93)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Selenium	ND (5.86)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Silver	ND (0.59)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Thallium	ND (5.86)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Vanadium	24.3 (1.17)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002
Zinc	199 (2.93)		6010C		1	CEV	02/21/23 11:52	2.14	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 0-1
Date Sampled: 02/16/23 15:15
Percent Solids: 80
Initial Volume: 19.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Acenaphthene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Acenaphthylene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Anthracene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Benzo(a)anthracene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Benzo(a)pyrene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Benzo(b)fluoranthene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Benzo(g,h,i)perylene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Benzo(k)fluoranthene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Chrysene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Dibenzo(a,h)Anthracene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Fluoranthene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Fluorene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Naphthalene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Phenanthrene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111
Pyrene	ND (0.315)		8270D		1	02/22/23 3:52	D3B0372	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>83 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>88 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>86 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>92 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-206 - 0-1

Date Sampled: 02/16/23 15:15

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-15

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 2-4
Date Sampled: 02/16/23 15:15
Percent Solids: 84

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	6.85 (1.06)		6020A		1	BJV	02/23/23 17:24	2.24	100	DB32002
Arsenic	13.9 (2.65)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Barium	85.9 (2.65)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Beryllium	0.33 (0.12)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Cadmium	ND (0.53)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Chromium	16.0 (2.12)		6010C		2	CEV	02/22/23 16:31	2.24	100	DB32002
Lead	319 (10.6)		6010C		2	CEV	02/22/23 16:31	2.24	100	DB32002
Mercury	0.223 (0.039)		7471B		1	YIV	02/23/23 11:29	0.6	40	DB32003
Nickel	37.4 (2.65)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Selenium	ND (1.06)		6020A		1	BJV	02/23/23 17:24	2.24	100	DB32002
Silver	EL ND (1.06)		6010C		2	CEV	02/22/23 16:31	2.24	100	DB32002
Thallium	ND (5.30)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Vanadium	21.5 (1.06)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002
Zinc	341 (2.65)		6010C		1	CEV	02/21/23 11:54	2.24	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 2-4
Date Sampled: 02/16/23 15:15
Percent Solids: 84
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Acenaphthene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Acenaphthylene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Anthracene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Benzo(a)anthracene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Benzo(a)pyrene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Benzo(b)fluoranthene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Benzo(g,h,i)perylene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Benzo(k)fluoranthene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Chrysene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Dibenzo(a,h)Anthracene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Fluoranthene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Fluorene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Naphthalene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Phenanthrene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111
Pyrene	ND (0.284)		8270D		1	02/21/23 23:09	D3B0383	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	84 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	79 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	97 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-206 - 2-4

Date Sampled: 02/16/23 15:15

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-16

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 4-5
Date Sampled: 02/16/23 15:15
Percent Solids: 91

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-17
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (4.98)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Arsenic	ND (2.49)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Barium	57.2 (2.49)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Beryllium	0.34 (0.11)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Cadmium	ND (0.50)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Chromium	12.0 (1.00)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Lead	EL ND (9.97)		6010C		2	CEV	02/22/23 16:33	2.21	100	DB32002
Mercury	0.034 (0.034)		7471B		1	YIV	02/23/23 11:31	0.64	40	DB32003
Nickel	8.75 (2.49)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Selenium	ND (4.98)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Silver	ND (0.50)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Thallium	ND (4.98)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Vanadium	21.7 (1.00)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002
Zinc	24.9 (2.49)		6010C		1	CEV	02/21/23 11:57	2.21	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 4-5
Date Sampled: 02/16/23 15:15
Percent Solids: 91
Initial Volume: 20.9g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Acenaphthene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Acenaphthylene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Anthracene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Benzo(a)anthracene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Benzo(a)pyrene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Benzo(b)fluoranthene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Benzo(g,h,i)perylene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Benzo(k)fluoranthene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Chrysene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Dibenzo(a,h)Anthracene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Fluoranthene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Fluorene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Indeno(1,2,3-cd)Pyrene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Naphthalene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Phenanthrene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111
Pyrene	ND (0.263)		8270D		1	02/21/23 23:40	D3B0383	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>85 %</i>		<i>30-130</i>
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>85 %</i>		<i>30-130</i>
<i>Surrogate: Nitrobenzene-d5</i>	<i>83 %</i>		<i>30-130</i>
<i>Surrogate: p-Terphenyl-d14</i>	<i>98 %</i>		<i>30-130</i>



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-206 - 4-5
Date Sampled: 02/16/23 15:15

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-17
Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-207F - 4-6
Date Sampled: 02/16/23 15:30
Percent Solids: 86

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (5.62)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Arsenic	8.13 (2.81)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Barium	287 (2.81)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Beryllium	0.33 (0.12)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Cadmium	1.85 (0.56)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Chromium	20.2 (1.12)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Lead	455 (5.62)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Mercury	0.406 (0.033)		7471B		1	YIV	02/23/23 11:33	0.69	40	DB32003
Nickel	23.6 (2.81)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Selenium	ND (5.62)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Silver	ND (0.56)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Thallium	ND (5.62)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Vanadium	18.9 (1.12)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002
Zinc	926 (2.81)		6010C		1	CEV	02/21/23 11:59	2.06	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: B-207F - 4-6
Date Sampled: 02/16/23 15:30
Percent Solids: 86
Initial Volume: 20.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Acenaphthene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Acenaphthylene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Anthracene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Benzo(a)anthracene	0.911 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Benzo(a)pyrene	0.830 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Benzo(b)fluoranthene	0.802 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Benzo(g,h,i)perylene	0.428 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Benzo(k)fluoranthene	0.486 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Chrysene	0.922 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Dibenzo(a,h)Anthracene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Fluoranthene	1.56 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Fluorene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Indeno(1,2,3-cd)Pyrene	0.492 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Naphthalene	ND (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Phenanthrene	0.956 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111
Pyrene	1.59 (0.278)		8270D		1	02/22/23 0:11	D3B0383	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichlorobenzene-d4	87 %		30-130
Surrogate: 2-Fluorobiphenyl	85 %		30-130
Surrogate: Nitrobenzene-d5	81 %		30-130
Surrogate: p-Terphenyl-d14	91 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: B-207F - 4-6

Date Sampled: 02/16/23 15:30

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-18

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: CF-STOCKPILE
Date Sampled: 02/16/23 14:00
Percent Solids: 76

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-19
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Antimony	ND (6.40)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Arsenic	4.97 (3.20)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Barium	88.7 (3.20)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Beryllium	0.26 (0.14)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Cadmium	0.70 (0.64)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Chromium	14.0 (1.28)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Lead	206 (6.40)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Mercury	0.433 (0.043)		7471B		1	YIV	02/23/23 11:35	0.61	40	DB32003
Nickel	9.97 (3.20)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Selenium	ND (6.40)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Silver	ND (0.64)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Thallium	ND (6.40)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Vanadium	17.2 (1.28)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002
Zinc	199 (3.20)		6010C		1	CEV	02/21/23 12:01	2.06	100	DB32002



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field
Client Sample ID: CF-STOCKPILE
Date Sampled: 02/16/23 14:00
Percent Solids: 76
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 23B0634
ESS Laboratory Sample ID: 23B0634-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 2/21/23 12:35

8270D Polynuclear Aromatic Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
2-Methylnaphthalene	ND (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Acenaphthene	ND (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Acenaphthylene	1.46 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Anthracene	0.891 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Benzo(a)anthracene	2.36 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Benzo(a)pyrene	2.19 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Benzo(b)fluoranthene	1.85 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Benzo(g,h,i)perylene	1.32 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Benzo(k)fluoranthene	1.40 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Chrysene	2.69 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Dibenzo(a,h)Anthracene	0.412 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Fluoranthene	3.92 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Fluorene	0.487 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Indeno(1,2,3-cd)Pyrene	1.42 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Naphthalene	ND (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Phenanthrene	4.14 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111
Pyrene	4.57 (0.338)		8270D		1	02/22/23 22:55	D3B0410	DB32111

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: 1,2-Dichlorobenzene-d4	80 %		30-130
Surrogate: 2-Fluorobiphenyl	73 %		30-130
Surrogate: Nitrobenzene-d5	80 %		30-130
Surrogate: p-Terphenyl-d14	90 %		30-130



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.

Client Project ID: Claxton Field

Client Sample ID: CF-STOCKPILE

Date Sampled: 02/16/23 14:00

ESS Laboratory Work Order: 23B0634

ESS Laboratory Sample ID: 23B0634-19

Sample Matrix: Soil

Subcontracted Analysis

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Units</u>	<u>Batch</u>
Asbestos	See Attached (N/A)								



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DB32002 - 3050B

Blank

Antimony	ND	4.88	mg/kg wet
Arsenic	ND	2.44	mg/kg wet
Barium	ND	2.44	mg/kg wet
Beryllium	ND	0.11	mg/kg wet
Cadmium	ND	0.49	mg/kg wet
Chromium	ND	0.98	mg/kg wet
Lead	ND	4.88	mg/kg wet
Nickel	ND	2.44	mg/kg wet
Selenium	ND	4.88	mg/kg wet
Silver	ND	0.49	mg/kg wet
Thallium	ND	4.88	mg/kg wet
Vanadium	ND	0.98	mg/kg wet
Zinc	ND	2.44	mg/kg wet

Blank

Antimony	ND	0.98	mg/kg wet
Selenium	ND	0.98	mg/kg wet
Thallium	ND	0.49	mg/kg wet

LCS

Antimony	63.1	15.6	mg/kg wet	59.10	107	80-120
Arsenic	61.0	7.81	mg/kg wet	65.20	94	80-120
Barium	642	7.81	mg/kg wet	626.0	103	80-120
Beryllium	61.4	0.34	mg/kg wet	72.20	85	80-120
Cadmium	98.9	1.56	mg/kg wet	118.0	84	80-120
Chromium	136	3.12	mg/kg wet	159.0	86	80-120
Lead	203	15.6	mg/kg wet	230.0	88	80-120
Nickel	160	7.81	mg/kg wet	183.0	88	80-120
Selenium	46.4	15.6	mg/kg wet	55.70	83	80-120
Silver	42.7	1.56	mg/kg wet	46.20	92	80-120
Thallium	73.9	15.6	mg/kg wet	83.30	89	80-120
Vanadium	81.7	3.12	mg/kg wet	94.80	86	80-120
Zinc	308	7.81	mg/kg wet	375.0	82	80-120

LCS

Antimony	69.0	15.6	mg/kg wet	59.10	117	80-120
Selenium	48.0	15.6	mg/kg wet	55.70	86	80-120
Thallium	64.7	7.81	mg/kg wet	83.30	78	65-134

LCS Dup

Antimony	60.5	15.2	mg/kg wet	59.10	102	80-120	4	30	
Arsenic	56.0	7.58	mg/kg wet	65.20	86	80-120	9	30	
Barium	623	7.58	mg/kg wet	626.0	99	80-120	3	30	
Beryllium	57.6	0.33	mg/kg wet	72.20	80	80-120	6	20	
Cadmium	92.8	1.52	mg/kg wet	118.0	79	80-120	6	30	B-
Chromium	127	3.03	mg/kg wet	159.0	80	80-120	7	30	
Lead	189	15.2	mg/kg wet	230.0	82	80-120	7	20	



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DB32002 - 3050B

Nickel	150	7.58	mg/kg wet	183.0		82	80-120	7	30	
Selenium	44.1	15.2	mg/kg wet	55.70		79	80-120	5	30	B-
Silver	40.1	1.52	mg/kg wet	46.20		87	80-120	6	30	
Thallium	67.9	15.2	mg/kg wet	83.30		82	80-120	9	30	
Vanadium	76.7	3.03	mg/kg wet	94.80		81	80-120	6	30	
Zinc	290	7.58	mg/kg wet	375.0		77	80-120	6	30	B-

LCS Dup

Antimony	65.3	15.2	mg/kg wet	59.10		111	80-120	5	30	
Selenium	45.5	15.2	mg/kg wet	55.70		82	80-120	5	30	
Thallium	60.8	7.58	mg/kg wet	83.30		73	65-134	6	30	

Batch DB32003 - 7471A

Blank

Mercury	ND	0.029	mg/kg wet							
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LCS

Mercury	16.2	3.30	mg/kg wet	18.20		89	80-120			
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LCS Dup

Mercury	16.3	3.30	mg/kg wet	18.20		90	80-120	1	30	
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8270D Polynuclear Aromatic Hydrocarbons

Batch DB32111 - 3546

Blank

2-Methylnaphthalene	ND	0.250	mg/kg wet							
Acenaphthene	ND	0.250	mg/kg wet							
Acenaphthylene	ND	0.250	mg/kg wet							
Anthracene	ND	0.250	mg/kg wet							
Benzo(a)anthracene	ND	0.250	mg/kg wet							
Benzo(a)pyrene	ND	0.250	mg/kg wet							
Benzo(b)fluoranthene	ND	0.250	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.250	mg/kg wet							
Benzo(k)fluoranthene	ND	0.250	mg/kg wet							
Chrysene	ND	0.250	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.250	mg/kg wet							
Fluoranthene	ND	0.250	mg/kg wet							
Fluorene	ND	0.250	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.250	mg/kg wet							
Naphthalene	ND	0.250	mg/kg wet							
Phenanthrene	ND	0.250	mg/kg wet							
Pyrene	ND	0.250	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	2.35		mg/kg wet	2.500		94	30-130			
Surrogate: 2-Fluorobiphenyl	2.33		mg/kg wet	2.500		93	30-130			
Surrogate: Nitrobenzene-d5	2.35		mg/kg wet	2.500		94	30-130			
Surrogate: p-Terphenyl-d14	2.41		mg/kg wet	2.500		96	30-130			

LCS



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8270D Polynuclear Aromatic Hydrocarbons

Batch DB32111 - 3546

2-Methylnaphthalene	2.34	0.250	mg/kg wet	2.500		93	40-140			
Acenaphthene	2.21	0.250	mg/kg wet	2.500		88	40-140			
Acenaphthylene	1.68	0.250	mg/kg wet	2.500		67	40-140			
Anthracene	2.18	0.250	mg/kg wet	2.500		87	40-140			
Benzo(a)anthracene	2.34	0.250	mg/kg wet	2.500		94	40-140			
Benzo(a)pyrene	2.30	0.250	mg/kg wet	2.500		92	40-140			
Benzo(b)fluoranthene	2.32	0.250	mg/kg wet	2.500		93	40-140			
Benzo(g,h,i)perylene	2.46	0.250	mg/kg wet	2.500		98	40-140			
Benzo(k)fluoranthene	2.51	0.250	mg/kg wet	2.500		100	40-140			
Chrysene	2.35	0.250	mg/kg wet	2.500		94	40-140			
Dibenzo(a,h)Anthracene	2.47	0.250	mg/kg wet	2.500		99	40-140			
Fluoranthene	2.50	0.250	mg/kg wet	2.500		100	40-140			
Fluorene	2.39	0.250	mg/kg wet	2.500		96	40-140			
Indeno(1,2,3-cd)Pyrene	2.33	0.250	mg/kg wet	2.500		93	40-140			
Naphthalene	2.29	0.250	mg/kg wet	2.500		91	40-140			
Phenanthrene	2.25	0.250	mg/kg wet	2.500		90	40-140			
Pyrene	2.35	0.250	mg/kg wet	2.500		94	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	2.46		mg/kg wet	2.500		98	30-130			
Surrogate: 2-Fluorobiphenyl	2.40		mg/kg wet	2.500		96	30-130			
Surrogate: Nitrobenzene-d5	2.46		mg/kg wet	2.500		98	30-130			
Surrogate: p-Terphenyl-d14	2.44		mg/kg wet	2.500		98	30-130			

LCS Dup

2-Methylnaphthalene	2.29	0.250	mg/kg wet	2.500		92	40-140	2	30	
Acenaphthene	2.20	0.250	mg/kg wet	2.500		88	40-140	0.3	30	
Acenaphthylene	1.63	0.250	mg/kg wet	2.500		65	40-140	3	30	
Anthracene	2.15	0.250	mg/kg wet	2.500		86	40-140	1	30	
Benzo(a)anthracene	2.34	0.250	mg/kg wet	2.500		94	40-140	0.04	30	
Benzo(a)pyrene	2.26	0.250	mg/kg wet	2.500		90	40-140	2	30	
Benzo(b)fluoranthene	2.28	0.250	mg/kg wet	2.500		91	40-140	2	30	
Benzo(g,h,i)perylene	2.49	0.250	mg/kg wet	2.500		99	40-140	1	30	
Benzo(k)fluoranthene	2.49	0.250	mg/kg wet	2.500		100	40-140	0.7	30	
Chrysene	2.32	0.250	mg/kg wet	2.500		93	40-140	1	30	
Dibenzo(a,h)Anthracene	2.46	0.250	mg/kg wet	2.500		98	40-140	0.5	30	
Fluoranthene	2.50	0.250	mg/kg wet	2.500		100	40-140	0.004	30	
Fluorene	2.34	0.250	mg/kg wet	2.500		94	40-140	2	30	
Indeno(1,2,3-cd)Pyrene	2.33	0.250	mg/kg wet	2.500		93	40-140	0.1	30	
Naphthalene	2.26	0.250	mg/kg wet	2.500		90	40-140	1	30	
Phenanthrene	2.25	0.250	mg/kg wet	2.500		90	40-140	0.09	30	
Pyrene	2.29	0.250	mg/kg wet	2.500		92	40-140	2	30	
Surrogate: 1,2-Dichlorobenzene-d4	2.46		mg/kg wet	2.500		98	30-130			
Surrogate: 2-Fluorobiphenyl	2.46		mg/kg wet	2.500		98	30-130			
Surrogate: Nitrobenzene-d5	2.55		mg/kg wet	2.500		102	30-130			
Surrogate: p-Terphenyl-d14	2.49		mg/kg wet	2.500		100	30-130			



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

Notes and Definitions

Z-08	See Attached
U	Analyte included in the analysis, but not detected
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Weston and Sampson Engineers, Inc.
Client Project ID: Claxton Field

ESS Laboratory Work Order: 23B0634

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

Shawn Morrell
ESS Laboratory
185 Frances Ave.
Cranston, RI 02910

February 24, 2023

Dear Shawn Morrell,

The enclosed analytical results have been obtained using the EPA/600/R-93/116 method. Calibrated Visual Estimate (CVE) is used by Aerobiology for the determination of the percentage of asbestos and other components in the sample. The sample preparation technique used was in accordance with the US EPA office of Environmental Evaluation and Measurement - Region 1 requirements. This technique involves the elimination of interfering particles through the following steps: homogenization of the sample; separation of different fractions and examination under the stereomicroscope.

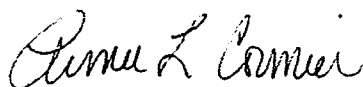
The quality control data related to the samples analyzed is available upon client's written request. Aerobiology Laboratory Associates, Inc., assumes no responsibility for potential sample contamination that may have occurred during the sample collection process or erroneous data provided by the client. As such, these results apply to the sample(s) as received.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

All Laboratory records are retained for at least three years unless otherwise directed in writing by the client. The actual samples are retained for a period of two months and written request is necessary in order to be retained for a longer period of time. All analytical results and records are considered strictly confidential and will not be released under any circumstances to anyone except the actual client. The analytical results included in this report apply only to the items tested. This report may not be reproduced, except in its entirety, without the permission of Aerobiology Laboratory Associates, Inc., Laboratory Manager.

If you have any questions please contact the Optical Manager or the Laboratory Manager.

Sincerely,



Aimee Cormier, Laboratory Manager

Enclosure:

LAB BATCH ID: S 132432 CLIENT PROJECT ID: 23B0634

Client Ref: N/A

CT ID# PH-0209; MA ID# AA000251; ME ID# LB-055; NVLAP Lab Code 200090-0; RI ID # PLM-00150; VT ID# AL254362.

Aerobiology Laboratory Associates, Inc.

Client #: 2118
 Client Project: 23B0634
 Client Reference: N/A
 Client Name: ESS Laboratory
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

Batch: S 132432
 Date Sampled: N/A
 Date Received: 2/22/2023
 Date Analyzed: 2/24/2023
 Date of Report: 2/24/2023

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-01	Multi	0	0	0	0	0	0	0	0	5	0	0	0	95

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-02	Multi	0	0	0	0	0	0	0	0	5	0	0	0	95

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-03	Multi	0	0	0	0	0	0	2	0	5	0	0	0	93

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-04	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-05	Multi	0	0	0	0	0	0	2	0	5	0	0	0	93

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-06	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Aerobiology Laboratory Associates, Inc.

Client #: 2118
 Client Project: 23B0634
 Client Reference: N/A
 Client Name: ESS Laboratory
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

Batch: S 132432
 Date Sampled: N/A
 Date Received: 2/22/2023
 Date Analyzed: 2/24/2023
 Date of Report: 2/24/2023

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-07	Multi	0	0	0	0	0	0	0	0	15	0	0	0	85
Description: Soil Location: N/A Comments:														Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-08	Multi	0	0	0	0	0	0	0	0	2	0	0	2	96
Description: Soil Location: N/A Comments:														Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-09	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98
Description: Soil Location: N/A Comments:														Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-10	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98
Description: Soil Location: N/A Comments:														Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-11	Multi	0	0	0	0	0	0	0	0	3	0	0	0	97
Description: Soil Location: N/A Comments:														Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-12	Multi	0	0	0	0	0	0	0	0	5	0	0	0	95
Description: Soil Location: N/A Comments:														Analyzed: Yes

Aerobiology Laboratory Associates, Inc.

Client #: 2118
 Client Project: 23B0634
 Client Reference: N/A
 Client Name: ESS Laboratory
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

Batch: S 132432
 Date Sampled: N/A
 Date Received: 2/22/2023
 Date Analyzed: 2/24/2023
 Date of Report: 2/24/2023

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-13	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-14	Multi	0	0	0	0	0	0	2	0	2	0	0	0	96

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-15	Multi	0	0	0	0	0	0	0	0	7	0	0	0	93

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-16	Multi	0	0	0	0	0	0	0	0	2	0	0	0	98

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-17	Multi	0	0	0	0	0	0	0	0	<1	0	0	0	100

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-18	Multi	0	0	0	0	0	0	0	0	5	0	0	0	95

Description: Soil

Location: N/A

Comments:

Analyzed: Yes

Aerobiology Laboratory Associates, Inc.

Client #: 2118
 Client Project: 23B0634
 Client Reference: N/A
 Client Name: ESS Laboratory
 Method: EPA/600/R-93/116; ENV.EVAL. and MEAS.- REGION 1 Requirements

Batch: S 132432
 Date Sampled: N/A
 Date Received: 2/22/2023
 Date Analyzed: 2/24/2023
 Date of Report: 2/24/2023

Sample ID	Color	ASBESTOS %						NON-ASBESTOS %						
		CHR	AMO	CRO	ACT	TRE	ANT	FBG	MNW	CEL	HAR	SYN	OTH	NON
23B0634-19	Multi	0	0	0	0	0	0	0	0	15	0	0	0	85
Description: Soil Location: N/A Comments: Analyzed: Yes														

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite

Non-Asbestos Codes: FBG = Fiberglass MNW = Mineral Wool CEL = Cellulose HAR = Hair SYN = Synthetic OTH = Other NON = Non-Fibrous Minerals

Note: To create a unique lab sample ID, use the Batch # and the Sample ID (example: [Batch #] - [Sample ID]).

* All results are in percentage


 Brian Shea, Analyst

Client Name: ESS Laboratory

Client Project #: 23B0634

Client Reference: N/A

Batch: S 132432

Date Received: 2/22/2023

Date Due: 2/24/2023

Stop on first pos: Yes or No

Batch: S 132432

Batch: 132432		Stereo Scope					Optical Properties					RI	Asbestos Percent							Non-Asbestos Percent							
Sample ID	Description	Analyst	SSAPE	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
23B0634-01	Soil	BS	0	M	N	M	Y															W					
23B0634-02	Soil		0	M	N	M	Y																5				95
23B0634-03	Soil		0	M	N	M	Y																W				95
23B0634-04	Soil		0	M	N	M	Y															NL	W				93
23B0634-05	Soil		0	M	N	M	Y															2	5				98
23B0634-06	Soil		0	M	N	M	Y															NL	W				93
23B0634-07	Soil		0	M	N	M	Y															2	5				98
23B0634-08	Soil		0	M	N	M	Y																W				85
			0	M	N	M	Y															W			NL		296

Comments:

Batch: S132432

Batch: 132432		Stereo Scope					Optical Properties					RI		Asbestos Percent					Non-Asbestos Percent								
Sample ID	Description	Analysis	SSAPE	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
23B0634-09	Soil	BS	0	M	N	M	Y															W	2			98	
23B0634-10	Soil		0	M	N	M	Y															W	2			98	
23B0634-11	Soil		0	M	N	M	Y															W	3			98 ^{BS} 97	
23B0634-12	Soil		0	M	N	M	Y															W	5			95	
23B0634-13	Soil		0	M	N	M	Y																W	2			98
23B0634-14	Soil		0	M	N	M	Y															W	2			96	
23B0634-15	Soil		0	M	N	M	Y															W	7			93.	
23B0634-16	Soil		0	M	N	M	Y															W	2			98	
23B0634-17	Soil		0	M	N	M	Y															W	4			100	
23B0634-18	Soil		0	M	N	M	Y															W	5			95	

Comments:

Batch: *S*132432

Batch: 132432		Stereo Scope					Optical Properties					RI		Asbestos Percent					Non-Asbestos Percent									
Sample ID	Description	Analyst	SSAPE	Color	Homogeneity	Texture	Friable	Morphology	Extinction	Elongation	Sign of	Birefringence	Pleochroism	Parallel	Perpendicular	Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
23B0634-19	Soil	BS		M	C	N	M	Y															W					
																							15					

Analyzed By / Date:

Brian
02/24/22

QC By / Date:

gjp
2/24/22

Fax, Email, Verbal Results By / Date:

of Samples:

19

Comments:



SUBCONTRACT ORDER

5132432

23B0634

SENDING LABORATORY:

ESS Laboratory
185 Frances Avenue
Cranston, RI 02910
Phone: (401) 461-7181
Fax: (401) 461-4486
Project Name: 23B0634

RECEIVING LABORATORY:

Aerobiology Boston
22 Cummings Park
Woburn, MA 01801
Phone: (781) 935-3212
Fax: (781) 392-4857

☐ These samples require MCL exceedance reporting

Sample ID: 23B0634-01	Matrix: Soil	Sampled: 02/16/23 10:45
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-02	Matrix: Soil	Sampled: 02/16/23 10:45
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-03	Matrix: Soil	Sampled: 02/16/23 10:45
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-04	Matrix: Soil	Sampled: 02/16/23 10:15
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-05	Matrix: Soil	Sampled: 02/16/23 10:15
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Released By	Date	Received By	Date
		<i>Doreen Dunsen</i>	2/22/23 1:18
Released By	Date	Received By	Date



SUBCONTRACT ORDER

5132 432

23B0634

Sample ID: 23B0634-06	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-07	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-08	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-09	Matrix: Soil	Sampled: 02/16/23 12:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-10	Matrix: Soil	Sampled: 02/16/23 12:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-11	Matrix: Soil	Sampled: 02/16/23 12:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Released By	Date	Received By	Date
Released By	Date	Received By	Date



SUBCONTRACT ORDER

23B0634

5132432

Sample ID: 23B0634-12	Matrix: Soil	Sampled: 02/16/23 14:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-13	Matrix: Soil	Sampled: 02/16/23 14:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-14	Matrix: Soil	Sampled: 02/16/23 14:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-15	Matrix: Soil	Sampled: 02/16/23 15:15
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-16	Matrix: Soil	Sampled: 02/16/23 15:15
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-17	Matrix: Soil	Sampled: 02/16/23 15:15
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Released By	Date	Received By	Date
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Released By	Date	Received By	Date
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SUBCONTRACT ORDER

S132432

23B0634

Sample ID: 23B0634-18	Matrix: Soil	Sampled: 02/16/23 15:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Sample ID: 23B0634-19	Matrix: Soil	Sampled: 02/16/23 14:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Asbestos	2/24/2023	2/17/2023

Released By	Date	Received By	Date
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Released By	Date	Received By	Date
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Report Prepared for:

Shawn Morrell
ESS Laboratory
185 Frances Avenue
Cranston RI 02910-2211

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Prepared Date:

March 10, 2023

Report Information:

Pace Project #: 10643743
Sample Receipt Date: 02/22/2023
Client Project #: 23B0634
Client Sub PO #: B03045
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Joanne Richardson, your Pace Project Manager.

This report has been reviewed by:



March 10, 2023

Joanne Richardson,
(612) 607-6453
(612) 607-6444 (fax)



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.



DISCUSSION

This report presents the results from the analyses performed on nine samples submitted by a representative of ESS Laboratory. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

Second column confirmation analyses of 2,3,7,8-TCDF values obtained from the primary (DB5-MS) column are performed only when specifically requested for a project and only when the values are above the concentration of the lowest calibration standard. Typical resolution for this isomer using the DB5-MS column ranges from 25-30%.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 52-115%. All of the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained or "P" where polychlorinated diphenyl ethers were present. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain a trace level of Total HpCDD. This level was below the calibration range for the method. The Total HpCDD concentrations reported for the field samples were higher than the corresponding blank level by one or more orders of magnitude.

A laboratory spike sample was also prepared using clean reference matrix that had been fortified with native standard materials. The recoveries of the native compounds ranged from 95-125%. These results were within the target range for the method. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

The responses obtained for selected labeled congeners in calibration standard analyses L230301B_17 and L230303A_13 were outside the target ranges. As specified in our procedures for this method, the averages of the daily response factors for these compounds were used in the calculations for the samples from these runshifts. The affected values were flagged "Y" on the results tables.

REPORT OF LABORATORY ANALYSIS

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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon-Primary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

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Report No.....2



Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

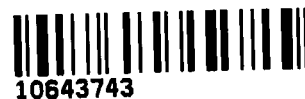
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SUBCONTRACT ORDER

WO#: 10643743

23B0634



10643743

SENDING LABORATORY:

ESS Laboratory
185 Frances Avenue
Cranston, RI 02910
Phone: (401) 461-7181
Fax: (401) 461-4486
Project Name: 23B0634

RECEIVING LABORATORY:

Pace Analytical
1700 Elm Street
Minneapolis, MN 55414
Phone: (612) 607-1700
Fax: (612) 607-6444

☐ These samples require MCL exceedance reporting

Sample ID: 23B0634-06

Matrix: Soil

Sampled: 02/16/23 13:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-07

Matrix: Soil

Sampled: 02/16/23 13:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-08

Matrix: Soil

Sampled: 02/16/23 13:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-09

Matrix: Soil

Sampled: 02/16/23 12:00

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-10

Matrix: Soil

Sampled: 02/16/23 12:00

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Released By

Date

Received By

Date

Released By

Date

Received By

Date



SUBCONTRACT ORDER

23B0634

Sample ID: 23B0634-11

Matrix: Soil

Sampled: 02/16/23 12:00

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-12

Matrix: Soil

Sampled: 02/16/23 14:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-13

Matrix: Soil

Sampled: 02/16/23 14:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Sample ID: 23B0634-14

Matrix: Soil

Sampled: 02/16/23 14:30

DEP Location Name: N/A

DEP Sample Type: N/A

DEP Location ID#: N/A

Sampled By: N/A

Analysis

Due

Expires

Released By

Date

Received By

Date

Released By

Date

Received By

Date



SUBCONTRACT ORDER

23B0634

SENDING LABORATORY:

ESS Laboratory
185 Frances Avenue
Cranston, RI 02910
Phone: (401) 461-7181
Fax: (401) 461-4486
Project Name: 23B0634

RECEIVING LABORATORY:

Pace Analytical
1700 Elm Street
Minneapolis, MN 55414
Phone : (612) 607-1700
Fax: (612) 607-6444

☐ **These samples require MCL exceedance reporting**

Sample ID: 23B0634-06	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-07	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-08	Matrix: Soil	Sampled: 02/16/23 13:30
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-09	Matrix: Soil	Sampled: 02/16/23 12:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-10	Matrix: Soil	Sampled: 02/16/23 12:00
DEP Location Name: N/A	DEP Sample Type: N/A	
DEP Location ID#: N/A	Sampled By: N/A	
Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Released By	Date	Received By	Date
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Released By	Date	Received By	Date
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SUBCONTRACT ORDER

23B0634

Sample ID: 23B0634-11 **Matrix: Soil** **Sampled: 02/16/23 12:00**

DEP Location Name: N/A **DEP Sample Type: N/A**

DEP Location ID#: N/A **Sampled By: N/A**

Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-12 **Matrix: Soil** **Sampled: 02/16/23 14:30**

DEP Location Name: N/A **DEP Sample Type: N/A**

DEP Location ID#: N/A **Sampled By: N/A**

Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-13 **Matrix: Soil** **Sampled: 02/16/23 14:30**

DEP Location Name: N/A **DEP Sample Type: N/A**

DEP Location ID#: N/A **Sampled By: N/A**

Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Sample ID: 23B0634-14 **Matrix: Soil** **Sampled: 02/16/23 14:30**

DEP Location Name: N/A **DEP Sample Type: N/A**

DEP Location ID#: N/A **Sampled By: N/A**

Analysis	Due	Expires
SUB: Dioxin	2/24/2023	2/17/2023

Released By	Date	Received By	Date
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Released By	Date	Received By	Date
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DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: 10643743

No Temp Blank		
Read Temp	Corrected Temp	Average temp
5.5	5.8	4.9
5.5	5.8	
3.8	4.1	
3.5	3.8	

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.
If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section **HERE**



Tracking Number	Temperature



Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

DC#_Title: Excel Form Template

Effective Date:

Sample Condition Upon Receipt	Client Name: <u>ESS Laboratory</u>	Project #: <u>W0# : 10643743</u>	PM: JMR Due Date: 03/15/23 CLIENT: ESS LAB
----------------------------------	------------------------------------	----------------------------------	--

Courier: ☐ FedEx ☒ UPS ☐ USPS ☐ Client
☐ Pace ☐ Speedee ☐ Commercial

Tracking Number: 1Z 037 497 01 7208 7788 ☐ See Exceptions
 ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
 Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other Temp Blank? ☐ Yes ☒ No
 Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178) Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None
☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☒ T9 (0727) ☐ 01339252/1710 ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☐ No	Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: _____ °C	Average Corrected Temp (no temp blank only): _____ °C
Correction Factor: <u>40.3</u> Cooler Temp Corrected w/temp blank: _____ °C	☒ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☐ N/A, water sample/other: _____)

Date/Initials of Person Examining Contents: HB 2/22/23

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork..

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out? ☒ Yes ☐ No	1.
Chain of Custody Relinquished? ☒ Yes ☐ No	2.
Sampler Name and/or Signature on COC? ☐ Yes ☒ No ☐ N/A	3.
Samples Arrived within Hold Time? ☒ Yes ☐ No	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested? ☐ Yes ☒ No	6.
Sufficient Sample Volume? ☒ Yes ☐ No	7.
Correct Containers Used? ☒ Yes ☐ No ☐ N/A	8.
-Pace Containers Used? ☐ Yes ☒ No	9.
Containers Intact? ☒ Yes ☐ No	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	12. Sample # ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? ☐ Yes ☐ No ☒ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS ☐ Yes ☐ No ☒ N/A (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	15. Pace Trip Blank Lot # (if purchased): _____
Headspace in Methyl Mercury Container? ☐ Yes ☐ No ☒ N/A	
Extra labels present on soil VOA or WIDRO containers? ☐ Yes ☐ No ☒ N/A	
Headspace in VOA Vials (greater than 6mm)? ☐ Yes ☐ No ☒ N/A	
3 Trip Blanks Present? ☐ Yes ☐ No ☒ N/A	
Trip Blank Custody Seals Present? ☐ Yes ☐ No ☒ N/A	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Joanne Richardson Date: 2-22-23

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: RWT Line 1



Pace Analytical Services, LLC
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Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- H2 = Extracted outside of holding time
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
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Minneapolis, MN 55414
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Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-06		
Lab Sample ID	10643743001		
Filename	L230303A_03		
Injected By	SMT		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	26.9	Dilution	NA
Dry Weight Extracted	7.59 g	Collected	02/16/2023 13:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 06:29

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.99	----	0.39 J		2,3,7,8-TCDF-13C	2.00	78
Total TCDF	12	----	0.39		2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	83
2,3,7,8-TCDD	-----	0.54	0.16 IJ		2,3,4,7,8-PeCDF-13C	2.00	87
Total TCDD	5.8	----	0.16		1,2,3,7,8-PeCDD-13C	2.00	90
					1,2,3,4,7,8-HxCDF-13C	2.00	87
1,2,3,7,8-PeCDF	1.3	----	0.13 J		1,2,3,6,7,8-HxCDF-13C	2.00	83
2,3,4,7,8-PeCDF	2.1	----	0.094 J		2,3,4,6,7,8-HxCDF-13C	2.00	83
Total PeCDF	28	----	0.094		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	4.8	----	0.21 J		1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	16	----	0.21		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	3.8	----	0.11 J		1,2,3,4,6,7,8-HpCDD-13C	2.00	76
1,2,3,6,7,8-HxCDF	4.1	----	0.089 J		OCDD-13C	4.00	77 Y
2,3,4,6,7,8-HxCDF	2.2	----	0.045 J				
1,2,3,7,8,9-HxCDF	0.77	----	0.25 J		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	54	----	0.045		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	5.5	----	0.19 J		2,3,7,8-TCDD-37Cl4	0.20	60
1,2,3,6,7,8-HxCDD	9.3	----	0.078				
1,2,3,7,8,9-HxCDD	9.0	----	0.14				
Total HxCDD	74	----	0.078				
1,2,3,4,6,7,8-HpCDF	25	----	0.20		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	1.6	0.23 IJ		Equivalence: 30 ng/Kg		
Total HpCDF	60	----	0.20		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	120	----	0.16				
Total HpCDD	310	----	0.16				
OCDF	45	----	0.14				
OCDD	1600	----	0.47				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Isotope ratio out of specification

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-07		
Lab Sample ID	10643743002		
Filename	L230303A_04		
Injected By	SMT		
Total Amount Extracted	10.3 g	Matrix	Solid
% Moisture	20.2	Dilution	NA
Dry Weight Extracted	8.18 g	Collected	02/16/2023 13:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 07:14

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	1.9	----	0.058		2,3,7,8-TCDF-13C	2.00	85
Total TCDF	33	----	0.058		2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	0.46	----	0.084	J	2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	13	----	0.084		1,2,3,7,8-PeCDD-13C	2.00	94
					1,2,3,4,7,8-HxCDF-13C	2.00	95
1,2,3,7,8-PeCDF	1.6	----	0.39	J	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	2.7	----	0.19	J	2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF	29	----	0.19		1,2,3,7,8,9-HxCDF-13C	2.00	79
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	2.0	----	0.072	J	1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	16	----	0.072		1,2,3,4,6,7,8-HpCDF-13C	2.00	55
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	2.2	----	0.087	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	80
1,2,3,6,7,8-HxCDF	1.2	----	0.12	J	OCDD-13C	4.00	84 Y
2,3,4,6,7,8-HxCDF	2.4	----	0.097	J			
1,2,3,7,8,9-HxCDF	0.92	----	0.097	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	53	----	0.087		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	2.6	----	0.45	J	2,3,7,8-TCDD-37Cl4	0.20	68
1,2,3,6,7,8-HxCDD	17	----	0.31				
1,2,3,7,8,9-HxCDD	8.2	----	0.46				
Total HxCDD	120	----	0.31				
1,2,3,4,6,7,8-HpCDF	39	----	0.18		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.8	----	0.29	J	Equivalence: 74 ng/Kg		
Total HpCDF	180	----	0.18		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	500	----	0.59				
Total HpCDD	940	----	0.59				
OCDF	83	----	0.35				
OCDD	3700	----	0.57				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

Y = Calculated using average of daily RfCs

REPORT OF LABORATORY ANALYSIS

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-08		
Lab Sample ID	10643743003		
Filename	L230303A_05		
Injected By	SMT		
Total Amount Extracted	10.6 g	Matrix	Solid
% Moisture	23.6	Dilution	NA
Dry Weight Extracted	8.12 g	Collected	02/16/2023 13:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 07:58

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	3.7	----	0.58		2,3,7,8-TCDF-13C	2.00	84
Total TCDF	48	----	0.58		2,3,7,8-TCDD-13C	2.00	80
					1,2,3,7,8-PeCDF-13C	2.00	90
2,3,7,8-TCDD	0.39	----	0.19	J	2,3,4,7,8-PeCDF-13C	2.00	93
Total TCDD	14	----	0.19		1,2,3,7,8-PeCDD-13C	2.00	96
					1,2,3,4,7,8-HxCDF-13C	2.00	97
1,2,3,7,8-PeCDF	2.1	----	0.76	J	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	3.2	----	0.035	J	2,3,4,6,7,8-HxCDF-13C	2.00	85
Total PeCDF	37	----	0.035		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	87
1,2,3,7,8-PeCDD	0.89	----	0.12	J	1,2,3,6,7,8-HxCDD-13C	2.00	84
Total PeCDD	14	----	0.12		1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	3.2	----	0.10	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	76
1,2,3,6,7,8-HxCDF	2.7	----	0.11	J	OCDD-13C	4.00	75 Y
2,3,4,6,7,8-HxCDF	3.1	----	0.14	J			
1,2,3,7,8,9-HxCDF	0.92	----	0.068	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	36	----	0.068		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.3	----	0.26	J	2,3,7,8-TCDD-37Cl4	0.20	69
1,2,3,6,7,8-HxCDD	2.6	----	0.30	J			
1,2,3,7,8,9-HxCDD	1.9	----	0.14	J			
Total HxCDD	27	----	0.14				
1,2,3,4,6,7,8-HpCDF	22	----	0.62		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	----	1.2	0.55	IJ	Equivalence: 16 ng/Kg		
Total HpCDF	40	----	0.55		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	41	----	0.23				
Total HpCDD	82	----	0.23				
OCDF	18	----	0.44				
OCDD	270	----	0.40				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Isotope ratio out of specification

Y = Calculated using average of daily RFs

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-09		
Lab Sample ID	10643743004		
Filename	L230303A_06		
Injected By	SMT		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	19.9	Dilution	NA
Dry Weight Extracted	8.35 g	Collected	02/16/2023 12:00
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 08:43

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.49	----	0.12 J		2,3,7,8-TCDF-13C	2.00	88
Total TCDF	7.0	----	0.12		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	97
2,3,7,8-TCDD	0.21	----	0.089 J		2,3,4,7,8-PeCDF-13C	2.00	102
Total TCDD	1.7	----	0.089		1,2,3,7,8-PeCDD-13C	2.00	108
					1,2,3,4,7,8-HxCDF-13C	2.00	98
1,2,3,7,8-PeCDF	0.57	----	0.34 J		1,2,3,6,7,8-HxCDF-13C	2.00	92
2,3,4,7,8-PeCDF	1.1	----	0.29 J		2,3,4,6,7,8-HxCDF-13C	2.00	90
Total PeCDF	18	----	0.29		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	97
1,2,3,7,8-PeCDD	0.39	----	0.14 J		1,2,3,6,7,8-HxCDD-13C	2.00	95
Total PeCDD	3.0	----	0.14 J		1,2,3,4,6,7,8-HpCDF-13C	2.00	77
					1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	0.81	----	0.080 J		1,2,3,4,6,7,8-HpCDD-13C	2.00	84
1,2,3,6,7,8-HxCDF	----	0.67	0.070 IJ		OCDD-13C	4.00	82 Y
2,3,4,6,7,8-HxCDF	1.2	----	0.075 J				
1,2,3,7,8,9-HxCDF	0.51	----	0.038 J		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	16	----	0.038		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	----	0.50	0.089 IJ		2,3,7,8-TCDD-37Cl4	0.20	70
1,2,3,6,7,8-HxCDD	1.1	----	0.070 J				
1,2,3,7,8,9-HxCDD	0.80	----	0.093 J				
Total HxCDD	9.3	----	0.070				
1,2,3,4,6,7,8-HpCDF	6.7	----	0.15		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.48	----	0.19 J		Equivalence: 5.2 ng/Kg		
Total HpCDF	12	----	0.15		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	12	----	0.16				
Total HpCDD	24	----	0.16				
OCDF	6.6	----	0.15 J				
OCDD	95	----	0.16				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

ND = Not Detected

NA = Not Applicable

NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Isotope ratio out of specification

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-10		
Lab Sample ID	10643743005		
Filename	L230303A_07		
Injected By	SMT		
Total Amount Extracted	10.8 g	Matrix	Solid
% Moisture	5.7	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	02/16/2023 12:00
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 09:27

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.8	----	0.80		2,3,7,8-TCDF-13C	2.00	95
Total TCDF	140	----	0.80		2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	0.28	----	0.064	J	2,3,4,7,8-PeCDF-13C	2.00	86
Total TCDD	30	----	0.064		1,2,3,7,8-PeCDD-13C	2.00	105
					1,2,3,4,7,8-HxCDF-13C	2.00	115
1,2,3,7,8-PeCDF	----	47	0.11	P	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	----	14	0.071	P	2,3,4,6,7,8-HxCDF-13C	2.00	88
Total PeCDF	140	----	0.071		1,2,3,7,8,9-HxCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	1.5	----	0.20	J	1,2,3,6,7,8-HxCDD-13C	2.00	90
Total PeCDD	35	----	0.20		1,2,3,4,6,7,8-HpCDF-13C	2.00	75
					1,2,3,4,7,8,9-HpCDF-13C	2.00	75
1,2,3,4,7,8-HxCDF	9.3	----	0.080		1,2,3,4,6,7,8-HpCDD-13C	2.00	85
1,2,3,6,7,8-HxCDF	----	9.1	0.14	P	OCDD-13C	4.00	67 Y
2,3,4,6,7,8-HxCDF	12	----	0.10				
1,2,3,7,8,9-HxCDF	----	2.6	0.077	PJ	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	120	----	0.077		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.9	----	0.14	J	2,3,7,8-TCDD-37Cl4	0.20	67
1,2,3,6,7,8-HxCDD	3.4	----	0.19	J			
1,2,3,7,8,9-HxCDD	2.1	----	0.14	J			
Total HxCDD	56	----	0.14				
1,2,3,4,6,7,8-HpCDF	120	----	0.29		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.7	----	0.22	J	Equivalence: 62 ng/Kg		
Total HpCDF	130	----	0.22		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	22	----	0.15				
Total HpCDD	56	----	0.15				
OCDF	25	----	0.31				
OCDD	160	----	0.13				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-11		
Lab Sample ID	10643743006		
Filename	L230303A_08		
Injected By	SMT		
Total Amount Extracted	12.1 g	Matrix	Solid
% Moisture	23.6	Dilution	NA
Dry Weight Extracted	9.26 g	Collected	02/16/2023 12:00
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 10:12

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	6.3	----	0.58		2,3,7,8-TCDF-13C	2.00	83
Total TCDF	170	----	0.58		2,3,7,8-TCDD-13C	2.00	79
					1,2,3,7,8-PeCDF-13C	2.00	92
2,3,7,8-TCDD	0.51	----	0.30	J	2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	21	----	0.30		1,2,3,7,8-PeCDD-13C	2.00	98
					1,2,3,4,7,8-HxCDF-13C	2.00	94
1,2,3,7,8-PeCDF	5.1	----	0.19	J	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	9.9	----	0.22		2,3,4,6,7,8-HxCDF-13C	2.00	87
Total PeCDF	110	----	0.19		1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	88
1,2,3,7,8-PeCDD	1.3	----	0.18	J	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	21	----	0.18		1,2,3,4,6,7,8-HpCDF-13C	2.00	72
					1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	8.0	----	0.13		1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	6.4	----	0.084		OCDD-13C	4.00	68 Y
2,3,4,6,7,8-HxCDF	7.9	----	0.084				
1,2,3,7,8,9-HxCDF	2.5	----	0.14	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	81	----	0.084		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.2	----	0.42	J	2,3,7,8-TCDD-37Cl4	0.20	69
1,2,3,6,7,8-HxCDD	2.6	----	0.099	J			
1,2,3,7,8,9-HxCDD	1.9	----	0.11	J			
Total HxCDD	28	----	0.099				
1,2,3,4,6,7,8-HpCDF	26	----	0.21		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	2.8	----	0.30	J	Equivalence: 27 ng/Kg		
Total HpCDF	42	----	0.21		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	33	----	0.15				
Total HpCDD	59	----	0.15				
OCDF	14	----	0.28				
OCDD	160	----	0.30				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

ND = Not Detected

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-12		
Lab Sample ID	10643743007		
Filename	L230303A_09		
Injected By	SMT		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	13.3	Dilution	NA
Dry Weight Extracted	8.87 g	Collected	02/16/2023 14:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 10:56

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.29	2,3,7,8-TCDF-13C	2.00	84
Total TCDF	2.8	----	0.29	2,3,7,8-TCDD-13C	2.00	80
				1,2,3,7,8-PeCDF-13C	2.00	100
2,3,7,8-TCDD	ND	----	0.069	2,3,4,7,8-PeCDF-13C	2.00	99
Total TCDD	ND	----	0.069	1,2,3,7,8-PeCDD-13C	2.00	107
				1,2,3,4,7,8-HxCDF-13C	2.00	95
1,2,3,7,8-PeCDF	ND	----	0.23	1,2,3,6,7,8-HxCDF-13C	2.00	88
2,3,4,7,8-PeCDF	0.35	----	0.18 J	2,3,4,6,7,8-HxCDF-13C	2.00	89
Total PeCDF	7.3	----	0.18	1,2,3,7,8,9-HxCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDD-13C	2.00	93
1,2,3,7,8-PeCDD	----	0.19	0.12 IJ	1,2,3,6,7,8-HxCDD-13C	2.00	88
Total PeCDD	1.0	----	0.12 J	1,2,3,4,6,7,8-HpCDF-13C	2.00	74
				1,2,3,4,7,8,9-HpCDF-13C	2.00	69
1,2,3,4,7,8-HxCDF	0.53	----	0.070 J	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	0.37	----	0.073 J	OCDD-13C	4.00	74 Y
2,3,4,6,7,8-HxCDF	----	0.49	0.067 IJ			
1,2,3,7,8,9-HxCDF	0.29	----	0.053 J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	7.4	----	0.053	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.39	----	0.23 J	2,3,7,8-TCDD-37Cl4	0.20	66
1,2,3,6,7,8-HxCDD	0.66	----	0.090 J			
1,2,3,7,8,9-HxCDD	0.52	----	0.043 J			
Total HxCDD	6.7	----	0.043			
1,2,3,4,6,7,8-HpCDF	3.4	----	0.074 J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.11	Equivalence: 3.4 ng/Kg		
Total HpCDF	6.8	----	0.074	(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	16	----	0.19			
Total HpCDD	32	----	0.19			
OCDF	5.0	----	0.21 J			
OCDD	140	----	0.18			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

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I = Isotope ratio out of specification

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-13		
Lab Sample ID	10643743008		
Filename	L230303A_10		
Injected By	SMT		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	20.3	Dilution	NA
Dry Weight Extracted	8.14 g	Collected	02/16/2023 14:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 11:41

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	34	----	0.15	2,3,7,8-TCDF-13C	2.00	77
Total TCDF	560	----	0.15	2,3,7,8-TCDD-13C	2.00	76
				1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	3.3	----	0.061	2,3,4,7,8-PeCDF-13C	2.00	85
Total TCDD	120	----	0.061	1,2,3,7,8-PeCDD-13C	2.00	93
				1,2,3,4,7,8-HxCDF-13C	2.00	87
1,2,3,7,8-PeCDF	9.6	----	2.9	1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	22	----	0.88	2,3,4,6,7,8-HxCDF-13C	2.00	75
Total PeCDF	230	----	0.88	1,2,3,7,8,9-HxCDF-13C	2.00	70
				1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	3.1	----	0.28 J	1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	51	----	0.28	1,2,3,4,6,7,8-HpCDF-13C	2.00	58
				1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	6.2	----	0.090	1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	5.6	----	0.11 J	OCDD-13C	4.00	55 Y
2,3,4,6,7,8-HxCDF	8.7	----	0.11			
1,2,3,7,8,9-HxCDF	1.5	----	0.13 J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	110	----	0.090	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.4	----	0.13 J	2,3,7,8-TCDD-37Cl4	0.20	61
1,2,3,6,7,8-HxCDD	3.3	----	0.11 J			
1,2,3,7,8,9-HxCDD	2.6	----	0.11 J			
Total HxCDD	42	----	0.11			
1,2,3,4,6,7,8-HpCDF	46	----	0.15	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	1.4	----	0.25 J	Equivalence: 54 ng/Kg		
Total HpCDF	57	----	0.15	(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	19	----	0.17			
Total HpCDD	39	----	0.17			
OCDF	24	----	0.34			
OCDD	80	----	0.19			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

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NA = Not Applicable

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Method 8290 Sample Analysis Results

Client - ESS Laboratory

Client's Sample ID	23B0634-14		
Lab Sample ID	10643743009		
Filename	L230303A_11		
Injected By	SMT		
Total Amount Extracted	10.6 g	Matrix	Solid
% Moisture	21.6	Dilution	NA
Dry Weight Extracted	8.35 g	Collected	02/16/2023 14:30
ICAL ID	L230302	Received	02/22/2023 09:45
CCal Filename(s)	L230302B_18 & L230303A_13	Extracted	02/27/2023 11:50
Method Blank ID	BLANK-104255	Analyzed	03/03/2023 12:25

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	8.5	----	0.36		2,3,7,8-TCDF-13C	2.00	62
Total TCDF	300	----	0.36		2,3,7,8-TCDD-13C	2.00	59
					1,2,3,7,8-PeCDF-13C	2.00	72
2,3,7,8-TCDD	0.69	----	0.28	J	2,3,4,7,8-PeCDF-13C	2.00	75
Total TCDD	26	----	0.28		1,2,3,7,8-PeCDD-13C	2.00	77
					1,2,3,4,7,8-HxCDF-13C	2.00	73
1,2,3,7,8-PeCDF	----	4.7	0.33	PJ	1,2,3,6,7,8-HxCDF-13C	2.00	67
2,3,4,7,8-PeCDF	11	----	0.17		2,3,4,6,7,8-HxCDF-13C	2.00	68
Total PeCDF	130	----	0.17		1,2,3,7,8,9-HxCDF-13C	2.00	59
					1,2,3,4,7,8-HxCDD-13C	2.00	68
1,2,3,7,8-PeCDD	1.4	----	0.21	J	1,2,3,6,7,8-HxCDD-13C	2.00	67
Total PeCDD	19	----	0.21		1,2,3,4,6,7,8-HpCDF-13C	2.00	58
					1,2,3,4,7,8,9-HpCDF-13C	2.00	52
1,2,3,4,7,8-HxCDF	5.8	----	0.12	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	59
1,2,3,6,7,8-HxCDF	5.4	----	0.14	J	OCDD-13C	4.00	58 Y
2,3,4,6,7,8-HxCDF	7.0	----	0.088				
1,2,3,7,8,9-HxCDF	1.0	----	0.094	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	74	----	0.088		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.3	----	0.18	J	2,3,7,8-TCDD-37Cl4	0.20	65
1,2,3,6,7,8-HxCDD	----	0.80	0.10	IJ			
1,2,3,7,8,9-HxCDD	----	0.53	0.085	IJ			
Total HxCDD	11	----	0.085				
1,2,3,4,6,7,8-HpCDF	33	----	0.14		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.63	----	0.32	J	Equivalence: 27 ng/Kg		
Total HpCDF	37	----	0.14		(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	3.3	----	0.16	J			
Total HpCDD	7.5	----	0.16				
OCDF	4.0	----	0.21	J			
OCDD	10	----	0.30	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

ND = Not Detected

NA = Not Applicable

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J = Estimated value

P = PCDE Interference

I = Isotope ratio out of specification

Y = Calculated using average of daily RFs

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Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKVS	Matrix	Solid
Lab Sample ID	BLANK-104255	Dilution	NA
Filename	L230301B_07	Extracted	02/27/2023 11:50
Total Amount Extracted	10.4 g	Analyzed	03/01/2023 19:06
ICAL ID	L230225	Injected By	SMT
CCal Filename(s)	L230301A_17 & L230301B_17		

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.100	2,3,7,8-TCDF-13C	2.00	88
Total TCDF	ND	----	0.100	2,3,7,8-TCDD-13C	2.00	70
				1,2,3,7,8-PeCDF-13C	2.00	98
2,3,7,8-TCDD	ND	----	0.12	2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	ND	----	0.12	1,2,3,7,8-PeCDD-13C	2.00	90
				1,2,3,4,7,8-HxCDF-13C	2.00	100
1,2,3,7,8-PeCDF	ND	----	0.069	1,2,3,6,7,8-HxCDF-13C	2.00	93
2,3,4,7,8-PeCDF	ND	----	0.069	2,3,4,6,7,8-HxCDF-13C	2.00	91
Total PeCDF	ND	----	0.069	1,2,3,7,8,9-HxCDF-13C	2.00	88
				1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	ND	----	0.10	1,2,3,6,7,8-HxCDD-13C	2.00	83
Total PeCDD	ND	----	0.10	1,2,3,4,6,7,8-HpCDF-13C	2.00	61
				1,2,3,4,7,8,9-HpCDF-13C	2.00	58
1,2,3,4,7,8-HxCDF	ND	----	0.075	1,2,3,4,6,7,8-HpCDD-13C	2.00	80 Y
1,2,3,6,7,8-HxCDF	ND	----	0.050	OCDD-13C	4.00	63 Y
2,3,4,6,7,8-HxCDF	ND	----	0.066			
1,2,3,7,8,9-HxCDF	ND	----	0.11	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	----	0.050	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	----	0.20	0.084 J	2,3,7,8-TCDD-37Cl4	0.20	73
1,2,3,6,7,8-HxCDD	ND	----	0.099			
1,2,3,7,8,9-HxCDD	ND	----	0.10			
Total HxCDD	ND	----	0.084			
1,2,3,4,6,7,8-HpCDF	ND	----	0.12	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.19	Equivalence: 0.043 ng/Kg		
Total HpCDF	ND	----	0.12	(Lower-bound - Using MADEP Factors)		
1,2,3,4,6,7,8-HpCDD	----	0.21	0.18 J			
Total HpCDD	0.21	----	0.18 J			
OCDF	ND	----	0.33			
OCDD	ND	----	0.65			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).

EMPC = Estimated Maximum Possible Concentration

EDL = Estimated Detection Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.

J = Estimated value

I = Isotope ratio out of specification

Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-104256	Matrix	Solid
Filename	L230301B_01	Dilution	NA
Total Amount Extracted	10.2 g	Extracted	02/27/2023 11:50
ICAL ID	L230225	Analyzed	03/01/2023 14:39
CCal Filename(s)	L230301A_17 & L230301B_17	Injected By	SMT
Method Blank ID	BLANK-104255		

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	104	2,3,7,8-TCDF-13C	2.0	86
Total TCDF				2,3,7,8-TCDD-13C	2.0	68
				1,2,3,7,8-PeCDF-13C	2.0	93
2,3,7,8-TCDD	0.20	0.22	111	2,3,4,7,8-PeCDF-13C	2.0	90
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	85
				1,2,3,4,7,8-HxCDF-13C	2.0	100
1,2,3,7,8-PeCDF	1.0	1.0	101	1,2,3,6,7,8-HxCDF-13C	2.0	95
2,3,4,7,8-PeCDF	1.0	1.0	101	2,3,4,6,7,8-HxCDF-13C	2.0	93
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	81
				1,2,3,4,7,8-HxCDD-13C	2.0	86
1,2,3,7,8-PeCDD	1.0	0.99	99	1,2,3,6,7,8-HxCDD-13C	2.0	88
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	65
				1,2,3,4,7,8,9-HpCDF-13C	2.0	61
1,2,3,4,7,8-HxCDF	1.0	1.0	103	1,2,3,4,6,7,8-HpCDD-13C	2.0	84 Y
1,2,3,6,7,8-HxCDF	1.0	1.0	105	OCDD-13C	4.0	67 Y
2,3,4,6,7,8-HxCDF	1.0	1.0	103			
1,2,3,7,8,9-HxCDF	1.0	1.0	101	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.1	111	2,3,7,8-TCDD-37Cl4	0.20	74
1,2,3,6,7,8-HxCDD	1.0	0.99	99			
1,2,3,7,8,9-HxCDD	1.0	0.95	95			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	107			
1,2,3,4,7,8,9-HpCDF	1.0	1.0	104			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.98	98			
Total HpCDD						
OCDF	2.0	2.5	125			
OCDD	2.0	2.3	113			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

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ESS Laboratory Sample and Cooler Receipt Checklist

Client: Weston and Sampson Engineers, Inc - TB

ESS Project ID: 23B0634

Date Received: 2/17/2023

Project Due Date: 2/27/2023

Days for Project: 5 Day

Shipped/Delivered Via: ESS Courier

1. Air bill manifest present?
Air No.: NA

6. Does COC match bottles?

2. Were custody seals present?

7. Is COC complete and correct?

3. Is radiation count <100 CPM?

8. Were samples received intact?

4. Is a Cooler Present?
Temp: -0.4 Iced with: Ice

9. Were labs informed about short holds & rushes? Yes / No / NA

10. Were any analyses received outside of hold time? Yes / No

5. Was COC signed and dated by client?

11. Any Subcontracting needed? Yes / No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? Yes / No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
a. If metals preserved upon receipt: Date: _____
b. Low Level VOA vials frozen: Date: _____

Time: _____ By/Acid Lot#: _____
Time: _____ By: _____

Sample Receiving Notes:

samples split for sub analysis

14. Was there a need to contact Project Manager? Yes / No
a. Was there a need to contact the client? Yes / No
Who was contacted? _____ Date: _____

Time: _____ By: _____

Resolution: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	401152	Yes	N/A	Yes	8 oz jar	NP	
1	401153	Yes	N/A	Yes	8 oz jar	NP	
2	401154	Yes	N/A	Yes	8 oz jar	NP	
2	401155	Yes	N/A	Yes	8 oz jar	NP	
2	401191	Yes	N/A	Yes	2 oz. Jar	NP	
3	401156	Yes	N/A	Yes	8 oz jar	NP	
3	401270	Yes	N/A	Yes	4 oz. Jar	NP	
4	401158	Yes	N/A	Yes	8 oz jar	NP	
4	401159	Yes	N/A	Yes	8 oz jar	NP	
4	401164	Yes	N/A	Yes	8 oz jar	NP	
5	401160	Yes	N/A	Yes	8 oz jar	NP	
5	401161	Yes	N/A	Yes	8 oz jar	NP	
5	401165	Yes	N/A	Yes	8 oz jar	NP	
6	401162	Yes	N/A	Yes	8 oz jar	NP	
6	401163	Yes	N/A	Yes	8 oz jar	NP	
7	401166	Yes	N/A	Yes	8 oz jar	NP	
7	401168	Yes	N/A	Yes	2 oz. Jar	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Weston and Sampson Engineers, Inc - TB

ESS Project ID: 23B0634

Date Received: 2/17/2023

7	401271	Yes	N/A	Yes	4 oz. Jar	NP
8	401167	Yes	N/A	Yes	8 oz jar	NP
8	401169	Yes	N/A	Yes	2 oz. Jar	NP
8	401272	Yes	N/A	Yes	4 oz. Jar	NP
9	401170	Yes	N/A	Yes	8 oz jar	NP
9	401202	Yes	N/A	Yes	8 oz jar	NP
10	401171	Yes	N/A	Yes	8 oz jar	NP
10	401181	Yes	N/A	Yes	2 oz. Jar	NP
10	401273	Yes	N/A	Yes	4 oz. Jar	NP
11	401172	Yes	N/A	Yes	8 oz jar	NP
11	401182	Yes	N/A	Yes	2 oz. Jar	NP
11	401274	Yes	N/A	Yes	4 oz. Jar	NP
12	401173	Yes	N/A	Yes	8 oz jar	NP
12	401183	Yes	N/A	Yes	8 oz jar	NP
13	401174	Yes	N/A	Yes	8 oz jar	NP
13	401184	Yes	N/A	Yes	8 oz jar	NP
13	401275	Yes	N/A	Yes	4 oz. Jar	NP
14	401175	Yes	N/A	Yes	8 oz jar	NP
14	401185	Yes	N/A	Yes	8 oz jar	NP
15	401176	Yes	N/A	Yes	8 oz jar	NP
15	401203	Yes	N/A	Yes	8 oz jar	NP
16	401177	Yes	N/A	Yes	8 oz jar	NP
16	401186	Yes	N/A	Yes	8 oz jar	NP
17	401178	Yes	N/A	Yes	8 oz jar	NP
17	401187	Yes	N/A	Yes	8 oz jar	NP
18	401179	Yes	N/A	Yes	8 oz jar	NP
18	401190	Yes	N/A	Yes	2 oz. Jar	NP
18	401276	Yes	N/A	Yes	4 oz. Jar	NP
19	401188	Yes	N/A	Yes	8 oz jar	NP
19	401189	Yes	N/A	Yes	8 oz jar	NP

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials C

Yes / No
Yes / No / NA
Yes / No / NA
Yes / No / NA
Yes / No / NA

Completed

By: [Signature]

Date & Time: 11:46 2/21/23

Reviewed

By: [Signature]

Date & Time: 1430 2/21/23



ESS Lab #	034	Page	1	of	2
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ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☒ State Forms ☐ EQuIS
☒ Excel ☐ State Upload ☒ Enviro Data
☐ CIP-like Package ☐ Other (Specify) →

REQUESTED ANALYSES

Client:	WESTON + SAMSON	Project
Address:	55 WALKERS BROOK DRIVE READING	Project
Phone:	978 818 9212	Project
Email Distribution List:	KOSKAL@WSEINC.COM BHUNIAP@WSEINC.COM	

Project Name: CLAYTON FIELD
Project Location: NEEDHAM MA
Project Number:
Project Manager: L. KOSKA
Bill to: L. KOSKA
PON:
Quote#: SEE T BYLINE QUOTE

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

[illegible]

Total Number of Bottles:

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	MO	AS	PA	DI	EF	JS
1	2/16/23	1045	6	Soil	B-201 (0-1)	X	X	X	X		
2	T	1045	T	T	B-201 (2-4)	X	X	X	X		
3	T	1045	T	T	B-201 (4-6)	X	X	X	X		
4	T	1015	T	T	B-202 (0-1)	X	X	X	X		
5	T	1015	T	T	B-202 (2-4)	X	X	X	X		
6	T	1330	T	T	B-203 (0-1)	X	X	X	X		
7	T	1330	T	T	B-203 (2-4)	X	X	X	X		
8	T	1330	T	T	B-203 (4-6)	X	X	X	X		
9	T	1200	T	T	B-204 (0-1)	X	X	X	X		
10	T	1200	T	T	B-204 (2-4)	X	X	X	X		

2	UK
2	(8/22)
3	U
1	M

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	J-Jar	O-Other	P-Poly	S-Sterile	V-Vial
-----------------	-----------------	----------------	--------------	--------------	-------	---------	--------	-----------	--------

Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*
-------------------	----------	-----------	----------	----------	----------	------	-------	--------	--------	---------	-----------

Preservation Code: 1-Non Preserved 2-HCl 3-H₂SO₄ 4-HNO₃ 5-NaOH 6-Methanol 7-Na₂S₂O₃ 8-ZnAc₂, NaOH 9-NH₄Cl 10-DI H₂O 11-Other*

Sampled by: MC6012E

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only

Comments: * Please specify "Other" preservative and containers types in this space

Cooler Temperature (°C):

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration

☐ Lab Filter

Relinquished by (Signature)

Date _____

Time

Received by (Signature) _____

Relinquished by (Signature)

Date _____

Time

Received by (Signature) _____

Relinquished by (Signature)

Date _____

Time

Received by (Signature) _____

Relinquished by (Signature)

Date _____

1999

Received by (Signature) _____



185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1030 Page 2 of 2

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☒ State Forms ☐ EQuIS
☒ Excel ☐ State Upload ☒ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) —

CLIENT INFORMATION

Client: WESTON + SAMPSON
Address: 55 WALKERS BROOK
DRIVE READING MA
Phone: 978 218 9212
Email: KOSKAL@WSEINC.COM
Distribution List: BHUNIAP@WSEINC.COM

PROJECT INFORMATION

Project Name: CLAXTON FIELD
Project Location: NEEDHAM, MA
Project Number:
Project Manager: L. KOSKA
Bill to: " " " "
PO#: " " " "
Quote#: SEE T. BYRNE QUOTE 1/3/23

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

MCP 14 METAL
ARRESTES (PLM)
DIOXINS
GALM HGT
GALM HGT

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID														Total Number of Bottles
11	2/16/23	1730	G	S	B-204 (4-6)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
12		1430			B-205 (0-1)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
13		1430			B-203 (2-4)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
14		1430			B-205 (4-6)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
15		1515			B-206 (0-1)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
16		1515			B-206 (2-4)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
17		1515			B-206 (4-5)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
18		1530			B-207 F (4-6)	X	X	X	X	X	X	X	X	X	X	X	X	X	2
19		1400			CF - STOCKPILE	X	X	X	X	X	X	X	X	X	X	X	X	X	2

Container Type: AC-Air Cassette AG-Ambur Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc2, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Sampled by: MCBUTRE

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only

Comments: * Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration

☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	2/16/23	1730					



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Traveling Meals Program

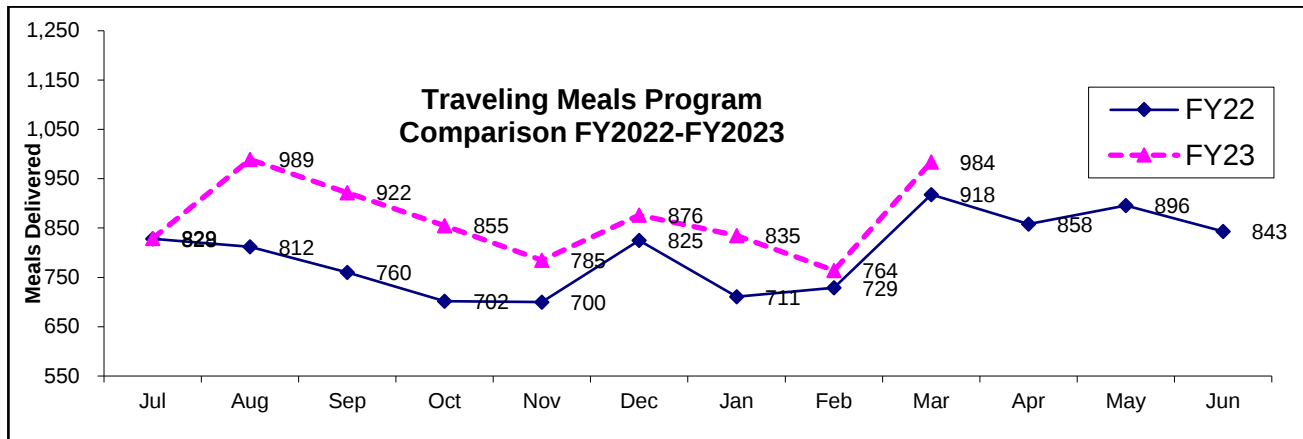
Monthly Report for March 2023

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 precaution in place</i> <i>Meal deliveries completed by 28 Volunteers</i>
<i>Distributed flyer letting clients know they can receive free COVID testing kits</i>	<i>30 kits distributed to 10 clients</i>
<i>984 Meals delivered in March 2023</i> <i>49 Clients at month end</i> <i>41 Springwell Consumers</i> <i>8 Private Pay Consumers</i> <i>5 New clients (3 Springwell; 2 Private)</i> <i>1 Canceled Program (1 Springwell)</i>	<i>No 911 calls initiated</i>

Summary overview for the month: **Graph of Meal Deliveries for the month March 2023**





NEEDHAM PUBLIC HEALTH DIVISION



Unit: Public Health Nursing

Month: March 2023

Staff members: Hanna Burnett and Ginnie Chacon-Lopez

Activities and Accomplishments

Activity	Notes
Communicable Disease investigation	Case notes in summary, below.
Community Outreach	BP Clinics at both NHA. Matter of Balance classes continued. Covid testing re-advertised but demand continues to be low. Postings on social media.
Education	Ginnie: MCAAP Immunization Initiative Webinar: ACIP Recommendations for 2023 Childhood/Adolescent and Adult Immunizations; LBOH Bi-Weekly Webinars; MAPHN QPR Course; Diversity Series: Building an Inclusive Work Community; Sanofi's presentation "Influenza Immunization: The Importance of Helping Protect Your Older Patients from Influenza;" OLRH Racial Equity 101 training; Alcohol, Health, and Safety in MA: A Status Report presented by BU School of PH; Youth MHFA Training; "TB In Children: A Century of Progress, but Local Threat Remains" sponsored by the Public Health Museum; Thomas Q. Garvey lecture re: TB and current status; "Sugary Drinks and Added Intake in Kids: New Data on Intake, Health Risks and Strategies for Reducing Harms" presented by CDC DNPAO Hanna: Supporting Girls Mental Health (by MetroWest Foundation)
DVAC	Scheduling 'Domestic Abuse awareness conversations' for the spring, brainstorming cable spot.
Other	Ginnie: Gun Violence Panel; Needham LEPC; Storm Prep Meeting; Opioid Task Force Meeting; CSL Seqirus meeting with Hanna and rep, Joelle, to discuss 2023-2024 flu season order; MA Alcohol Policy Coalition. Hanna: Guidance for CPR classes written for instructors, finding space to hold classes, setting up online sign-up system.

Summary overview for the month:

Continue to assist several residents with finding resources for heating / utilities. 2 SelfHelp applications filled out and mailed forward. BP clinics at NHA. 3 CPR classes held: 1 for NHA staff, 1



NEEDHAM PUBLIC HEALTH DIVISION



for Park & Rec staff, 1 for MRC volunteers. 2 Matter of Balance classes on-going. Boston College student continues with Hanna. The congregation of First Parish UU in Needham donated \$759.50 towards Gift of Warmth.

Lyme Disease case counts have been broken down into “suspected” and “probable:”

Suspected: +IgG immunoblot without a positive or equivocal first-tier screening assay

Probable: standard two-tier testing or a modified two-tier testing

A GI bug sickened nine residents at a local LTC/SNF between March 5th and March 11th. 12 middle schoolers were +COVID and had all attended a school function the week of March 20th.

Potential Food-Borne Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
Amebiasis													0	0	<5
Calicivirus/Norovirus	<5	<5						<5	<5				5	<5	<5
Campylobacteriosis	<5	<5		<5			<5						8	6	15
Cryptosporidiosis													0	<5	<5
Enterovirus													0	0	0
Giardiasis													0	0	0
Listeriosis													0	<5	0
Salmonellosis	<5	<5		<5			<5						<5	<5	<5
Shigellosis													0	<5	<5
Vibrio spp			<5										<5	<5	0
Arbovirus	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
Arbovirus (other)													0	0	0
Babesiosis	<5												<5	<5	5
Borrelia miyamotoi													0	<5	0
HGA/Anaplasmosis				<5		<5							<5	<5	<5
Lyme Disease Suspected	6	10	7	5	<5	<5	<5	<5	<5				45	N/A	N/A
Lyme Disease Probable	<5	<5		<5	<5	<5		<5	<5				12	51	38
West Nile Infection													0	0	0
Other Communicable Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
Group A streptococcus													0	0	0
Group B streptococcus	<5												<5	<5	<5
Haemophilus influenzae													0	<5	<5
Hepatitis A													0	0	0
Hepatitis B Confirmed/Probable				<5	<5								<5	9	6
Hepatitis B Contact			<5				<5						<5	0	<5
Hepatitis C Confirmed													0	0	<5
Hepatitis C Probable		0		0				<5	<5				<5	<5	<5
Influenza		<5		<5	22	133	25	6	<5				189	51	<5
Legionellosis							<5						<5	<5	0
Mumps													0	0	0
Novel Coronavirus Confirmed	169	117	107	102	76	154	105	63	35				928	4153	1416



NEEDHAM PUBLIC HEALTH DIVISION



Novel Coronavirus Probable	23	8	14	<5	23	20	33	34	21					179	484	118
Pertussis (Bordetella spp.)								<5						<5	0	0
Streptococcus pneumoniae														0	<5	0
TB Disease														0	0	0
Latent TB Infection (Confirmed)	<5	<5		<5	<5	<5	<5	<5	7					21	24	21
Latent TB Infection (Suspected)	<5			<5	<5	<5	<5	<5	<5					13	10	5
Varicella	<5					<5								<5	<5	<5
Other (specify in narrative)				<5		<5								<5	-	-
Totals	211	146	130	121	134	318	174	115	73	0	0	0	0	1422	4819	1645
Reported Cases later Revoked		<5		<5			<5		<5							

Immunizations Injections	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
B12	1	1						1					3	14	13
Influenza			262	235	219			1					717	812	1225
TDap													0	3	0
Covid-19	5		167	82	181								435	3792	6963
VFC													0	4	0
Other													0	0	0
Total	6	1	429	317	400	0	0	2	0	0	0	0	1155	4625	8201

Animal-to-Human Bites	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
Dog													0	4	8
Cat													0	0	1
Bat													0	1	7
Skunk													0	0	0
Raccoon													0	0	1
Other													0	0	2
Total Bites	0	0	0	0	0	0	0	0	0	0	0	0	0	5	18

Assistance Programs	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
Food Pantry					2	1		1					4	0	0
Friends													0	0	0
Gift of Warmth	5	5	9	7	4	3	4	3	5				45	23	-
GoW Amount	2120	1900	3559	1156	1576	1255	2292	1046	2705				17609	13141	16956
Parks & Rec													0	0	1
Self Help				1			2	1	2				6	1	2



NEEDHAM PUBLIC HEALTH DIVISION



Education	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2023	2022	2021
CPR Education			~75 @Harvest Fair		4	15	25	9	14				142	53	
Matter of Balance Graduates							9	11					20	10	
Narcan			2			1	4	6	2				15		0

Donations:	760
Giftcards Distributed:	0



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Epidemiology

Date: March 2023

Staff member: Julie McCarthy

Activities and Accomplishments

Activity	Notes
COVID-19 Update	Brief update on COVID-19 in Needham in March 2023 <u>Reminder:</u> end of Public Health Emergency is May 11 th https://www.mass.gov/news/healey-driscoll-administration-announces-end-of-covid-19-public-health-emergency-in-massachusetts
Accreditation	Continuing work on Community Health Assessment. Data sources include American Community Survey (US Census Bureau), MetroWest Adolescent Health Survey, Healthy Aging in Needham Assessment, Assessment of Needham Housing Authority Residents, National Community Survey, MA Department of Public Health, CDC, Beth Israel Community Health Needs Assessment Met with Lynn Schoeff and Cindi Melanson to discuss Community Health Assessment progress, gaps, and next steps and Domain 1/Domain 2 requirements and documentation
Misc.	3/6/23, 3/13/23 Regional Epi Zoom Meetings; planning for "From Theory to Practice: Regional Shared Public Health Services in Massachusetts" webinar on 4/3/23. Materials and recording for that webinar here . 3/20/23 SAPHE Grant Working Group Meeting #1 3/27/23 MetroWest Health Foundation Data Group Steering Committee Meeting 3/30/23 Meeting with Hanna and Ginnie about Public Health Nursing/Epidemiology current and upcoming projects, future of COVID testing 3/31/23 OLRH Racial Equity 101 Training Current COVID-19 testing schedule is Tues/Thurs 9-11am and 3-5pm (per nurse availability) through end of April. Testing also available to Dover/Medfield/Sherborn



COVID-19 UPDATE

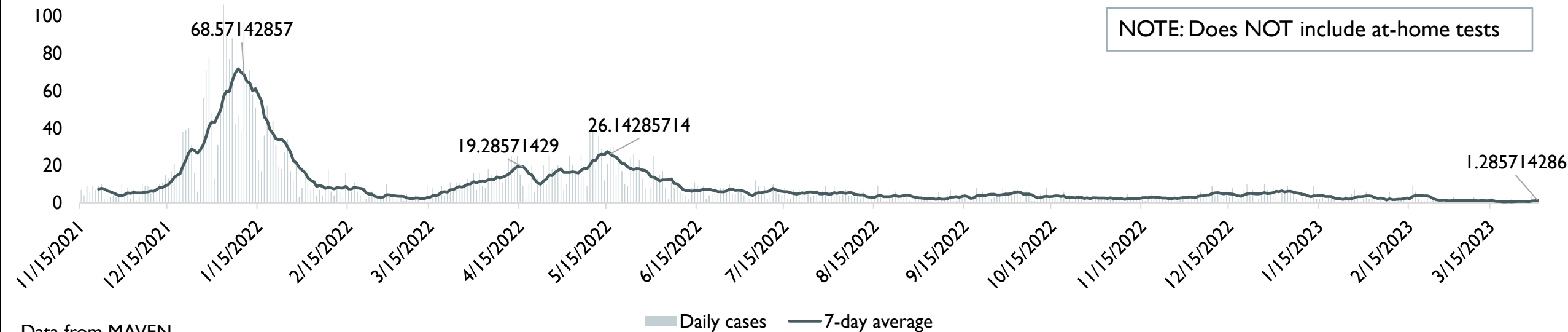
April 14th, 2023

Julie McCarthy

MARCH 2023 COVID-19 CASES

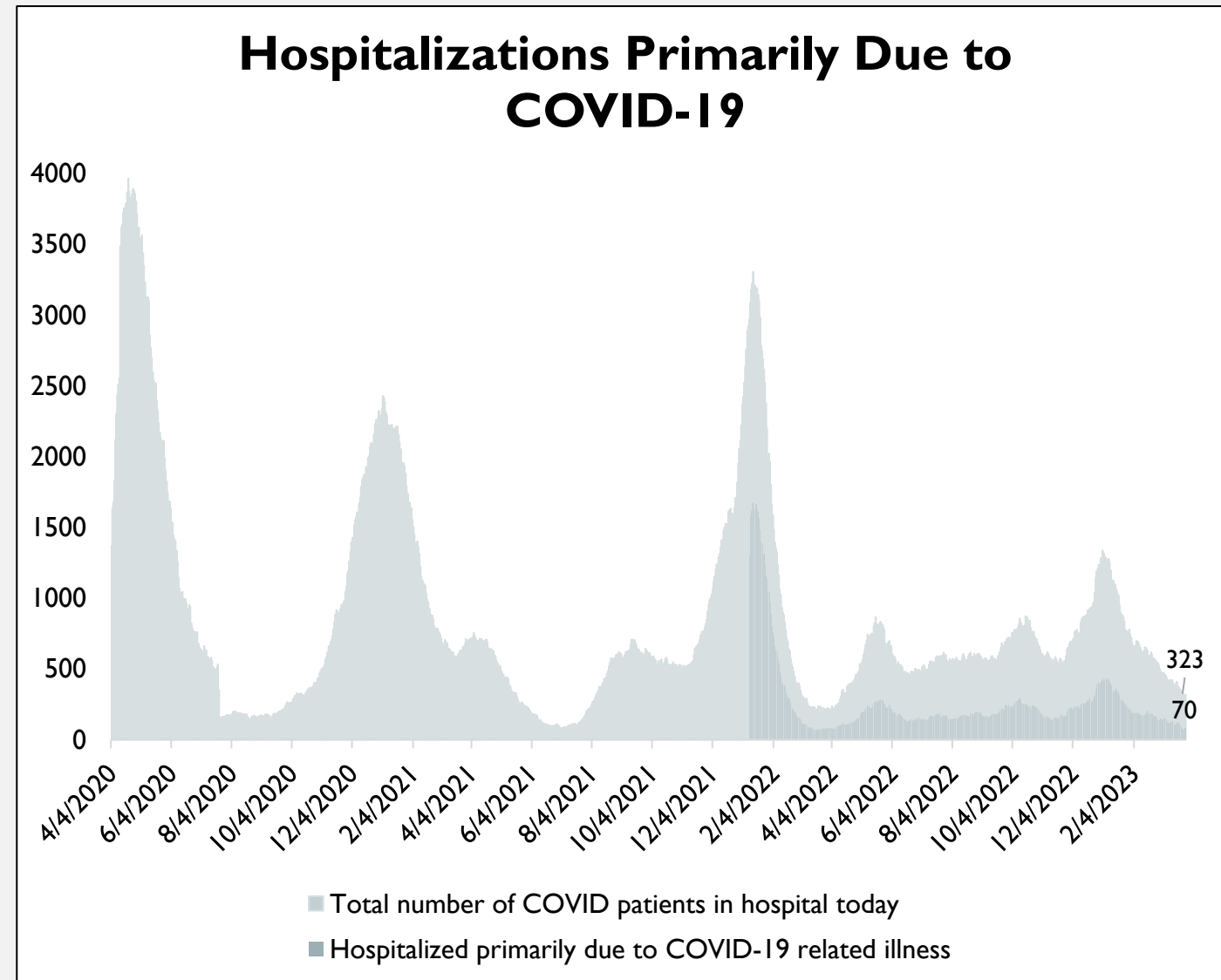
- **35** cases in March
 - 63 cases in February, 111 in January
 - Average age: 47.6 years (range 8 months to 96 years)
 - 1 case indicated as hospitalized in MAVEN
 - 34% of cases had not received a booster and/or were not eligible for booster
 - Caveat: information may be missing from MIIS. Some individuals may have been vaccinated in another state

Needham Daily Cases 11/15/21-3/31/23



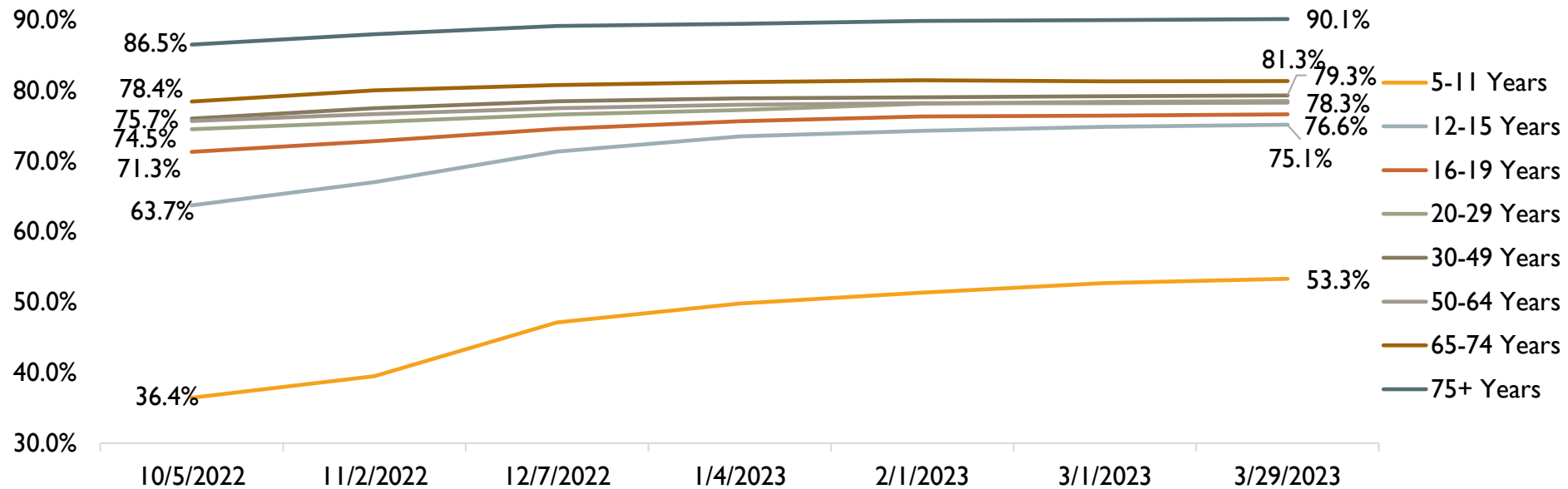
HOSPITALIZATION RATES (PER 100K) BY AGE

Age Group	Hosp. rate <u>current</u> reporting period (3/12-3/25/23)	Hosp. rate <u>previous</u> reporting period (3/5-3/18/23)	Hosp. rate <u>1 year ago</u> (3/13-3/26/22)
0-11	1.8	2.2	1.2
12-17	1.8	0.6	0.6
18-19	2.5	3.5	1.5
20-29	2.5	2.3	2.2
30-39	5.5	6.6	3.6
40-49	3.9	4.6	4.3
50-59	8.3	7.7	4.5
60-69	19.7	19.1	9.1
70-79	43.1	42.3	17.5
80+	89.8	105.4	41.6

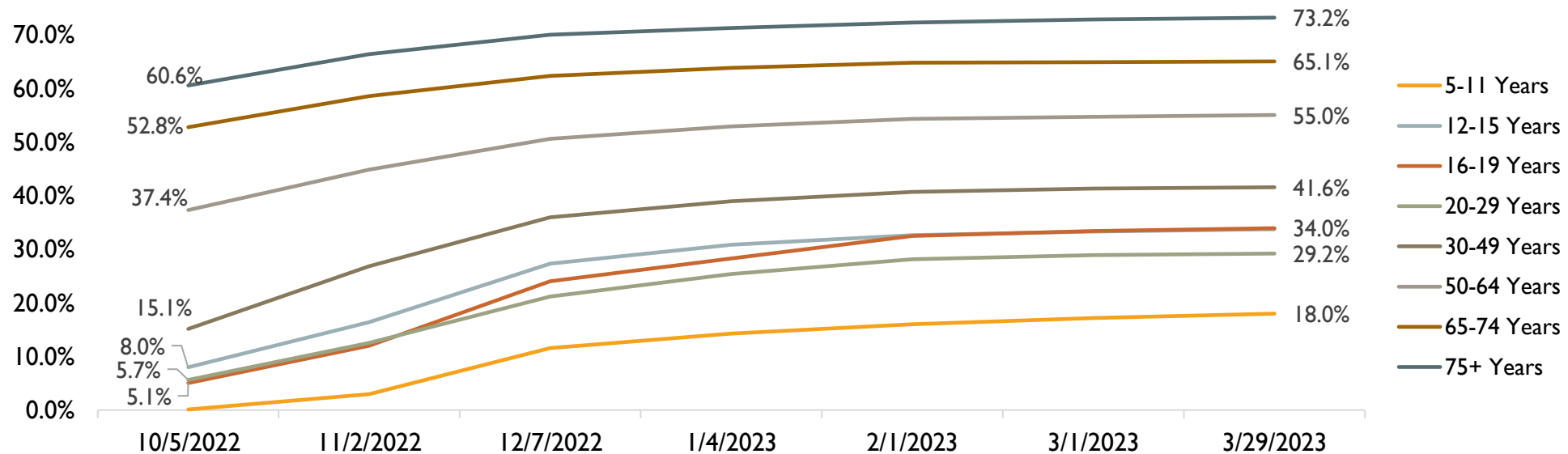


BOOSTER RATES OVER TIME

Booster 1 Rates by Age



Booster 2 Rates by Age



Data from: <https://www.mass.gov/info-details/archive-of-covid-19-vaccination-reports>

Data as of 3/31/23



Needham Public Health Division



Assist. Health Director - Tara Gurge
Part-time Health Agent – Monica Pancare
Student Intern – Ecom Lu

Unit: Environmental Health

Date: March 2023

Staff members: Tara Gurge, Monica Pancare and Ecom Lu

Activities and Accomplishments:

Activity	Notes
Public Health Inspector Team staffing updates	We interviewed some promising candidates that applied for the vacant full-time Env. Health Agent job position, and after conducting first and second round interviews, we hired Sainath Palini. He is a seasoned inspector coming to us from western MA, and he has agreed to a start date of April 24 th . We are so happy to have him join our team!
Permit Renewals/ Routine inspections	Tara has been keeping up with reviewing the online Waste Hauler permit reviews, Demolition reviews and other online permit requests as they are received. She has also been able to coordinate with Diana on having her shared part-time inspector staff, Roland Abuntori, assist with conducting routine food establishment inspections, including mobile food truck inspections, while the vacant position was being filled. Monica Pancare, our Needham Health Division part-time inspector, is also continuing her weekly routine food establishment inspections and has also been able to take on some additional follow-up food establishment inspections.
The Rice Barn	We received a notification from the Building Dept. about a denied variance request that was submitted by the owner to the MA Plumbing Board, which was submitted in order to alleviate the owner from having to conduct the required plumbing repairs on site at his food establishment. The local plumbing inspector at the Building Dept. was confused as to why the owner applied for a state plumbing variance when in fact it was the local inspectors that had required the owner to conduct those repairs. The owner has again gone silent with Public Health, after numerous inquiries made to follow-up with him on the status of required repairs that were brought to his attn. during the joint inspection conducted by Health and Building back on March 6 th . The Building Dept. has also not heard back from the owner about the status of the building, electrical, gas and plumbing items that needed to be addressed. No permits have been applied for to date. No updates have been received from the Fire Dept. re: installation of the required smoke and carbon monoxide detectors.
Certificate of Excellence Restaurant Grading initiative	Continued to work with Ecom Lu, along with Lynn Schoeff, on finalizing our well vetted and researched Certificate of Excellence Restaurant Grading initiative. We have also received some valuable guidance from our Food Code Pro electronic food inspection software expert, on coming up with some appropriate weighted point values for our Priority, Priority foundation and our Core food code violations, which can easily be incorporated into our food establishment inspection software, when we are ready to roll this out as a pilot program in Needham. We have enclosed a copy of this finalized draft Certificate of Excellence grading document. We aim to receive your comments and feedback, just in time for the wrap up of Ecom's Public Health master's degree capstone project, at the end of this month. We are so proud of all the hard work he's done.
Update on High St. Housing Case	A follow-up joint inspection was conducted by the Health and Building Depts. on March 8 th . We met with the occupant and the landlord on site, with a police escort. This continues to be a very challenging and time-consuming case, due to the continued tensions between the occupant and the landlord. Public Health continues to act as the intermediate between the

	two parties. The landlords' lawyer has also been brought into the loop with proper email communication being required for both parties, directly through their lawyer and copying our Needham Town Counsel. New items were brought to our attention by the occupant during this most recent inspection on March 8th, which we spoke to the landlord about at the conclusion of our visit. Improvements continue to be made by both parties however, many items still remain, and additional extensions have been offered, due to the fact that we are finding the coordination of these required licensed electrician and plumber visits to be very challenging. The occupant has limited dates/times to allow access to his unit and he has also taken it upon himself to secure his own licensed electrician and plumber to complete the work required, (especially since the Building Commissioner pointed out to the occupant during the inspection that the occupant should not be completing this work since he <u>is not</u> a licensed electrician or plumber). Our next joint follow-up inspection was pushed back to Friday, April 14th, due to the occupant needing additional time to complete his items.
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Other Public Health Division activities this month: (See report below.)

Activities

Activity	Notes
Demo Reviews/ Approvals	2 - Demolition signoffs: -#66 Oakcrest Rd. -#27 Colby St.
Disposal of Sharps Permits	0 – Disposal of Sharps Permits issued.
Septage/Grease Waste Hauler Permits Issued	0 – Septage/Grease Waste Hauler Permits Issued.
Trash/Recycling Waste Hauler Permits issued	4 - Trash and Recycling Waste Hauler Permits issued to: - Wellesley Trucking - Dalton Disposal - Town Line Disposal - Save That Stuff
Medical Waste Hauler Permit Issued	0 – Medical Waste Hauler Permits Issued.
Food - Plan reviews/Follow- ups/Permits issued	7 – Food Permit Plan Reviews/Follow-ups/Permits issued for: - <u>140 Kendrick (New coffee retail store)</u> – Proposal came through to install a new coffee retail store at the existing permitted site. UPDATE: Permit application reviewed. Need additional documentation submitted on grease trap spec in order to approve plan. (Still pending.) - <u>Zdorovie (35 Highland Circle)</u> - Plan review completed and approved. Owner will schedule a pre-operation inspection in the coming week. Once approved, permit will be Issued. UPDATE: Pre-operation inspection conducted. Permit issued. - <u>Temple Aliyah</u> – Food permit application received. Plan review in process. UPDATE: Plan review completed and approved. Pre-operation inspection conducted. Permit issued. - <u>Carter Memorial Methodist Church (Bread of Life Program)</u> – Pre-operation inspection still pending. Scheduled to be conducted in the next week. UPDATE: Still installing the required grease trap. Will call us once installed, to conduct a pre-operation inspection. - <u>McDonald's</u> – Plan review application received for food establishment renovations. Plan review in process. Building and Health Depts. will be requiring the establishment to shut down while renovations are being conducted. Building Permit Plan review sign-off still pending. UPDATE: Plans approved. McDonalds agreed to shut down the store during

	renovations. Health will need to conduct a pre-operation inspection, prior to reopening. - The Rice Barn – Online permit application received to re-open establishment by owner, Mr. Intha. Plan review is still in process. Conducted a walk-through to check current status of establishment. Need to set up a joint walkthrough inspection with the Building Dept. and also the Fire Dept. UPDATE: Joint inspection conducted. Many Building-related items observed that need to be addressed. Health has tried reaching out to owner, with status of items, with no reply. - Rainbow ADHC of Needham Riverside, LLC (185 2nd Ave.) - This is the old Zdorovie site. A new food establishment will be moving into that space. (Still in plan review process.)
Food – Temporary Event Permits issued	5 – Temporary Food event permits issued to: - Broadmeadow School PTC - Needham Baseball and Softball event (@ Defazio Field) - Memorial Park Field House pre-operation inspection - How's Your Meat? Food Truck - Moyzilla Food Truck
Food Complaints/Follow-ups	0/0 – No New Food Complaints received.
Housing Complaints/Follow-ups	0/2 - New Housing Complaints/Follow-ups conducted at: - High St. (0/2) - A housing order letter was sent to the landlord with timelines stated in the letter for addressing the items in both units on High St. A follow-up inspection was conducted on 2/16 to check on the status of the items. Updated letter sent. Will continue to work with Needham Building Commissioner in coordinating follow-up site visits to check on status of items and coordinate with occupant and landlord in addressing the items in a timely manner. UPDATE: A follow-up Health and Building joint inspection was conducted on March 8th. The landlord also came into the Public Health office for a brief check-in meeting on March 27th. Our next joint follow-up inspection was pushed back to Friday, April 14th, due to the occupant needing additional time to complete his items.
Nuisance complaints/Follow-ups	3/3 – New Nuisance Complaints/Follow-ups - St. Mary's St. - Received report from a neighbor about a lot of items and junk being stored in back yard of an abutting residential property. NOTE: This was on the Select Board, Health and Building Depts. radar prior to the pandemic. We had worked with the owner and verified progress on a routine basis, now it seems that the property has reportedly gotten worse, with many more items stored on site as reported by the neighbor. The Health and Select Board Depts. will conduct a joint inspection to verify the report and take pictures from the complainants back yard, and we will come up with a plan on how to get the owners to comply with the Town Junk By-law regulation requirements. - Hamilton Highlands – Report received from an occupant of pest concerns in her unit. Spoke to the property manager about the report, and he supplied the Health Division with copies of recent weekly pest control treatment reports for her unit. (Will continue to monitor.) - Domino's Pizza – A rep from Petrini stopped by the Health Division office to provide pictures of Domino's pizza cardboard boxes that were thrown in Petrini's dumpster that morning. Tara called and spoke to the new owner and Domino's Regional Manager about the concern. The store manager re-educated their store staff on the proper dumpster to use on site to dispose of their recycling materials. The manager also removed the cardboard from Petrini's dumpster and discarded it in their designated dumpster.
Planning Board Special Permit review	1 – Planning Board review conducted: - Farmers Market special permit review for Greene's Field location. Comments sent.
Septic Certificate of Compliance (COC)	0 – Septic Certificate of Compliance final signoffs issued.

Septic – Construction (minor repair) permit issued	1 – Septic Construction (Minor Repair) Permit issued for: - #65 Charles River St. - For a D-Box replacement. Site visit conducted to confirm new distribution box was installed. (As-built plan still pending, showing updated septic system component.)
Septic Installation inspection	1 – Septic installation inspection conducted: - #65 Charles River St. - To confirm new D-Box.
Septic Installer Exams/Permits Issued	2 - Septic System Installer Exams and Permits issued to: - Kenny Jones - Daniel Faria
Septic Addition/Reno. to a Home on a Septic reviews	0 – Addition/Reno. to a Home on a Septic reviews conducted.
Septic Plan Reviews	2– Septic Plan reviews conducted for: - #173 Stratford Rd. - Septic plans submitted for review. Plan review is still in process. - #18 Brookside Rd. - Revised septic plans received. Initial plan review conducted. Comments sent. UPDATE: Received revised septic plan. Still need a specific grading plan submitted which is still pending. Will also review grading plan with Town Engineer once received, since the grading is close to the street.
Septic – Soil/Perc Tests	2 – Septic Soil/Perc Tests conducted at: - #173 Stratford Rd. - #61 Crestview Rd.
Septic Trench permit issued	1 – Septic Trench permit issued to: - David Atkinson, Jr.
Septic – Abandonment Form received	1 – Septic abandonment/connection to sewer form received for: - 66 Oakcrest Rd.
Tobacco Complaint/Follow-up	1/1 - Tobacco Complaint/follow-up conducted for: - Needham Housing Authority (Linden/Chambers) – An occupant, who had reached out before, asked about the ongoing issue with an abutting occupant that continues to smoke in their unit. The smoke is reportedly migrating into her unit. Tara checked in with the Assist. NHA Director, and she confirmed that this smoking complaint has been brought to housing court and is currently in litigation. No updates to share on the status of that case. (Will check in again to get the latest updates and to confirm what the NHA steps will be in order to have the occupant smoke outside in the designated smoking areas on site.)
Well Permit online plan review	1 – Well permit online plan review conducted for: - #11 Ingleside Rd. - For 3 proposed closed-loop geothermal wells. (Plan review in process.) UPDATE: Added an irrigation well to the plan. Additional plan review conducted. Needed to add underground utility lines and setbacks to the plan. Plans approved, and applicant will need to receive approvals from additional Town Depts. prior to receiving an approval to drill letter.
Zoning Board of Appeals plan reviews	5 – Zoning Board of Appeals plan reviews conducted for: - #470 Dedham Ave. - #73 Highland Ave. - #238 Highland Ave. - #1584 Great Plain Ave. - #246 Forest St.

FY 23 Priority FBI Risk Violations of Interest

Establishment	Date	Inspection Type	Violation(s)	Corrective Action/Follow-up
7-Eleven	3/4	Routine	<i>Food separated and protected. 3-304.11 Food Contact with Soiled Items 15 - Front of house - Measuring thermometers stored in unclean environment. Severely soiled. Not fit for use. 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 container is refilled for a new consumer.</i>	Staff stated they will clean and sanitize prior to use and relocate to the proper area on site.
			<i>3-304.11 Food Contact with Soiled Items - Front of house - Unsanitary food trays, debris noted at hot food display case. Overall equipment for hot food storage is unacceptable. Remove all trays and clean internal area. 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 container is refilled for a new consumer.</i>	Staff removed and will clean and sanitize all areas.
			<i>Toxic substances properly identified, stored & used. 7-301.11 Separation 28 - Front of house. Toxic chemicals stored on shelf next to foodservice papers supplies and utensils. Store separated and segregated. 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.</i>	Staff removed toxic chemicals and relocated them to their designated area on site.
			<i>Plumbing installed; proper backflow devices 5-202.11 (A) Approved System/Cleanable Fixtures 51 - Back of house - Backflow devices draining into the 3-compartment sanitizer sink. Remove pipes so that no pipes drainage is leading into the 3-compartment sink. Code: A plumbing system shall be designed, constructed, and installed according to law.</i>	Owner to hire a plumber to address issue.
	3/18	Routine	<i>Food separated and protected. 15 3-304.11 Food Contact with Soiled Items - Kitchen - Ice machine severely soiled.</i>	PIC will empty and clean and sanitize ice machine and put on a

North Hill (Main Kitchen)			<i>Dump/Clean/Sanitize 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 container is refilled for a new consumer.</i>	more frequent cleaning and service schedule.
7-Eleven	3/18	Re-inspection	<i>Food separated and protected.</i> <i>15 3-304.11 Food Contact with Soiled Items - Front of house - Measuring thermometers stored in unclean environment. Severely soiled. Not fit for use</i> <i>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 container is refilled for a new consumer.</i>	Staff removed thermometers from that location and will clean and sanitize prior to use and relocate them to the proper area on site. Additional Notes: 3/18/23 - Reinspection Although most of the previous violations have been corrected, the physical facilities and floor areas where food is stored, or serviced are not clean or sanitary. Additional and more frequent cleaning is mandatory. The expectation is that all areas including floors, walls, backsplash and behind equipment remain clean, and free from litter and cleaned more frequently. Failure to correct and maintain may result in fines, suspension, or both. A second reinspection will be required.

Category	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	FY'23	FY'22	FY'21	FY '20	FY' 19	FY' 18
Biotech registrations/Plan rev./Insp.	1	0	0	0	1	1	0	0	0	0	0	0	3	3	0	1	1	1
Bodywork Estab. Insp.	0	0	0	0	0	5	0	0	0	0	0	0	5	5	6	7	14	11
Bodywork Estab. Permits	1	0	0	0	0	5	0	0	0	0	0	0	6	5	13	9	9	6
Bodywork Pract. Permits	0	0	0	0	0	5	0	0	0	0	0	0	5	8	12	23	21	22
COVID 19 Complaints	0	0	0	0	0	0	0	0	0	0	0	0	0	3	123	0	0	0
COVID 19 Follow Ups	0	0	0	0	0	0	0	0	0	0	0	0	0	3	122	0	0	0
Demo reviews	6	6	4	5	3	5	2	4	2	0	0	0	37	89	76	73	104	105
Domestic Animal permits	4	0	0	0	0	0	0	0	0	0	0	0	4	15	29	1	21	19
Domestic Animal Inspections	0	0	0	0	1	0	0	0	0	0	0	0	1	10	8	3	22	3
Food Service Routine insp.	12	11	10	15	26	27	19	18	21	0	0	0	159	194	134	149	200	225
Food Service Pre-oper. Insp.	0	1	1	3	1	2	3	1	2	0	0	0	14	22	16	48	12	32
Retail Food Routine insp. Or 6 month check in	0	1	2	2	0	0	0	0	0	0	0	0	5	11	12	33	46	60
Residential Kitchen Routine insp.	0	3	1	0	0	0	0	0	2	0	0	0	6	5	5	3	6	8
Mobile Routine insp.	0	0	0	0	2	1	0	0	0	0	0	0	3	10	10	4	17	13
Food Service Re-insp.	6	4	0	2	9	5	4	0	1	0	0	0	31	27	7	21	28	53
Food Establishment Annual/Seasonal Permits	0	0	1	32	23	66	5	0	2	0	0	0	129	138	134	155	140	171
Temp. food permits	4	4	4	2	0	1	1	2	5	0	0	0	23	37	9	67	134	163
Temp. food inspections	3	2	2	0	0	0	0	1	4	0	0	0	12	9	3	10	37	29
Farmers Market permits	1	0	2	0	0	0	0	0	0	0	0	0	3	16	15	14	14	14
Farmers Market insp.	11	11	18	15	0	0	0	0	0	0	0	0	55	149	124	158	229	127
Food Complaints	1	0	2	2	1	1	0	2	0	0	0	0	9	13	7	49	18	20
Follow-up food complaints	2	0	2	2	1	1	0	2	0	0	0	0	10	15	8	48	21	21
Food Service Plan Reviews	4	5	2	7	7	10	6	8	7	0	0	0	56	13	12	14	20	42
Food Service Admin. Hearings	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0
Grease/ Septage Hauler Permits	1	0	0	0	7	19	1	0	0	0	0	0	28	22	13	20	21	24
Housing (Chap II Housing) Annual routine inspection	0	1	0	8	0	0	0	0	0	0	0	0	9	10	7	7	0	14
Housing Follow-up insp.	1	0	6	5	1	0	0	0	0	0	0	0	13	3	2	0	0	5
Housing New Complaint	2	2	2	0	3	4	6	2	0	0	0	0	21	41	40	41	22	22
Housing Follow-ups	6	7	11	7	5	9	9	4	2	0	0	0	60	65	63	56	28	24
Hotel Annual inspection	0	0	0	0	1	2	0	0	0	0	0	0	3	3	3	3	3	3
Hotel Follow-ups	0	1	0	0	0	1	0	0	0	0	0	0	2	0	1	15	0	0
Nuisance Complaints	2	1	1	1	1	2	4	2	3	0	0	0	17	35	45	34	55	42
Nuisance Follow-ups	5	4	4	4	2	5	6	2	3	0	0	0	35	41	60	55	69	42
Pool inspections	0	0	0	0	0	7	0	0	0	0	0	0	7	15	15	13	20	12
Pool Follow up inspections	0	0	0	0	0	2	2	0	0	0	0	0	4	4	5	3	12	7
Pool permits	0	0	0	0	0	6	2	0	0	0	0	0	8	15	17	11	19	12
Pool plan reviews	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	44
Pool variances	0	0	0	0	0	4	2	0	0	0	0	0	6	6	5	6	5	7
Septic Abandonment	1	1	0	0	0	0	0	0	1	0	0	0	3	9	17	21	9	5
Addition to a home on a septic plan rev/approval	0	0	0	0	0	0	0	0	0	0	0	0	0	15	5	5	2	2
Septic Install. Insp.	2	0	1	0	1	6	0	0	1	0	0	0	11	19	11	13	21	28
Septic COC for repairs	1	0	0	0	1	0	0	0	0	0	0	0	2	3	2	5	3	1
Septic COC for complete septic system	0	0	0	2	0	0	0	1	0	0	0	0	3	4	1	3	4	3
Septic Info. requests	6	5	6	7	6	4	5	6	5	0	0	0	50	64	86	61	62	51
Septic Soil/Perc Test.	0	1	0	0	0	0	0	0	2	0	0	0	3	5	8	1	1	2
Septic Const. permits	0	0	0	0	1	1	0	0	1	0	0	0	3	6	6	6	6	5
Septic Installer permits	0	0	0	0	2	6	0	2	2	0	0	0	12	11	8	6	8	9
Septic Installer Tests	0	0	0	0	0	0	0	0	2	0	0	0	2	4	3	2	5	3
Septic Deed Restrict.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	3
Septic Plan reviews	2	3	3	5	2	2	2	1	2	0	0	0	22	21	14	8	9	23
Septic Trench permits	0	0	0	0	0	1	0	3	1	0	0	0	5	12				
Disposal of Sharps permits	0	1	0	0	1	7	1	0	0	0	0	0	10	7	8	7	7	9

Disposal of Sharps Inspections	0	1	0	0	1	9	1	0	0	0	0	0	0	12	8	8	7	7	7
Planning Board Subdivision Sp Permit Plan reviews/Insp. of lots	1	2	2	3	2	0	0	3	1	0	0	0	0	14	21	20	4	1	1
Subdivision Bond Releases	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Special Permit/Zoning	2	0	2	3	2	1	2	0	5	0	0	0	0	17	21	18	17	34	15
Tobacco permits	0	0	0	0	2	3	1	0	0	0	0	0	0	6	6	7	10	10	11
Tobacco Routine insp	0	0	0	0	0	0	6	0	0	0	0	0	0	6	12	7	8	14	18
Tobacco Follow-up insp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	3	3
Tobacco Compliance checks	0	0	0	0	0	0	6	0	0	0	0	0	0	6	6	6	30	30	41
Tobacco complaints	1	0	0	2	1	0	0	1	1	0	0	0	0	6	0	0	2	3	4
Tobacco Compl. follow-ups	1	0	0	2	1	0	0	1	1	0	0	0	0	6	0	0	1	3	4
Trash Hauler permits	0	0	0	0	1	1	1	1	4	0	0	0	0	8	23	16	15	17	14
Medical Waste Hauler permits	0	0	0	0	1	4	1	0	0	0	0	0	0	6	2	2	2	2	1
Well - Plan Reviews, Permission to drill letters, Insp.	2	4	1	0	0	0	0	4	1	0	0	0	0	12	10	11	2	6	2
Well Permits	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	1	1	0



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Emergency Preparedness

Month: March 2023

Staff members: Taleb Abdelrahim

Activities and Accomplishments:

Activity	Notes
Medical Reserve Corps	A. 2023-2024 Training Plan has been kicked off by offering two training opportunities through in-person & on-line training modules B. Coordinating with trainers at local & non-local level to come & speak to volunteers and different groups
Warming and Cooling Center Plan	Delivered the plan with updates and changes for review.
COVID After Action Reports - Improvement Plan	Delivered phase 1 & 2 Improvement Plan Portion with changes and adjusting wording for review.
Accreditation	Continuing to work on Domain 2 - Standard 2.2 Documentation.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Emergency Management

Date: March 2023

Staff member: Michael Lethin

Activities and Accomplishments

Activity	Notes
MEMA Quarterly EMD Meeting	Fire Chief/EMD Tom Conroy and Michael Lethin attended the Quarterly Regional Local Emergency Management Director's meeting. Valuable information was provided, including an After-Action Review of the Mass Casualty Incident at the Hingham Apple Store in November 2022.
Grants	Request for Quotes for a Hazmat Awareness Instructor has been sent out with a due back date of April 12 and an anticipated contract start date of April 24. Training will be provided to DPW staff.
EOC Training	The Town's partnership with MEMA continued with a regional Basic Emergency Operations Center course hosted at the Needham Public Safety Building and attended by three Town staff members.
Storm Response	The Town did hold a Storm Preparation/EOC meeting in advance of the March 14 winter storm. The response to the storm was strong and the storm was less impactful than forecasted.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Accreditation Team

Date: March 2023

Staff: Cindi Melanson and Lynn Schoeff

Activities and Accomplishments

Activity	Notes
Community Health Assessment	Continued discussion, review, and editing of document.
Accreditation Steering Committee	The Steering Committee met on March 23, 2023 The group discussed how Cindi and Lynn will support the domain leaders in their work.
Workforce Development Plan	Discussion about how to incorporate findings from MA Public Health Excellence grant program, the Capacity Assessment Results Toolkit (CART).
Public Health Accreditation Board trainings	Cindi Melanson attended PHAB Documentation Intensive Training Feb 23 Innovation Webinar Series: Exploring the New FPHS Capacity and Cost Assessment: The Public Health National Center for Innovations (PHNCI) at the Public Health Accreditation Board (PHAB) is launching the new Foundational Public Health Services (FPHS) Capacity and Cost Assessment, March 16, 2023
Individual support meetings with domain leaders	Cindi and Lynn began individual meetings with domain leaders to review details and requirements for each area; to take inventory of existing documents and those that may be updated; and to identify ways to support domain leaders. Met with Julie McCarthy and Taleb Abdelrahim in March.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Shared Services Grants – Public Health Excellence and Contact Tracing

Date: 4/14/2023

Staff members: Diana Acosta, Roland Abuntori, Jessica Kent, Michaela Bucca

Activities and Accomplishments

Activity	Notes
Environmental Health Work and Training	Diana and Roland attended Racial Equity 101: Building Foundational Knowledge and Skills to Advance Racial Equity which was sponsored by the Office of Local and Regional Health. Additional trainings are being held in April and BOH members or Public Health staff can register here: https://calendly.com/olhraciaequity/101training?month=2023-03. Roland completed: • Memorial Park food establishment inspection • Zdorovie ADH food establishment inspection • Baker's Best food establishment inspection • Al freshco food establishment inspection • Gari food establishment inspection • Moyzilla food truck inspection • Linden Chambers food establishment inspection • Shared Services meeting • Needham Golf Club food establishment inspection • Temple Aliyah food establishment inspection • How's Your Meat food truck pre operation inspection.
Shared Services Work	Diana is currently in process of obtaining licenses for FoodCodePro, HousingCodePro, PoolCodePro, and R360 for the Charles River Health District. Each municipality will have access to these inspectional programs while the regional inspectors will have access to a regional license where they can enter inspections for any municipality in our Shared Services Agreement. The first Working Group meeting was held on March 20, 2023. Each municipality had at least one representative attend the meeting. During the discussion, the goal of this process that came up the most is to increase communication and collaboration between the four towns, even if they don't arrive at an official IMA/MOU by June. It was agreed that mutual aid agreements should be pursued and implemented, at minimum, regardless of whether PHE grant funding would be used. Working Group members thought an approach would to begin with the obvious, easily attainable goals; then, having fostered collaboration and communication between the four communities, more ambitious projects will hopefully follow. The next meeting will be held on April 10, 2023. Diana is currently working on the Public Health Excellence Work plan based off of the recommendations given in the Capacity Assessment Results Toolkit. The Office of Local and Regional Health has shared a template that is to be submitted at the end of April 2023.
Contact Tracing	Michaela Bucca is continuing contact tracing in Medfield and Dover.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: **Substance Use Prevention MassCALL3 Grant** Dedham- Needham- Walpole- Westwood, Date: March 2023

Staff members: Carol Read, M.Ed., CAGS, CPS & Lydia Cunningham, MPH, CHES@ Activities and Accomplishments- Meetings and trainings attended through virtual platforms TEAMS- Zoom- FaceTime unless otherwise noted.

Activity	Notes
MassCALL3 Prevention Coordinator Onboarding processes- In person/ TEAMS meetings alternative days. Lydia Cunningham, MPH, CHES. Start date January 9 th . Full time position.	Continuation of overview of protocols, responsibilities and requirements related to Town of Needham Public Health (fiscal agent), DPH-BSAS (funder), and Communities MassCALL3 grant mission, strategic planning processes and cluster town coalition activities. Integration to local and state community stakeholder meetings including Norfolk County Sheriff Prevention, MAPC Substance Prevention, DPH- OLRH and cluster coalition meetings.
Communication with Digital Media Advertising Agencies- Weekly/Ongoing (3/2, 3/3, 3/7, 3/20, 3/22, 3/23)	Discussion: Potential vendors for SAMHSA: <i>Talk, They Hear You</i> PSA campaign- Needham, Dedham, Walpole, and Westwood residents. Cost, duration, ad type, recommendations. Draft: Scope of Work (SOW) for RFQ distribution.
MassCALL3 Key Community Member Interview- 3/7	Interview: Needham author, volunteer, and parent regarding perception of youth substance use in Needham and surrounding communities. Conducted following MassCALL3 interview guide.
Needham Public Health- Prevention- Strategic planning Needham alcohol compliance – alcohol regulation update 3/7 3/8 In person 3/10 TEAMS Karen Shannon, CPS- Julie McCarthy, Epidemiologist. Needham BOH meeting March 13 th 7:00pm Zoom.	Review: Needham data alcohol compliance (annual – trend analysis) TIPs training (annual attendance- survey responses trends) – Alcohol regulation proposed changes: CDC- WHO evidence informed strategies, alcohol access – community norms perception of harm.
Needham Alcohol Awareness Community Forum Flyer Distribution- Alcohol...Health, Safety, and Prevention Community Forum- April 13, 2023- Ongoing , Speakers: Dr. David Jernigan- Boston University, Dr. John Kelly- Harvard University, Dr. Amy Turncliff- iDECIDE, Elizabeth Parsons.	Communication- community members, leaders, organizers across Needham, Dedham, Walpole, and Westwood area and beyond. Distribution of flyer in PDF and JPG format via email, print, and social media. Promotion of event flyer on regular meetings cluster towns, prevention



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	coalitions, professional membership organizations and community groups.
Metropolitan Area Planning Council (MAPC) Substance Use in Massachusetts: Regional Paths to Prevention & Recovery, Session 3- 3/8 Mark Fine, Director of Municipal Collaboration Gary Christenson, Mayor, Malden, MA, Claire Hoffman, MAPC.	Session 3 of 3: <i>Solutions and Funding- Where Do We Go From Here?</i> Discussion: successes and strategies, information about opioid settlement funds in Massachusetts, break-out sessions, questions/group discussion, concluding remarks from Deb Schmill, President Becca Schmill Foundation.
DPH- BSAS Meetings MassCALL3 grant program- 3/8, 3/13 Amal Marks, Prevention Program Coordinator, Andrew Robinson, Lead Program Coordinator.	Review and discussion: Use of FY23 funds for community awareness campaign to build prevention capacity, upstream youth engagement. Movie theater/social media advertising campaign of SAMHSA: Talk, They Hear You PSA materials. Review: proposal detailing budget and plan for moving forward.
Needham Town Accountant Budget Meeting FY23 MassCALL3 Grant- 3/8 Lisa McDonough, Assistant Accountant	EIM Virtual Gateway: Reimbursement February expenses. Review FY23 year to date spending and encumbrances, UFR line amendment options, discussion of availability on unspent funds.
MetroWest Health Foundation conference: Supporting Girls Mental Health Together- 3/9 Martin Cohen, President & CEO Keynote: Barbara Fortier, CEO, Girl Scouts of Eastern Massachusetts <i>Girl Scouts and Mental Health- More than Cookies, Camp, and Crafts.</i>	Panel discussion: Facilitated by Anna Cross, Executive Director, MetroWest Nonprofit Network: Anna Nolin, Superintendent, Natick Public Schools. Allison Parks, Site Director, Wayside Youth and Family Support Network. Margie Rosalio, Founder, Voices of the Community, Discovering Hidden Gems. Breakout Sessions: including <i>The Power of Social Media- Helping Create a Healthy Balance for Girls</i> , Shari Kessel Schneider, EDC.
Needham Board of Health Meeting- Town of Needham Alcohol: Compliance, Policies, and Regulations- 3/13 BOH members, Tim McDonald, Director Health and Human Services, Karen Shannon, CPS, Lydia Cunningham, MPH, Carol Read, M.Ed., CPS.	Agenda: Review Town of Needham Alcohol Compliance- data, trends over time. Alcohol Regulations- proposed regulation changes, Needham Select Board public hearing. Discussion: Needham Board of Health priorities, proposed regulation changes, action steps – in person advocacy/letter.
Needham Local Emergency Planning Coalition (LEPC) 3/13 Michael Lethin, Manager	Agenda: FEMA Hazard Mitigation Assistance Overview: HMGP grant program scope-eligible activities- risk assessment.



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Town of Needham, procurement: Tim McDonald, Director Health & Human Services 3/13 3/20	TEAMS meetings: Review required components for SAMHSA Talk They Hear You community awareness campaign. Prioritization of goals and preparation of materials for April 13 th community forum. Review of FY23 budget amendments.
Needham Public Health Division (NPHD) Staff Meeting- 3/14 Timothy McDonald, Health & Human Services Director, Assistant Public Health Director: Tara Gurge, MPH, RS. Diana Acosta, MPH, Manager Shared Services program: Dover and Medfield Public Health Nurses: Hanna Burnett, Virginia Chacon-Lopez and staff.	Staff program sharing- project and program progress: policy updates, accreditation, traveling meals, emergency preparedness, environmental health, epidemiology, public health nursing, and substance use prevention. Review of BOH goals, FY23 goals. Flu, COVID-19 data, vaccination data. Staff review - discussion of NPHD and HHS policies. Next meeting: April 11, 2023
MA Department of Public Health (MDPH) OLRH Interagency Local Boards of Health Bi-Weekly Webinars- 3/14, 3/28 Dr. Sam Wong, Director OLRH. Phyllis Williams-Thompson, Erica Piedade, and Rachael Cain, Amy Berube-Rivera Workforce Development Credentialing Coordinator Office of Local and Regional Health- MDPH Dr. C Brown, Dr. Laurie Courtney and Hillary Johnson, Bureau of Infectious Disease and Laboratory Sciences, Donna Quinn, Office of Preparedness and Emergency Management, Cheryl Sbarra, Massachusetts Association of Health Boards Public Health Emergency ends May 11, 2023 <i>COVID-19 contact tracing ended 12/2021</i>	3/14 COVID-19 overview: test kit status- Shigellosis update – case counts/trends-reporting MAVEN EOHHS: Update Plan for MassHealth Eligibility Redeterminations April 2023 FFCRA Maintenance of Effort (MOE) provision- Protocols- guidance- local support providers and website: www.mass.gov/masshealthrenew 3/31 COVID-19 overview: vaccination – case trends – testing insurance coverage. Presentation: Registered Sanitarian (RS) and Certified Health Officer (CHO) New statutes, M.G.L. c. 111 §§ 27E and 27F, DPH administration of RS and CHO credentials, establishment RS and CHO requirements, duties, qualifications, application processes, and promulgation rules and regulations to administer RS and CHO credentials Effective January 1, 2023 RFR 223127 BIDLS Contact Tracing Grants: Third year continuation, shared services municipalities (or independently qualifying municipality) additional round of full funding FY24 starting July 1, 2023. (In addition to carry-forward of unexpended FY23 resources)
Middlesex County District Attorney Marian Ryan- Opioid Task Force Meeting- 3/15	Agenda: <i>Growing a New Heart</i> : Intersection of sexual and domestic violence and substance use, Erin Miller and Tanisha Arena. <i>Adolescent development and impact</i>



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	<i>of substance use on the developing brain: Dr. Sharon Levy, MD, MPH, Director Adolescent Substance Use and Addiction Program (ASAP), Boston Children's Hospital</i>
MetroWest Foundation- MetroWest Adolescent Health Survey- Community of Practice Meeting 3/16 Shari Kessel-Schneider, MPH, EDC	Discussion: Potential revisions- 2023 MetroWest Adolescent Health Survey (MWAHS). Distribution, priorities, and new areas of concern. Questions: What data has not been utilized? How can we improve online survey administration? New topics/questions, modification of existing questions.
National Academies of Sciences, Engineering, and Medicine- Addressing the Long-Term Impact of the COVID-19 Pandemic on Children and Families- 3/16	Presentation of new publication on the long-term impact of the COVID-19 pandemic on the lives of children and families. Speakers: Tumaini Rucker Coker, Chair- University of Washington, Kent McGuire, William and Flora Hewlett Foundation, Tina Cheng, Cincinnati Children's Hospital, Marci Ybarra, University of Wisconsin, Michelle Sarche, University of Colorado.
Town of Needham: Roundtable Discussions-Session 2: Unconscious Bias- 3/16 Rachel Glisper, Principal, Crossroads DEIB, LLC Next session: June 1, 2023	Town-wide Diversity Series: <i>Building an Inclusive Work Community</i> . Discussion: unconscious bias in the workplace, intervention strategies, setting standards and expectations in the workplace, group roleplaying scenario.
Needham Board of Health- 3/17 Tim McDonald, Director Health & Human Services, Diana Acosta, MPH, Shared Services Manager (Needham, Dover, Medfield) Next meeting: April 14, 2023 Upcoming meetings: 4/14/23, 5/12/23, 6/9/23	Agenda: Welcome and Public Comment Period, Review of Minutes, Staff Reports and COVID Update The Rice Barn Food Permit Discussion Charles River Public Health District- Capacity Assessment Resource Toolkit (CART) Report Public Health Excellence/Shared Services Working Group. Alcohol Compliance Needham Select Board Regulations, Revise Article 11: Biosafety Regulations in Needham, Brief Updates: Accessory Dwelling Units-Claxton Field - Needham Housing Authority -Preservation and Redevelopment Initiatives Opioid Trust Fund Town Meeting Warrant Articles (2)
Health Resources in Action, Office of Local and Regional Health (OLRH) Racial Equity Training- 3/20 Rachael Cain, DrPH, Deputy Director OLRH	Racial Equity 101 Training- <i>Building Foundational Knowledge and Skills to Advance Racial Equity</i> . Discussion: levels of racism, instances of racism in the



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	workplace, benefits and harms, group discussion.
MAPC-Alcohol, Health, and Safety in Massachusetts: A Status Report- 3/21 Dr. David Jernigan, Boston University School of Public Health, Elizabeth Parsons	Presentation: "Alcohol, Health and Safety in Massachusetts: A Status Report." Report summary slideshow, audience question-and-answer. April 13 th Alcohol Community Forum flyer distribution.
MassCALL3 DEI Capacity Building, RIZE LLC- 3/21 Nicole Augustine, MPH, Alison Brill, MPH. Diversity, Equity, and Inclusion consultation.	Review and discussion: strategic planning meetings, equitable data collection and display, DEI recommendations for capacity building.
Reconciling with Histories of Injustice- Boston University- 3/22 Yvette Cozier, Dean- Boston University School of Public Health, Lillie Jewel Tyson, Voices for Our Fathers Legacy Foundation, Christopher Koller, Milbank Memorial Fund	Presentation: lessons learned Tuskegee Syphilis Study, application and impact to public health and healthcare today. Discussion: how to move forward from instances of injustice, how to impact issues like COVID vaccination and medical mistrust.
Strategic Planning Meetings, MassCALL3-3/22 3/29 Jessica Goldberg, MPH, Prevention Solutions @EDC Consultant	Review and discussion: MassCALL3 Strategic Planning meetings- structure, timeline, content, editing/writing emails for recruitment. Selection of PSA materials and supplemental materials for social media and movie theater showing of SAMHSA Talk, They Hear You campaign.
Norfolk County District Attorney Michael Morrissey. Coalition Leader Monthly Meeting, Canton MA- 3/27 Jennifer Levine, Project Coordinator.	Discussion: upcoming events, support needed, trainings and education sessions, goals for upcoming meetings. Alcohol Community Forum flyer distribution.
Needham Alcohol Community Forum Planning Meeting- Alcohol...Health, Safety, and Prevention Community Forum April 13, 2023- 3/27 Tim McDonald, Director of Health and Human Services, Dr. David Jernigan- Boston University, Dr. John Kelly- Harvard University, Dr. Amy Turncliff, Rockfern Scientific Elizabeth Parsons, CDC.	Review and discussion: Agenda timing forum event structure, content, materials, Including experts' presentation time, panel discussion format and audience questions. Resources- options CDC- WHO data and research: prevention, addiction, adolescent brain development, evidence informed strategies to impact alcohol access. Hard copy and online packet.
Walpole Coalition for Alcohol and Drug Awareness Monthly Meeting- 3/28 Melissa Ranieri, Director Walpole PHD, Megan Leary, Patricia Fisher, Public Health Nurse. Next meeting: April 25 th	Agenda: Introductions, Walpole Police Department Update, Update on MassCALL3 Grant (by Carol Read and Lydia Cunningham), MA Behavioral Health Help Line, Norfolk DA's Office Opioid Crisis Settlement Grant,



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Massachusetts DPH: Suicide Prevention: Postvention: Responding to Schools, Workplaces, and Communities Following Suicide Conference-3/29 Darlyn Beaujour, Suicide Prevention Program Coordinator, Rebecca Ames, LICSW, Senior Clinical Manager and Larry Berkowitz, EdD, Director/Co-Founder of Riverside Trauma Center. Virtual 9:30am-4:30pm	Agenda: Introduction, Suicide: A Major Public Health Issue, Data Presentation, Defining Suicide, Risk Factors, Need for Training agenda: best practices- evidence informed principals related to suicide awareness, intervention and Postvention. Managing grief, case study examples. Break-out session: Postvention Tasks, Impact for Survivors, Memorials, Group Exercise, Key Takeaways- Resource listings, federal- state.
Boston University: A Conversation with Rochelle Walensky- Boston University- 3/30 Rochelle Walensky, Director, Centers for Disease Control and Prevention, Sandro Galea, Dean, Boston University School of Public Health	Interview: Background, COVID-19 specific questions, peer review process and credibility, impact of politics, lessons learned from HIV, COVID, MPox, climate change, emerging diseases. Audience questions.
Walpole Public Health Department- 3/30 Melissa Ranieri, Health Director- Walpole Substance Prevention Coalition	Review and discussion: opioid litigation funds, accrual, parameters for spending and acceptable spending uses. MassCALL3 strategic planning- Walpole stakeholder list and building prevention capacity in the town of Walpole.

Holidays: None

All processes related to drafting, finalizing, and posting Scope of Work/Request for Quotes for Digital Media Advertising Agency and Movie Theater Advertising Agency.

February monthly activities report- Needham Board of Health

NPHD staff collaboration, Needham alcohol regulation public hearing – Board of Health response: data compilation (Massachusetts: economic- social- use rates | Town of Needham: police OUI- compliance checks | MWAHS youth use and access | Needham adult treatment) evidence informed strategies aligned with access and availability.



NEEDHAM PUBLIC HEALTH DIVISION



Unit: Substance Use Prevention

Date: March 2023

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

Activities and Accomplishments

Activity	Notes
SPAN Projects/Events	• Social Host event: SPAN partnering with the Needham High PTC and administration, scheduled for May 2. Preparation included vetting speakers, preparing and promoting event flyer, arranging for filming of event with The Needham Channel/Natalie Guthrie, and preparing event handouts. • Drug Take Back Day, scheduled for April 22. Preparation included preparing and promoting event flyer, recruiting SALSA student volunteers. • Positive Community Norms campaign continued with the distribution of the second poster in 4-part series about shifting community misperceptions about Needham High student substance use. The messaging raises awareness that most Needham HS students do not use substances. • SPAN film, an educational film to raise awareness of SPAN, substance use prevention and the resources available to the community. Preparation included meetings with contractor, Boston Filmworks. providing contractor with background on SPAN and coalition history and recruiting SPAN volunteers to be interviewed. • Mental Health Awareness Team created first article for a parent newsletter called, <i>Should We Rethink Success?</i>, an initiative to address the dramatic decline in youth mental wellbeing in Needham. • SPAN committee meetings included Youth (3/6 & 17), Parent (3/16), Community Action Teams (3/14), and the Mental Health Awareness Team (3/2 & 28).
STOP Act grant	SAMHSA grant: STOPping Underage Access and Use of Alcohol: Codifying Youth, Parent and Retailer Education and Compliance in Needham, MA: The grant administration team: • Coordinated TIPS training for May 15, including creation of promotional flyer, Eventbrite page, and mailing to alcohol licensees • Coordinated alcohol compliance check logistics, including underage operative recruitment • Assisted in drafting letter from the Board of Health to the Needham Select Board with recommendations on proposed changes to the Needham Alcohol Regulations. • Drafted letter from the Board of Health to the Needham League of Women Voters about question 2 on the April Needham Town ballot. Position



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	statement signaled opposition to expansion of off-premise alcohol licenses with Needham. Met with Jacqueline Beale, SAMHSA, Grant Project Officer for STOP Act Grant for monthly check in.
SALSA	In March, 42 Youth Advocates contributed 288 hours of service in Needham. - The 84 Movement “Kick Butts Day of Youth Action” at the MA Statehouse-3/30. 17 Youth participated + 2 SPAN chaperones - Students met with Sen. Becca Rausch’s office & Rep. Denise Garlick to speak out on youth substance use and mental health concerns they have observed in Needham. 3 SALSA members wrote a Metro West Health Foundation grant application for \$10,000 in funding: “Middle School Wellness Initiative,” to establish a Pollard MS Wellness club which would include youth advocacy training, and pilot presentations to younger students. - Pollard Middle School Field trips to 8th grade wellness classes on 3/2 & 3/3 (16 SALSA members spoke to 65 8th graders during 3 Health/Wellness Classes - SALSA members participated in NIDA’s Drug & Alcohol Facts week in March w/Social Media posts 7 NHS SALSA members partnered with SPAN in March to deliver and hang PCN posters at 25 Needham businesses & schools
Parent Al-anon group	Meetings held every Monday evening. Attendance remains steady averaging 6- 14 people each week. Hometown Weekly continues free publishing of meeting announcements in Needham edition.
Training	- MA State Ethics online training, 3/17, Karen M. attended - Covid’s Impact on Substance Abuse webinar (Partnership to End Addiction), 3/23, Karen M. attended - Understanding & Preventing Student Marijuana Use (US Dept of Ed) 3/23, Karen M. attended - Substance Use in Massachusetts: Regional Paths to Prevention & Recovery MAPC, 3/8, Angi , Monica and Karen S. attended - Unconscious Bias Roundtable mtg, Town of Needham Human Resources Dept. with Rachel Glisper, Consultant, 3/16, Karen S. and Monica attended - It’s not the Dough It’s the Dopamine: The dangerous myth of responsible gambling, 3/16, Angi attended - Women and Alcohol: Drinking to Cope South Southwest PTTC, 3/23, Angi attended
Meetings	- MA Opioid Settlement Funds update, MA Attorney General and BSAS hosts, 3/7, Karen S. & Angi attended - Supporting Girls’ Mental Health, MetroWest Health Foundation host, 3/9, Angi, Karen S. attended



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| | <ul style="list-style-type: none">- Social host event planning with The Needham Channel, Natalie Guthrie, 3/10, Karen S.- Board of Health meeting on proposed changes to Needham alcohol regulations, discussion with Needham Public Health, 3/13, Karen S. attended- Needham Select Board Public Hearing on proposed changes to the Needham alcohol regulations, 3/14, Karen S. attended- Middlesex District Attorney's Opioid Task Force mtg, 3/15, Monica attended- SAMHSA Grant Project Officer meeting with Jacqueline Beale, 3/16, Monica, Jazmine and Karen S. attended- Project ECHO Cannabis Prevention Cohort meeting, 3/16, K. Shannon, Angi attended.- STOP Act grant meeting with Scott Formica, 3/17, Karen S. attended- Easthampton, MA Prevention Coordinators mtg, 3/20, Karen S. attended- Online Safety Coalition mtg, 3/27, Karen S. attended- Norfolk County District Attorney Coalition Leaders meeting, 3/27, Karen S. attended.- Newton Wellesley Community Collaborative meeting, 3/29, Angi and Karen S. attended |
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Summary for Month of March 2023: Focus this month included preparation of two letters drafted on behalf of the Board of Health about the Needham alcohol regulations and question 2 on the Needham April ballot for expansion of off-premise alcohol licenses, planning for a social host law community education event, production of a SPAN film, alcohol compliance check logistics and TIPS training promotion.



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



MEETING DATE: 4/14/2023

Agenda Item	Board of Health Re-Organization
Presenter(s)	Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
The Board of Health will discuss the re-organization of the Board.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
A vote will be required. Suggested Motion: "Mr. Chair, I nominate PERSON X and Person Y to serve as BOH Chair and Vice Chair, respectively."	
3.	BACK UP INFORMATION:
None.	