

MEMORANDUM

Project No. 210426-A-10

October 2, 2023

To: Jim Orr, Oregon Department of Environmental Quality

cc: Tamara Holden and Xiaofei Ren, Monroe Apartments Owner LLC

From:



Jasmin Toro, EIT
Project Engineer
jtoro@aspectconsulting.com



Carla Brock, RG
Principal Geologist
cbrock@aspectconsulting.com

Re: Former L.D. McFarland Creosote Wood Treating Facility, Milwaukie, Oregon (ECSI #887) – Initial Vapor Intrusion Assessment Results

Aspect Consulting, LLC (Aspect) prepared this memorandum to present the results of the initial vapor intrusion (VI) assessment at the Former L.D. McFarland Company, Ltd. (LDM) Creosote Wood Treating Facility in Milwaukie, Oregon (the Site¹) following completion of construction activities for the Phase II remedial action. The LDM property (Property) includes two parcels, referred to as Parcel 1 and Parcel 2 (Figure 1). The Oregon Department of Environmental Quality (DEQ) provides cleanup oversight under the requirements of the August 14, 2001 Stipulation and Consent Decree No. CCV0108179 (Consent Decree; State of Oregon, 2001).

Parcel 1 has been remediated to DEQ residential use exposure scenarios as part of the Phase I remedial action, completed in 2001. A Certificate of Completion for the Phase I work was received from DEQ in a letter dated July 11, 2002 (DEQ, 2002). Parcel 2 has been remediated to DEQ occupational/commercial use exposure scenarios as part of the Phase II remedial action in accordance with the Phase II Design Report (Aspect, 2020a). The remedial action on Parcel 2 was completed on August 8, 2023, as part of Property redevelopment. The forthcoming Phase II Construction Closeout Report will describe the Phase II remedial action.

The initial VI assessment was completed in August 2023 to evaluate potential VI risk to the Clubhouse, a new structure constructed on Parcel 2 as part of the Property redevelopment. This document describes the results of the VI assessment completed in general accordance with the *Guidance for Assessing and Remediating Vapor Intrusion in Buildings* (DEQ, 2010), the Initial VI Assessment Work Plan (Aspect, 2023), and DEQ's email approval (DEQ, 2023) of the Initial VI

¹ The Site is comprised of all areas where contamination came to be located. In addition to the LDM property (Parcels 1 and 2), this includes areas on the Milwaukie Marketplace property and the Union Pacific Railroad (UPRR) easement.

Assessment Work Plan.² The initial VI assessment was completed as described in the Initial VI Assessment Work Plan, with one exception. Indoor air samples planned for collection from Parcel 1's Building 2 to evaluate potential interference from new building materials were instead collected from Parcel 1's Building 4. Conditions within Building 4 were assumed to be similar to those within the Clubhouse since it had been completed more recently than Building 2. DEQ approved this modification prior to the sampling.

Background

On October 20, 2021, the LDM Property was purchased from Tyee Management Company, LLC by Monroe Apartments Owner LLC, as documented in the Closing Notice to DEQ (Tyee, 2021). The LDM Property was vacant until late October 2021, when construction for the Seven Acres Apartments (formerly Monroe Apartments) development began. The Phase II remedial action consisted of excavating Parcel 2 primary utility corridors and backfilling with clean import fill, capping Parcel 2, and managing Parcel 2 soil vapor. To manage Parcel 2 soil vapors, a PrePrufe chemical vapor barrier and radon mitigation system³ (referred to as the passive venting system), collectively comprising a VI mitigation system, was installed beneath the Clubhouse.

The chemical vapor barrier membrane and passive venting system was installed beneath the Clubhouse in response to a soil gas investigation (Bridgewater, 2018) conducted within Interim Action Excavation 5 (Figure 1) which is assumed to be the naphthalene source area.⁴ The soil gas investigation naphthalene detection exceeded DEQ's risk-based concentrations (RBCs) for urban residential exposure (39 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) and occupational exposure (360 $\mu\text{g}/\text{m}^3$) and is, therefore, of potential concern with respect to VI into the Clubhouse building located approximately 50 feet north of the source area. The passive venting system was constructed such that it can be easily converted to an active sub-slab depressurization system (SSDS) if a VI concern is identified in the Clubhouse.

The purpose of the VI assessment is to evaluate the performance of the chemical vapor barrier to protect Clubhouse indoor air from VI. Long-term monitoring to confirm protectiveness of the chemical vapor barrier will be described in the forthcoming Parcel 2 Operations and Maintenance Plan (OMP). This memo presents site conditions prior to sampling, sampling procedures and analysis, analytical data results, and recommendations. Laboratory standard operation procedures and the laboratory quality assurance manual are included in the Initial VI Assessment Work Plan (Aspect, 2023). Quality Assurance/Quality Control is described in the Phase II Sampling and Analysis Plan (Aspect, 2020b).

² In addition to the indoor air sampling scope outlined in the Initial VI Assessment Work Plan, DEQ requested an exhaust stack sample from the passive venting system effluent stack to be analyzed during a period of low barometric pressure and no recent rainfall, a notification of the proposed sampling date at least three days ahead of the sampling date, and a notification when the radon effluent stack construction is complete.

³ As stated in the Phase II Design Report, the radon mitigation system is not required for the purpose of radon mitigation, since the Clubhouse does not meet the occupancy threshold of the 2019 Oregon Structural Specialty Code; however, it is a well-established technology for mitigating sub-slab soil vapor intrusion into structures, and is just as effective for volatile organic contaminants such as naphthalene as it is for radon.

⁴ As documented in Bridgewater's soil gas investigation technical memorandum, the naphthalene concentration in a soil gas sample collected just outside the excavation footprint (sample HS1) did not exceed DEQ's RBCs. This result supports the assumption that the naphthalene source area is limited to the excavation footprint.

Site Conditions

A pre-sampling site assessment, documented in Attachment A, was conducted four weeks prior to collecting samples to identify building construction characteristics, heating and ventilation systems, and background sources of possible chemical contaminants that may influence the results of indoor sampling. Jason Hensel, the Parcel 2 construction superintendent with LMC Construction, was interviewed during the site assessment. Based on our interview with Mr. Hensel, Building 4's construction was completed on June 8, 2023, and the Clubhouse was completed on July 14, 2023. Following construction completion, minor dust-producing or volatile organic compound-containing construction repairs occurred in the Clubhouse until August 4, 2023.

The Clubhouse was under minor repairs at the time of the site assessment and construction preparation materials were observed including butcher paper, tile dust, painter's tape, and plastic wrapping. Building 4 units and exterior were free of construction materials and other interferences; however, the units were painted and carpeted approximately three weeks prior to the site assessment, and a paint-like odor from the new materials was observed. Existing construction drawings were used to complete the building evaluation form. Instructions for building occupants were provided to the Seven Acres management team and building occupants at least 48 hours prior to the sampling event.

Air Sampling Methods

Indoor and Ambient Air Sampling

- Aspect completed indoor air sampling over a 24-hour period on August 14 and 15, 2023. Indoor air sampling consisted of collecting two samples inside Parcel 2's Clubhouse Building and two samples inside Parcel 1's Building 4 to evaluate potential interference from new building materials. One ambient (outdoor) air sample was collected outside the Clubhouse and another outside Building 4. Sampling locations are shown in Figure 1.
- Ambient weather conditions on the sampling dates and barometric pressure leading up to sampling dates, as recorded in Portland, Oregon, are provided in Attachment B. Seven days prior to sampling, the average temperature was 74°F and total precipitation was 0.01 inch. Barometric pressure decreased leading up to the sampling event from 30.15 inches mercury (inHg) on August 12 to 29.8 inHg on August 14 and increased during the sampling event to a high of 29.95 inHg on August 15. The wind speed was documented at 11 miles per hour (mph) from the north with temperatures ranging from 69°F to 106°F at the start of the sampling event on August 14. The wind speed was 5 mph from the southwest with temperatures ranging from 73°F to 102°F at the end of sampling on August 15. Humidity ranged from 19 to 73 percent over the sampling period with no measured precipitation.

Sampling locations and observations are as follows:

- Clubhouse indoor and ambient air samples were collected at breathing zone height between 3 and 4.5 feet above ground. Indoor air samples targeted the areas with the greatest potential for VI. One indoor air sample (CH-IA1) was collected near the center of the building in the Clubroom near a concrete slab and chemical vapor barrier repairs completed in November 2022. A second sample (CH-IA2) was collected on the south side of the building within the work room between occupied offices and the maintenance room, where a fire sprinkler penetration through the concrete slab and chemical vapor barrier was

recently sealed. An ambient (outdoor) air sample (CH-AA) was collected outside of the Clubhouse on the east side of the building exterior, in an upwind location, away from wind obstructions.

- The Clubhouse building was occupied during business hours at the time of the sampling event and was recently furnished. The Clubhouse HVAC system was operating at the time of the sampling event, windows were not used, and doors were infrequently opened. The sample locations were visibly assessed for potential sources of cross-contamination and a photoionization detector (PID) was used to screen background levels of volatile organic compounds (VOCs) in the vicinity of each sample area. PID readings maintained at 0.0 parts per million (ppm) inside and outside the Clubhouse.
- Building 4 indoor and ambient air samples were collected at breathing zone height between 3.5 and 4.5 feet above ground. Building 4 indoor air samples were distributed throughout the first floor and were collected in Unit 102 on the west side of the building (B4-IA1) and in Unit 111 on the east side of the building (B4-IA2). An ambient (outdoor) air sample (B4-AA) was collected outside of Building 4 on the east side of the building exterior, in an upwind location, away from wind obstructions, and at breathing zone height.
- Building 4 units were unoccupied and unfurnished at the time of the sampling event. The HVAC system was operating in both units at the time of the sampling event, windows were opened, ceiling fans were turned on, and doors were infrequently opened when inspecting the samplers. The units sample locations were visibly assessed for potential sources of cross-contamination and a PID was used to screen background levels of VOCs in each sample area. A paint-like odor was observed in Unit 102. PID readings ranged between 0.3 and 0.5 ppm inside Unit 102, between 0.2 and 0.5 ppm inside Unit 111, and was consistently 0.0 ppm outside Building 4.

Effluent Stack Sampling

Aspect installed a permanent sample port into the passive venting system effluent stack in the Clubhouse attic to collect and directly assess soil vapors collected in the passive venting piping prior to emission above the Clubhouse roof. The sample port was installed in the only accessible location of the passive venting system, in the Clubhouse attic. The effluent stack sample port was installed by drilling a ¼-inch diameter hole directly into the passive venting PVC piping, threading a ¼-inch NPT ball valve port into the piping, and sealing the port with TaegaSeal PTFE tape and Herson SelfSealer, water based, non-toxic pipe sealant. PID readings in the Clubhouse attic were consistently 0.0 ppm during the sampling event.

Sampling Analysis

The sampling was performed in general accordance with the *Guidance for Assessing and Remediating Vapor Intrusion in Building* (DEQ, 2010). The indoor and ambient air samples were collected in 6-liter vacuum Summa canisters, and the effluent stack sample was collected in a 1-liter vacuum canister, that were individually certified “clean” by Friedman & Bruya, Inc. (F&B), a certified analytical laboratory in Seattle, Washington. Each indoor and ambient air canister was outfitted with a 0.2 micrometer (µm) filter, a vacuum gage, and dedicated flow regulators set at a fill rate for a 24-hour sampling event. The effluent stack sample was outfitted with a 0.2 µm filter, a vacuum gage, and a dedicated flow regulator set at a fill rate of 150-200 milliliter per minute

(mL/min) for a 6-minute sampling event. The effluent stack sample was collected directly from the sample port by connecting PFTE tubing to the sample port with silicone tubing. Samples were transferred under appropriate chain-of-custody documentation to the analytical laboratory, F&B. All samples were analyzed for naphthalene by EPA Method TO-15 in accordance with F&Bs Standard Operating Procedures (Aspect, 2023).

Analytical Results

Indoor, ambient, and effluent stack air sample results are summarized in Table 1. Sampling results are screened against the DEQ air inhalation risk-based concentrations (RBCs) for urban residential (0.20 ug/m^3) and occupational (0.36 ug/m^3) receptor scenarios, as defined in the Initial VI Assessment Work Plan (Aspect, 2023). Analytical laboratory reports are included in Attachment C. A photograph log showing sample locations and current conditions at the buildings is provided as Attachment D. Sampling results are detailed below:

- Naphthalene was detected in the north clubroom indoor, and effluent stack air samples at concentrations below the urban residential and occupational RBCs between 0.15 ug/m^3 and 0.17 ug/m^3 . The concentrations of naphthalene detected in indoor air and effluent stack air are similar to those detected in the ambient (outdoor) air sample at the Clubhouse where naphthalene was reported at a concentration of 0.17 ug/m^3 .
- Naphthalene was not detected above the laboratory reporting limit in the Clubhouse south work room indoor air sample; however, the reporting limit slightly exceeds the urban residential RBC, at 0.26 ug/m^3 .
- Naphthalene was detected in the Building 4 indoor air samples at concentrations above the urban residential and occupational RBCs between 1.4 ug/m^3 and 2.8 ug/m^3 . Naphthalene was detected slightly above the urban residential RBC, but below the occupational RBC in the Building 4 ambient air sample at 0.21 ug/m^3 .

Based on the ambient air sample results, indoor air within the Clubhouse is representative of urban background conditions and is not impacted by naphthalene in soil on Parcel 2. Building 4 naphthalene detections are likely a result of new building materials in unoccupied spaces with limited indoor air ventilation.

Summary of Findings and Recommendations

Results of the VI assessment indicate concentrations of naphthalene detected in Clubhouse ambient (outdoor) air, Clubhouse indoor air, and the air sample collected from the passive venting system effluent stack are below the urban residential RBC of 0.20 ug/m^3 and the occupational RBC of 0.36 ug/m^3 .

Concentrations of naphthalene detected in Building 4 ambient and indoor air samples exceed the urban residential RBC and/or the occupational RBC. The Building 4 air samples were collected to provide background data to evaluate potential interference from new building materials and the naphthalene detections in the Building 4 indoor air samples are likely a result of new building materials. No additional indoor air sampling is planned for Building 4.

To confirm the effectiveness of the chemical vapor barrier beneath the Clubhouse, the scope of work completed at the Clubhouse for the initial VI assessment will be repeated in approximately six

months, during the winter of 2024. Long-term operation and maintenance of the VI mitigation system, including a schedule for indoor air sampling, details for inspection and maintenance of the VI mitigation system, and triggers for activating the sub-slab depressurization system (SSDS) will be described in the Parcel 2 OMP, currently in preparation by Aspect.

References

Aspect Consulting, LLC (Aspect), 2020a, Phase I Sampling and Analysis Plan, Former L.D. McFarland Creosote Wood Treating Facility, Milwaukie, Oregon, Prepared for: Johnson Development Associates, November 24, 2020.

Aspect Consulting, LLC (Aspect), 2020b, Phase II Sampling and Analysis Plan, Former L.D.

McFarland Creosote Wood Treating Facility, Milwaukie, Oregon, Prepared for: Johnson Development Associates, December 21, 2020.

Aspect Consulting, LLC (Aspect), 2023, Initial Vapor Intrusion Assessment Work Plan, Former L.D. McFarland Creosote Wood Treating Facility, Milwaukie, Oregon, February 2, 2023.

Bridgewater Group, Inc. (Bridgewater), 2018, Results of Naphthalene Soil Gas Sampling at Former L.D. McFarland Wood Treating Site Milwaukie, Oregon, January 23, 2018

Oregon Department of Environmental Quality (DEQ), 2002, Phase I Certification of Completion L.D. McFarland Milwaukie Project ECSI No. 887 and No. 3331 Letter between Matt McClincy of DEQ and Les Lonning of L.D. McFarland Company, July 11, 2002.

Oregon Department of Environmental Quality (DEQ), 2010, Guidance for Assessing and Remediating Vapor Intrusion in Buildings, March 2010

Oregon Department of Environmental Quality (DEQ), 2023, Email Correspondence between Jim Orr (DEQ) and Jasmin Toro (Aspect Consulting, LLC), April 3, 2023.

State of Oregon, Clackamas County Department of Justice, 2001, Case No. CCV0108179 Stipulation and Consent Decree, Portland, Oregon, Filed August 14, 2001.

Tyee Management Company, LLC (Tyee), 2021, Closing Notice to DEQ Re: State of Oregon v. L.D. McFarland Company, Ltd., Stipulation and Consent Decree (CCV0108179) (the Consent Decree); Closing of Conveyance to Monroe Apartments Owner LLC/Copy of Recorded Deed/Effectiveness of Assignment/Assumption and Release, October 20, 2021.

Limitations

Work for this project was performed for the Guardian Real Estate Services LLC (Client), and this memorandum was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This memorandum does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Attachments:

- Table 1 – Initial Vapor Intrusion Assessment Results
- Figure 1 – Site Plan
- Attachment A – Building Evaluation Form
- Attachment B – Portland Weather Data
- Attachment C – Laboratory Analytical Results
- Attachment D – Photograph Log

V:\170573 Monroe Street Apartments\Deliverables\VI Assessment Memo\Final\VI Assessment Memo_Final.docx

TABLE

Table 1. Initial Vapor Intrusion Assessment Results

Project No. 210426 , Milwaukie, Oregon

			Analyte Unit	Naphthalene ug/m3
			Occupational RBC	0.36
			Urban Residential RBC	0.2
Sample Location	Sample Name	Sample Date		
Building 4 Samples				
Building 4 Ambient (East)	B4-AA-081423	08/14/2023	0.21 J	
Building 4 (West) Unit 102	B4-IA1-081423	08/14/2023	2.8	
Building 4 (East) Unit 111	B4-IA2-081423	08/14/2023	1.4	
Clubhouse Samples				
Clubhouse Ambient (East)	CH-AA-081423	08/14/2023	0.17 J	
Clubhouse Effluent Stack	CH-ES-081523	08/14/2023	0.15 J	
Clubhouse (North) Clubroom	CH-IA1-081423	08/14/2023	0.17 J	
Clubhouse (South) Work Room	CH-IA2-081423	08/14/2023	< 0.26	

Notes:

RBC - Risk Based Concentration

Grey Shaded - Identifies a detected result that exceeds the occupational RBC

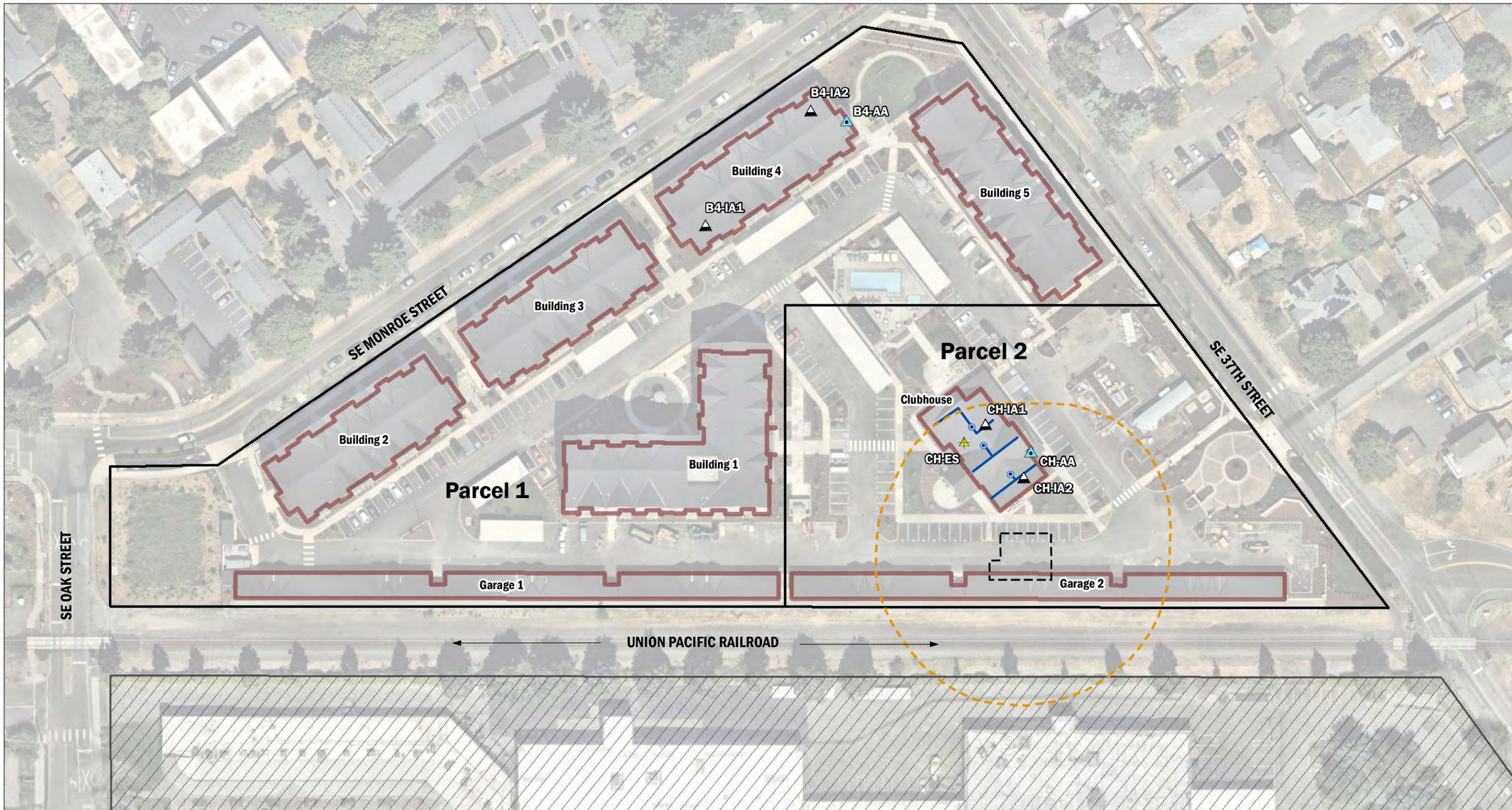
Red Text - Identifies a detected result that exceeds the urban residential RBC

"<" - Analyte not detected at or above the Reporting Limit (RL) shown

J - Result value estimated between the Method Detection Limit (MDL) and the RL

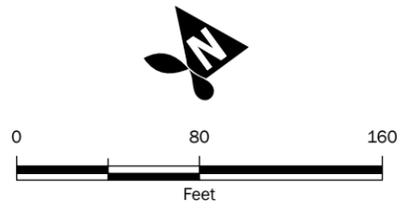
ug/m3 = microgram per cubic meter

FIGURE



- Effluent Stack Sample location
- Indoor air sampling locations
- Ambient air sampling locations
- Passive Venting Piping Up
- Passive Venting Piping
- Interim Action Excavation 5
- Area of Potential Naphthalene Concern
- Parcel 1 and 2 Boundaries
- Milwaukie Marketplace
- Clackamas County Tax Parcel

Notes:
 1. Site features are approximate.
 2. Passive/Radon Piping from Clubhouse Underground Plan, Arris Studio Architects and Robison Engineering Inc., Lynnwood, Washington, 4/23/2021.



Site Plan

Summer 2023 Vapor Intrusion Assessment
 Former L.D. McFarland Creosote Wood Treating Facility
 Milwaukie, Oregon

	SEP-2023	BY: DAH / SCC	FIGURE NO. 1
	PROJECT NO. 210426	REVISED BY: ZAS / NLK / HMD	

GIS Data: CA Projects\MonmouthApartments_210426\Delivered\Initial_Vapor_Assess\WPA_Meeting_Q1_Site_Plan.mxd | Coordinate System: NAD 1983 HARN StatePlane Oregon North FIPS 3601 | Date Saved: 9/27/2023 | User: Indran | Print Date: 9/27/2023

ATTACHMENT A

Building Evaluation Form

Complete this form for each building involved in indoor air testing

Preparer's Name: Alexandra Franco Date/Time Prepared: 9:00 7/17/2023

Preparer's Affiliation: Staff Scientist, Aspect Work Phone: 949-379-9342

Purpose of Investigation: Vapor Intrusion indoor air assessment

1. OCCUPANT:

Interviewed: Y/N

Last Name: N/A First Name: N/A

Address: _____

County: _____

Home Phone: _____ Alternate Phone: _____

Number of Occupants/persons at this location: _____

Age of Occupants: _____

2. OWNER OR LANDLORD: (Check if same as occupant)

Interviewed: Y/N

Last Name: Hensel First Name: Jason

Address: Constructionsupervisor@LMC Seven Acres Apt.

County: Multnomah

Home Phone: _____ Alternate Phone: _____

3. BUILDING CHARACTERISTICS:

Type of Building: (Circle appropriate response)

Residential (Bldg 4) School Commercial/Multi-use (Clubhouse)
Industrial Church Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	<input checked="" type="checkbox"/> Apartment House	Townhouse/Condos
Modular	Log Home	Other: _____

If multiple units, how many? Bldg 4 - 12 units first floor _____

If the property is commercial, type?

Business Type(s) _____

Does it include residences (i.e., multi-use)? Y/N If yes, how many? _____

Other characteristics:

Number of floors Bldg 4 = 3 floors Building age > 1 year (newly constructed)
Clubhouse = 1 + mezzanine level

Is the building insulated Y/N? How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns & qualitatively describe:

Airflow between floors
None, breezeway between units in Bldg 4

Airflow near source
N/A

Outdoor air infiltration
N/A

Infiltration into air ducts
N/A

Lowest level

5. BASEMENT & CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction: wood frame concrete stone brick Both slab on grade

b. Basement type: full crawlspace slab other _____

c. Basement floor: concrete dirt stone other _____

d. Basement floor: unsealed sealed
covered with _____ Flooring sealed (non-concrete seal)
Vapor barrier seal in Clubhouse

e. Concrete floor: unsealed sealed
sealed with _____

f. Foundation walls: poured block stone
other _____ concrete

g. Foundation walls: unsealed sealed waterproofing
sealed with _____

h. The basement is: wet damp dry moldy N/A

i. The basement is: finished unfinished partially finished

j. Sump present? Y N Bldg 4 Y Clubhouse elevator sump

k. Water in sump? Y N not applicable

Basement/Lowest level depth below grade: 2' foundation Clubhouse and Bldg 4 Clubhouse 4' elevator (feet)

Identify potential soil vapor entry points & approximate size (e.g., cracks, utility ports, drains)

None identified

6. HEATING, VENTING & AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	<input checked="" type="checkbox"/> Heat pump	Hot water baseboard
Space heaters	Steam radiation	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler
Other <u>Bldg 4 portable terminal air conditioner (PTAC) electrical wall heater</u>		
Clubhouse central AC condensing units; gas fireplace		

The primary type of fuel used is:

Clubhouse

<input checked="" type="checkbox"/> Natural gas	Fuel oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Natural gas hot water heater in attic (Clubhouse)
~~Small electric water heater in each Bldg 4 unit~~

Boiler/furnace located in: Basement Outdoors Main Floor
Other N/A

Air conditioning: Clubhouse Central air Window units Open windows Portable in Bldg 4
Heat Pump None

Are there air distribution ducts present? Y/N Y / N Clubhouse

Describe the supply & cold air return ductwork & its condition where visible, including whether there is a cold air return & tightness of duct joints. Indicate the locations on the floor plan diagram.

See floorplan for Clubhouse; no ducts for Bldg 4

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom
Almost never

Level General use of each floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement: _____

1st Floor Clubhouse community and mail; Bldg 4 residence

2nd Floor Clubhouse mezzanine community space; Bldg 4 residence

3rd Floor Bldg 4 residence

4th Floor _____

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- a. Is there an attached garage? Y N
- b. Does the garage have a separate heating unit? Y N NA
- c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, car) Y N Please specify N/A
- d. Has the building ever had a fire? Y N When _____
- e. Is a kerosene or unvented gas space heater present? Y N Where & Type? _____
- f. Is there a workshop or hobby/craft area? Y N Where & Type? _____
- g. Is there smoking in the building? Y N Frequency? _____
- h. Have cleaning products been used recently? Y N When & Type? Bldg 4
- i. Have cosmetic products been used recently? Y N When & Type? Bldg 4
- j. Has painting/staining been done in the last 6 months? Y N Where & When? Bldg 4 painted 1 month ago, Clubhouse currently being touched up
- k. Is there new carpet, drapes or other textiles? Y N Where & When? _____

l. Have air fresheners been used recently? Y N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes,
where vented? Bldg 4 and Clubhouse kitchen

n. Is there a bathroom exhaust fan? Y / N If yes,
where vented? Bldg 4 and Clubhouse bathrooms

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N Bldg 4

p. Has there been a pesticide application? Y / N When & Type? _____

Are there odors in the building? Y / N If yes
please describe: Bldg 4 faint textile odor (carpeting)

Do any of the building occupants use solvents or volatile chemicals at work? Y / N Unsure
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil
delivery, boiler mechanic, pesticide applicator, cosmetologist, carpet installer)
If yes, what type of solvents are used? _____
If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (circle
appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
 Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of
Installation: Clubhouse spring 2023 Bldg 4 summer 2023

Is the system active or passive? Active / Passive

9. WATER & SEWAGE

Water Supply: Public water Drilled well Driven well Dug well
Other: _____

Sewage Disposal: Public sewer Septic tank Leach field Dry well
Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family
relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided & explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement & first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

SEE ATTACHED

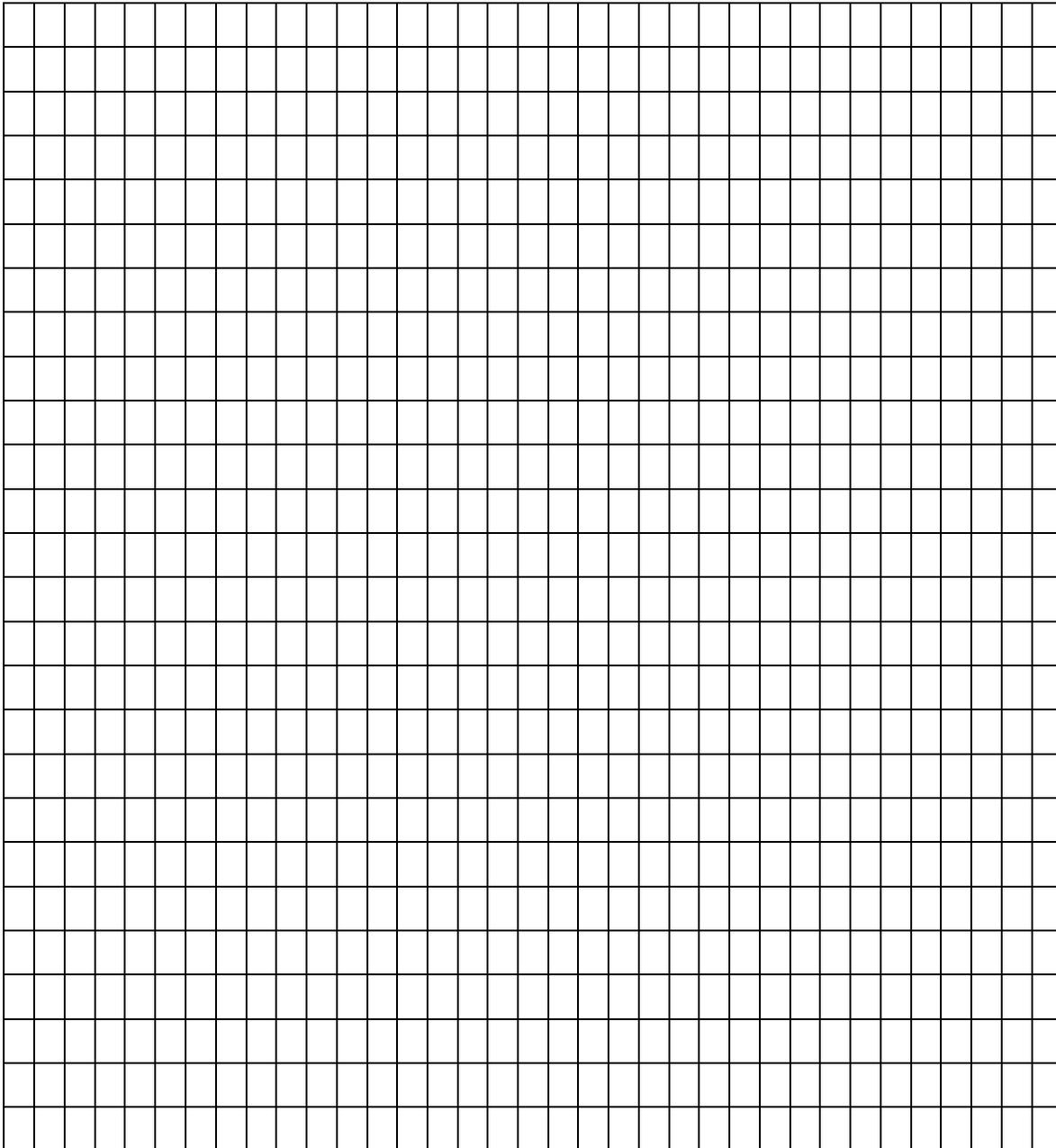
Basement:

A large grid for drawing a plan view sketch of the basement and first floor of a building. The grid is approximately 30 units wide by 30 units high. A horizontal line is drawn across the top of the grid, and a vertical line is drawn along the right side of the grid.

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc), outdoor air sampling location(s) & PID meter readings.

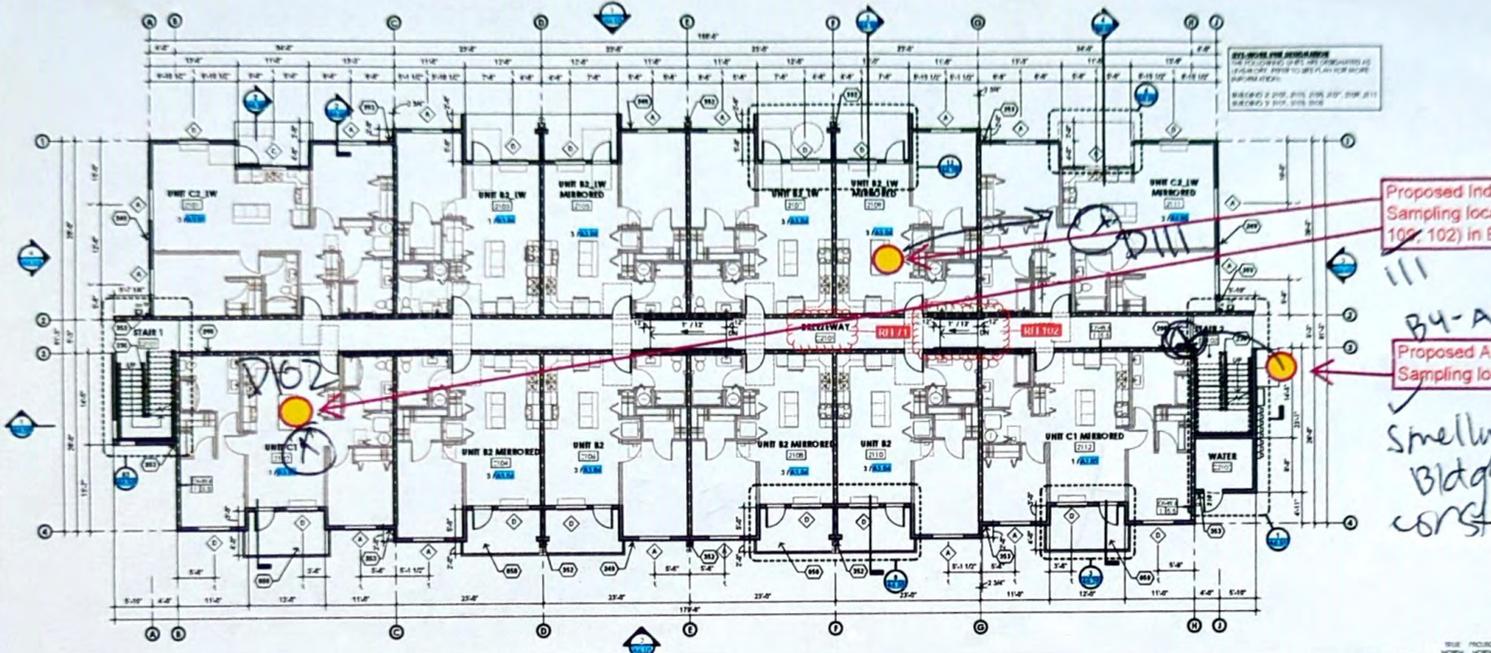
Also indicate compass direction, wind direction & speed during sampling, the locations of the well & septic system, if applicable, & a qualifying statement to help locate the site on a topographic map.






MEN





1 LEVEL 1 FLOOR PLAN

GENERAL NOTES

1. REFER TO CONTRACTOR FOR ALL REQUIRED MATERIALS AND METHODS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
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7. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
8. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
9. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
10. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.

Proposed Indoor Air Sampling locations (Unit 102, 102) in Building 4

Proposed Ambient Air Sampling location

Smelly Bldgs const

WALL LEGEND

WALL TYPE	DESCRIPTION
1	CONCRETE WALL
2	CMU WALL
3	GLASS WALL
4	GLASS CURTAIN WALL
5	GLASS PARTITION
6	GLASS PARTITION WITH OPERABLE PANELS
7	GLASS PARTITION WITH FIXED PANELS
8	GLASS PARTITION WITH OPERABLE PANELS AND FIXED PANELS
9	GLASS PARTITION WITH OPERABLE PANELS AND FIXED PANELS AND OPERABLE PANELS
10	GLASS PARTITION WITH OPERABLE PANELS AND FIXED PANELS AND OPERABLE PANELS AND OPERABLE PANELS

RCP NOTES

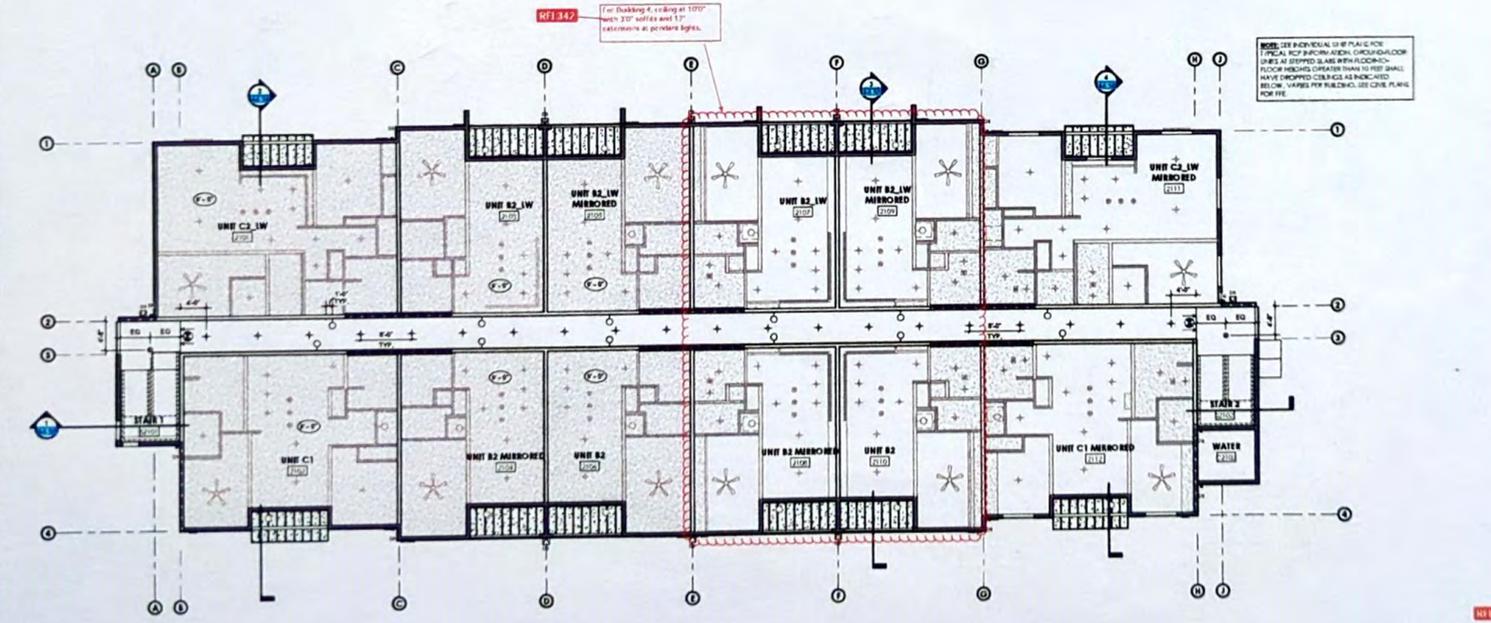
1. SEE ELECTRICAL PLAN FOR COORDINATION WITH ADDITIONAL INFORMATION AND CHANGES.
2. SEE ELECTRICAL PLAN FOR COORDINATION WITH ADDITIONAL INFORMATION AND CHANGES.
3. SEE ELECTRICAL PLAN FOR COORDINATION WITH ADDITIONAL INFORMATION AND CHANGES.
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9. SEE ELECTRICAL PLAN FOR COORDINATION WITH ADDITIONAL INFORMATION AND CHANGES.
10. SEE ELECTRICAL PLAN FOR COORDINATION WITH ADDITIONAL INFORMATION AND CHANGES.

RCP LEGEND

1	NOTION OF THE ELECTRICAL SYMBOL
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38	NOTION OF THE ELECTRICAL SYMBOL
39	NOTION OF THE ELECTRICAL SYMBOL
40	NOTION OF THE ELECTRICAL SYMBOL

REFERENCE NOTES

1. REFER TO CONTRACTOR FOR ALL REQUIRED MATERIALS AND METHODS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
3. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.
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10. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE IBC AND ALL APPLICABLE CODES.



2 LEVEL 1 RCP

ARRIS
GROUP SERVICES

1000 NE CHASE ST. STE. 200
PORTLAND, OR 97202
TEL: 503.253.1000
WWW.ARRISGROUP.COM

MONROE APARTMENTS OWNER, LLC
760 SW 9TH AVENUE, SUITE 2000
PORTLAND, OR 97205
(503) 802-3600

MONROE APARTMENTS
BUILDING 2-4
10999 SE 37TH, MILWAUKEE, OR 97222
BUILDING #2-4 - LEVEL 1 - OVERALL
FLOOR PLAN AND RCP

PROJECT: A20070
DATE: 12/21/2020
SHEET: A6.00

REFERENCE NOTES

- 018 ELECTRICAL WIRING SWITCHES - SEE ELECTRICAL DRAWINGS
- 026 GAS WATER - SEE PLUMBING DRAWINGS
- 036 GAS SERVICE - SEE PLUMBING DRAWINGS
- 100 SEE ELEVATOR WELLS FOR CURBS
- 101 DOOR HANDICAP TO CLEARANCES
- 217 DIRECT VIEW, SEE THROUGH GLASS WALLS, SEE FINISH & FURNISH SCHEDULES
- 230 FINISHED FLOOR, AT-RISC ACCESS LADDER
- 232 DECORATIVE WALL FINISHES
- 301 SIZE OF AT-RISC ACCESS WINGS
- 302 EXTERIOR CEILING FINISH, SEE SCHEDULES & FINISHES SCHEDULES
- 303 COMPRESSIBLE FLOORING, SEE FINISHES & FURNISH SCHEDULES
- 304 ALUMINUM PARTITION WALLS, SEE FINISHES & FURNISH SCHEDULES
- 305 SEE FINISHES & FURNISH SCHEDULES FOR FINISHES, WALLS, PARTITION WALLS, POWER, DATA & FIRE CABLES
- 306 SEE FINISHES & FURNISH SCHEDULES FOR FINISHES, WALLS, PARTITION WALLS
- 765 NON-STRUCTURAL ROOF MASS AT EXTERIOR COVERED AREA
- 767 STRUCTURAL BEAM SHOWING DIMENSIONS, SEE SCHEDULES
- 768 STRUCTURAL BEAM, S.D.S.
- 769 STRUCTURAL COLUMN, S.D.S.
- 800 4" ALUMINUM PARTITION CURBS AND DOWNPOUTS, SEE ROOF PLAN AND L.P.D.
- 806 BUILT-IN CYCLING STORAGE BENCHES FOR ACCESSIBILITY, SEE FINISHES & FURNISH SCHEDULES

WALL LEGEND

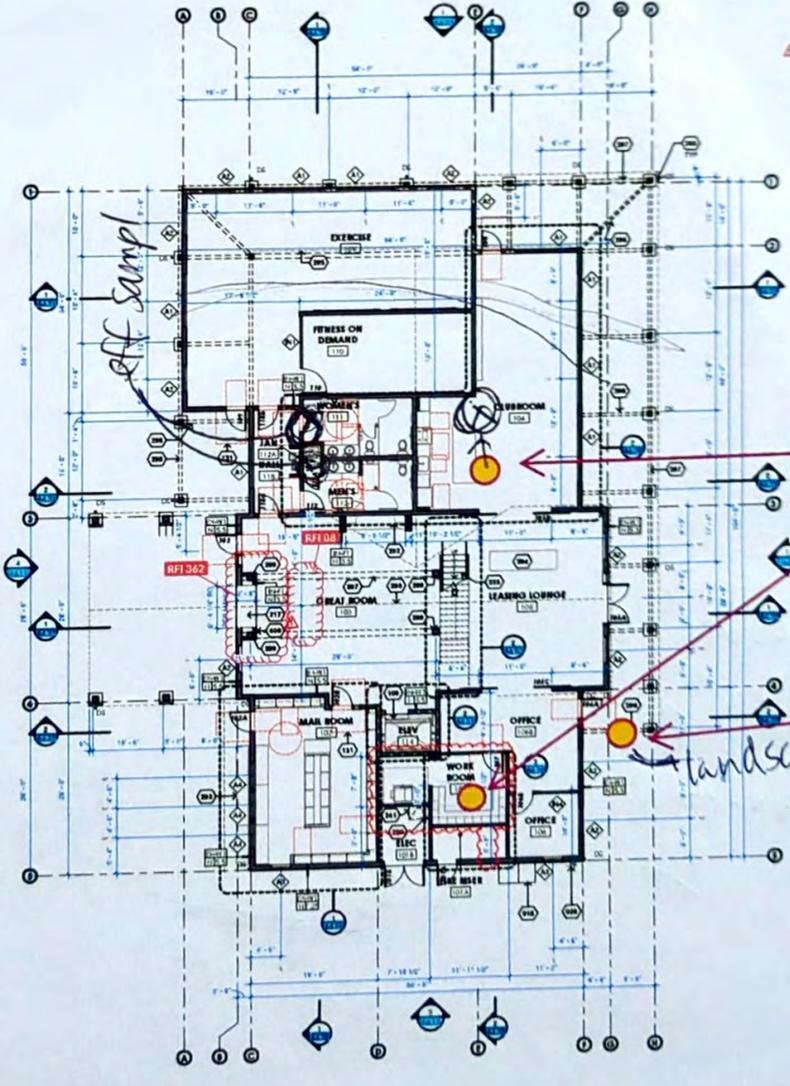
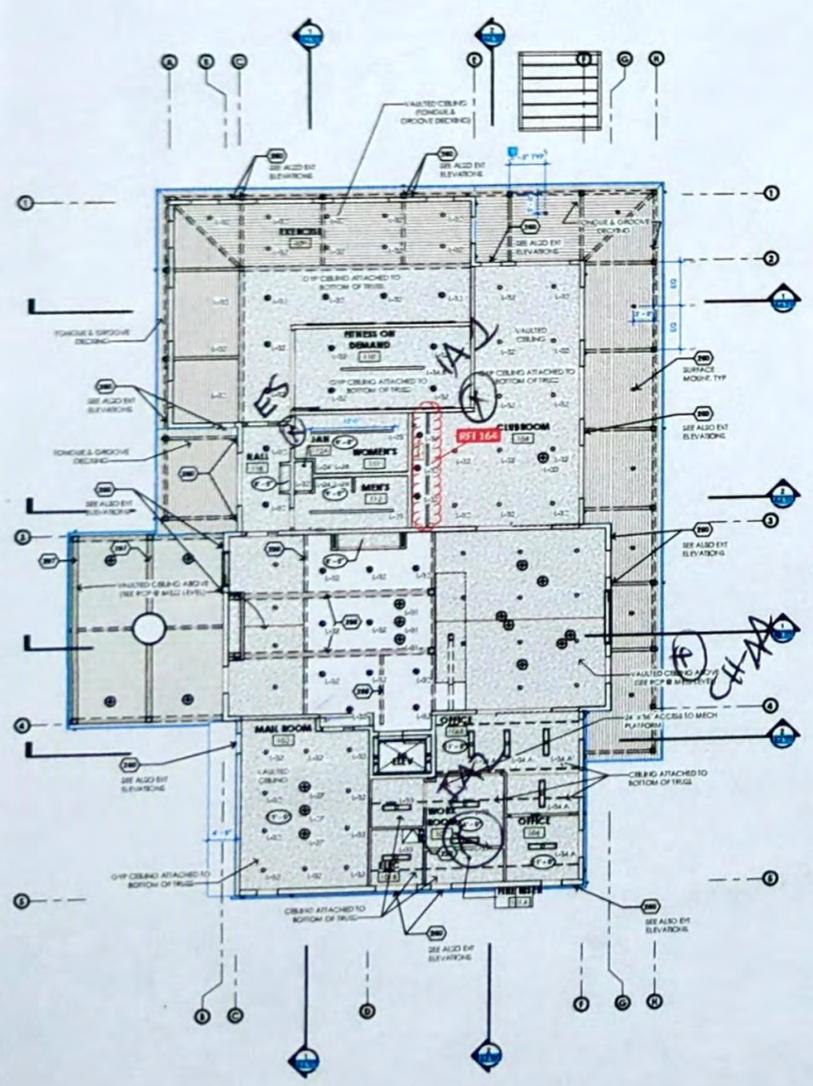
WALL TYPE	DESCRIPTION	THICKNESS
1	CONCRETE WALL	12" MIN.
2	CONCRETE WALL WITH FINISH	12" MIN.
3	CONCRETE WALL WITH FINISH AND INSULATION	12" MIN.
4	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH	12" MIN.
5	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS	12" MIN.
6	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS AND DOWNPOUTS	12" MIN.
7	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS AND DOWNPOUTS AND ROOF MASS	12" MIN.
8	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS AND DOWNPOUTS AND ROOF MASS AND ALUMINUM PARTITION CURBS	12" MIN.
9	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS AND DOWNPOUTS AND ROOF MASS AND ALUMINUM PARTITION CURBS AND DOWNPOUTS	12" MIN.
10	CONCRETE WALL WITH FINISH AND INSULATION AND EXTERIOR FINISH AND CURBS AND DOWNPOUTS AND ROOF MASS AND ALUMINUM PARTITION CURBS AND DOWNPOUTS AND ROOF MASS AND ALUMINUM PARTITION CURBS AND DOWNPOUTS AND ROOF MASS AND ALUMINUM PARTITION CURBS AND DOWNPOUTS	12" MIN.

GENERAL PLAN NOTES

1. ALL DIMENSIONS ARE UNLESS OTHERWISE NOTED.
2. ALL FINISHES ARE TO BE AS SHOWN ON FINISHES & FURNISH SCHEDULES.
3. ALL WALLS ARE TO BE CONCRETE UNLESS OTHERWISE NOTED.
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RCP NOTES

1. RCP NOTES ARE TO BE USED IN CONJUNCTION WITH THE RCP PLAN.
2. RCP NOTES ARE TO BE USED IN CONJUNCTION WITH THE RCP PLAN.
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Proposed Indoor Air Sampling Locations in Clubhouse

Proposed Ambien Air Sampling Location

landscape

off sample



MONROE APARTMENTS OWNER, LLC
 760 SW 9TH AVENUE, SUITE 220
 PORTLAND, OR 97205
 (503) 802-3600

MONROE APARTMENTS
 10999 SE 37TH AVENUE, MILWAUKEE, OR 97222
 CLUBHOUSE - FLOOR PLAN & RCP - LEVEL 1

NO.	REVISION	DATE

Project: A20070
 Date: 12/21/2020
 Drawn:

A4.00

ATTACHMENT B

Portland Weather Data

45.56 °N, 122.6 °W

Portland, OR Weather History

61° PORTLAND INTERNATIONAL AIRPORT STATION | CHANGE

TODAY

HOURLY

10-DAY

CALENDAR

HISTORY

WUNDERMAP

Daily

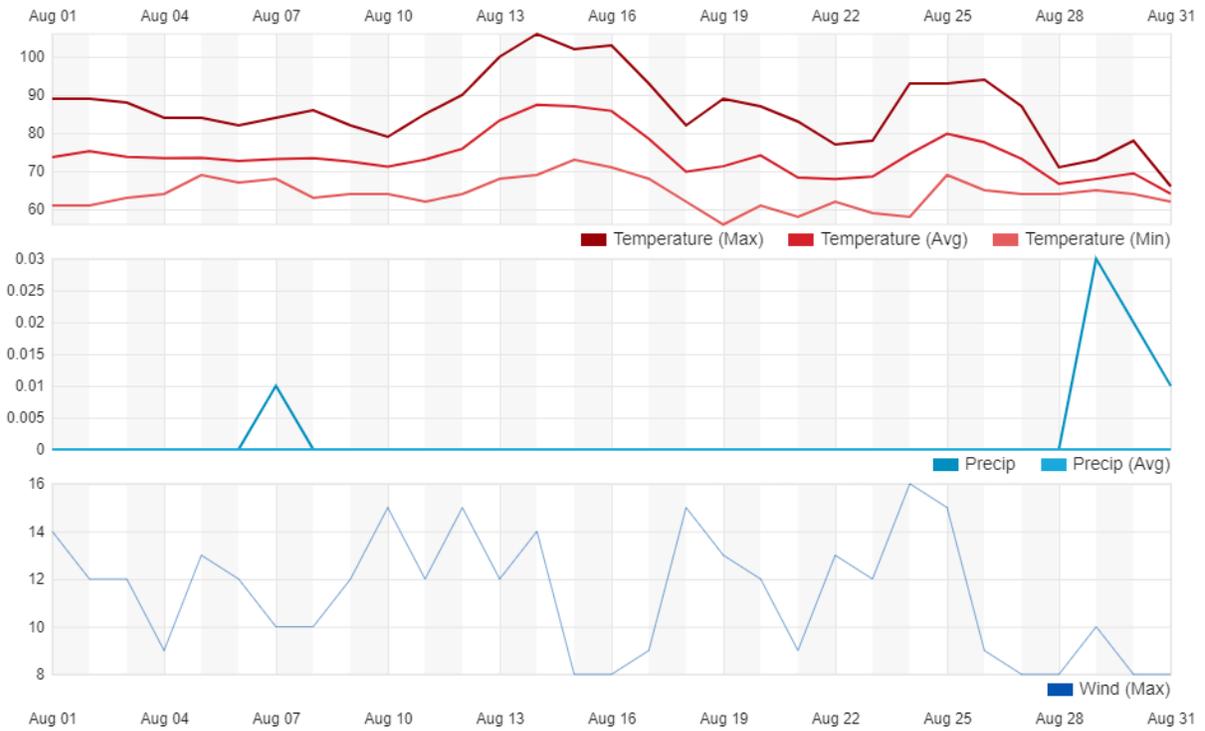
Weekly

Monthly

August

2023

View



Summary

Temperature (°F)	Max	Average	Min	▲	
Max Temperature	106	86.35	66		
Avg Temperature	87.38	74.09	64.07		
Min Temperature	73	64.13	56		
Dew Point (°F)	Max	Average	Min	▲	
Dew Point	65	55.07	37		
Precipitation (in)	Max	Average	Min	Sum	▲
Precipitation	0.03	0.00	0.00	0.07	
Snowdepth	0.00	0.00	0.00	0.00	
Wind (mph)	Max	Average	Min	▲	
Wind	16	5.92	0		
Gust Wind	23	0.9	0		
Sea Level Pressure (in)	Max	Average	Min	▲	
Sea Level Pressure	30.21	29.98	29.71		

Daily Observations

Time	Temperature (°F)			Dew Point (°F)			Humidity (%)			Wind Speed (mph)			Pressure (in)			Precipitation
	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	
Aug																
1	89	73.7	61	55	51.1	37	78	49.5	16	14	7.0	0	30.1	30.0	29.9	0.00
2	89	75.2	61	54	49.4	44	67	42.9	22	12	6.5	0	30.1	30.0	30.0	0.00
3	88	73.8	63	58	55.6	52	81	56.0	31	12	6.7	0	30.1	30.1	30.0	0.00
4	84	73.4	64	58	56.0	54	72	55.8	40	9	5.5	0	30.1	30.1	30.0	0.00
5	84	73.5	69	61	59.2	58	71	61.3	43	13	4.5	0	30.1	30.1	30.0	0.00
6	82	72.7	67	61	59.2	57	79	64.0	47	12	5.7	0	30.2	30.2	30.1	0.00
7	84	73.2	68	61	58.7	56	78	62.0	38	10	5.4	0	30.1	30.1	30.0	0.01
8	86	73.4	63	58	56.1	52	78	56.9	33	10	5.8	0	30.1	30.0	29.9	0.00
9	82	72.5	64	62	56.7	55	73	58.6	42	12	5.5	0	29.9	29.9	29.9	0.00
10	79	71.2	64	57	53.0	49	70	53.9	37	15	7.6	0	30.0	30.0	29.9	0.00
11	85	73.0	62	56	54.0	50	75	53.5	31	12	6.3	0	30.1	30.0	30.0	0.00
12	90	75.9	64	58	55.8	53	75	52.2	29	15	8.0	0	30.1	30.1	30.0	0.00
13	100	83.3	68	58	56.2	55	63	42.3	22	12	6.5	0	30.1	30.0	29.9	0.00
14	106	87.4	69	63	58.7	56	70	41.5	19	14	6.2	0	29.9	29.9	29.8	0.00
15	102	87.0	73	65	60.5	57	73	43.8	24	8	4.7	0	30.0	29.9	29.9	0.00
16	103	85.8	71	63	59.0	47	70	44.1	16	8	5.1	0	30.0	29.9	29.8	0.00

45.56 °N, 122.6 °W

Portland, OR Weather History

61° PORTLAND INTERNATIONAL AIRPORT STATION | CHANGE

TODAY

HOURLY

10-DAY

CALENDAR

HISTORY

WUNDERMAP

Daily

Weekly

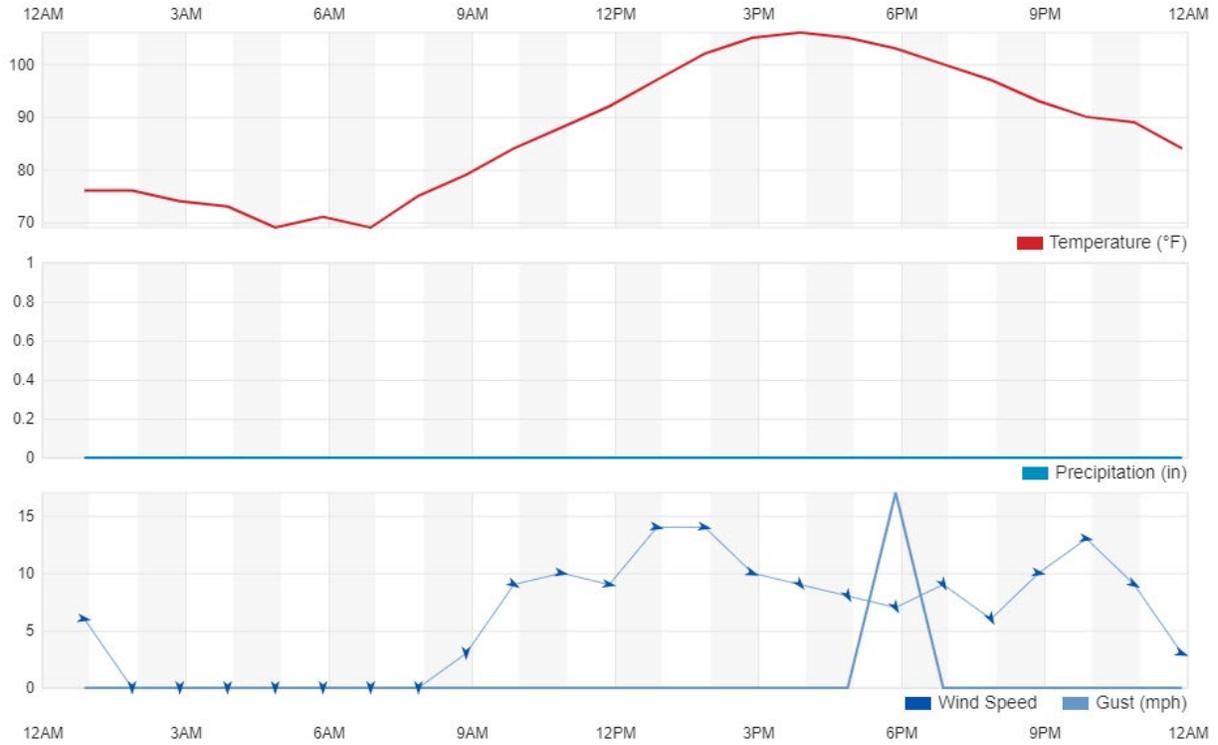
Monthly

August

14

2023

View



Summary

Temperature (°F)	Actual	Historic Avg.	Record	▲
High Temp	106	82.6	102	
Low Temp	69	59.3	47	
Day Average Temp	87.38	71	-	
Precipitation (in)	Actual	Historic Avg.	Record	▲
Precipitation (past 24 hours from 07:53:00)	0.00	--	-	
Dew Point (°F)	Actual	Historic Avg.	Record	▲
Dew Point	58.67	-	-	
High	63	-	-	
Low	56	-	-	
Average	58.67	-	-	
Wind (mph)	Actual	Historic Avg.	Record	▲
Max Wind Speed	14	-	-	
Visibility	10	-	-	
Sea Level Pressure (in)	Actual	Historic Avg.	Record	▲
Sea Level Pressure	29.93	-	-	

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:53 AM	76 °F	57 °F	52 %	W	6 mph	0 mph	29.93 in	0.0 in	Fair
1:53 AM	76 °F	56 °F	50 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
2:53 AM	74 °F	63 °F	68 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
3:53 AM	73 °F	60 °F	64 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
4:53 AM	69 °F	59 °F	70 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
5:53 AM	71 °F	61 °F	70 %	CALM	0 mph	0 mph	29.92 in	0.0 in	Fair
6:53 AM	69 °F	58 °F	68 %	CALM	0 mph	0 mph	29.93 in	0.0 in	Fair
7:53 AM	75 °F	61 °F	62 %	CALM	0 mph	0 mph	29.93 in	0.0 in	Fair
8:53 AM	79 °F	58 °F	48 %	VAR	3 mph	0 mph	29.93 in	0.0 in	Fair
9:53 AM	84 °F	58 °F	41 %	WNW	9 mph	0 mph	29.91 in	0.0 in	Fair
10:53 AM	88 °F	58 °F	36 %	W	10 mph	0 mph	29.90 in	0.0 in	Fair
11:53 AM	92 °F	59 °F	33 %	W	9 mph	0 mph	29.88 in	0.0 in	Fair
12:53 PM	97 °F	60 °F	29 %	W	14 mph	0 mph	29.86 in	0.0 in	Fair
1:53 PM	102 °F	59 °F	24 %	W	14 mph	0 mph	29.83 in	0.0 in	Fair
2:53 PM	105 °F	57 °F	20 %	WNW	10 mph	0 mph	29.81 in	0.0 in	Fair
3:53 PM	106 °F	56 °F	19 %	NW	9 mph	0 mph	29.79 in	0.0 in	Fair
4:53 PM	105 °F	57 °F	20 %	NNW	8 mph	0 mph	29.79 in	0.0 in	Fair
5:53 PM	103 °F	59 °F	23 %	NNW	7 mph	17 mph	29.78 in	0.0 in	Fair
6:53 PM	100 °F	60 °F	27 %	NNW	9 mph	0 mph	29.77 in	0.0 in	Fair
7:53 PM	97 °F	59 °F	28 %	NNW	6 mph	0 mph	29.78 in	0.0 in	Partly Cloudy
8:53 PM	93 °F	58 °F	31 %	W	10 mph	0 mph	29.80 in	0.0 in	Fair
9:53 PM	90 °F	58 °F	34 %	W	13 mph	0 mph	29.83 in	0.0 in	Fair
10:53 PM	89 °F	58 °F	35 %	WNW	9 mph	0 mph	29.83 in	0.0 in	Fair
11:53 PM	84 °F	59 °F	43 %	WNW	3 mph	0 mph	29.84 in	0.0 in	Fair

45.56 °N, 122.6 °W

Portland, OR Weather History

61° PORTLAND INTERNATIONAL AIRPORT STATION | CHANGE

TODAY

HOURLY

10-DAY

CALENDAR

HISTORY

WUNDERMAP

Daily

Weekly

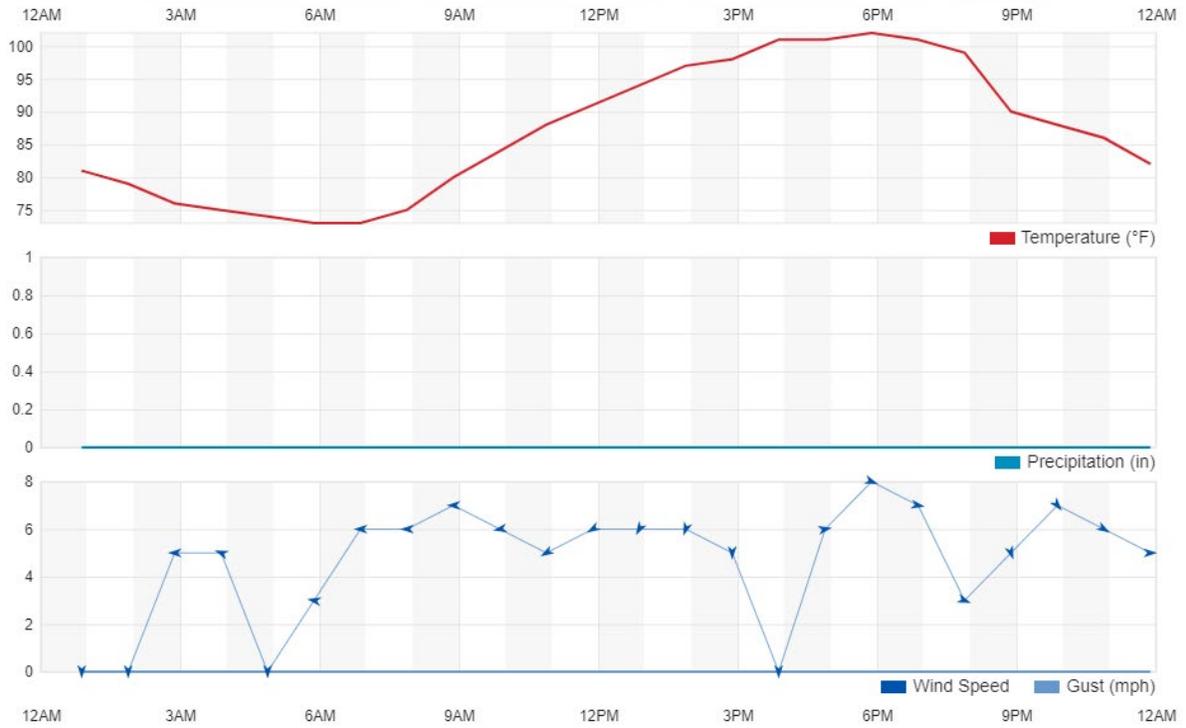
Monthly

August

15

2023

View



Summary

Temperature (°F)	Actual	Historic Avg.	Record	▲
High Temp	102	82.5	100	
Low Temp	73	59.2	51	
Day Average Temp	87	70.9	-	
Precipitation (in)	Actual	Historic Avg.	Record	▲
Precipitation (past 24 hours from 07:53:00)	0.00	--	-	
Dew Point (°F)	Actual	Historic Avg.	Record	▲
Dew Point	60.46	-	-	
High	65	-	-	
Low	57	-	-	
Average	60.46	-	-	
Wind (mph)	Actual	Historic Avg.	Record	▲
Max Wind Speed	8	-	-	
Visibility	10	-	-	
Sea Level Pressure (in)	Actual	Historic Avg.	Record	▲
Sea Level Pressure	29.96	-	-	

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:53 AM	81 °F	58 °F	45 %	CALM	0 mph	0 mph	29.85 in	0.0 in	Fair
1:53 AM	79 °F	61 °F	54 %	CALM	0 mph	0 mph	29.86 in	0.0 in	Fair
2:53 AM	76 °F	65 °F	69 %	E	5 mph	0 mph	29.87 in	0.0 in	Fair
3:53 AM	75 °F	64 °F	69 %	ESE	5 mph	0 mph	29.88 in	0.0 in	Fair
4:53 AM	74 °F	65 °F	73 %	CALM	0 mph	0 mph	29.89 in	0.0 in	Fair
5:53 AM	73 °F	64 °F	73 %	E	3 mph	0 mph	29.91 in	0.0 in	Fair
6:53 AM	73 °F	62 °F	68 %	E	6 mph	0 mph	29.93 in	0.0 in	Fair
7:53 AM	75 °F	59 °F	57 %	E	6 mph	0 mph	29.96 in	0.0 in	Partly Cloudy
8:53 AM	80 °F	59 °F	48 %	E	7 mph	0 mph	29.96 in	0.0 in	Partly Cloudy
9:53 AM	84 °F	58 °F	41 %	E	6 mph	0 mph	29.96 in	0.0 in	Partly Cloudy
10:53 AM	88 °F	57 °F	35 %	ENE	5 mph	0 mph	29.96 in	0.0 in	Mostly Cloudy
11:53 AM	91 °F	59 °F	34 %	ENE	6 mph	0 mph	29.96 in	0.0 in	Mostly Cloudy
12:53 PM	94 °F	59 °F	31 %	NNE	6 mph	0 mph	29.94 in	0.0 in	Mostly Cloudy
1:53 PM	97 °F	59 °F	28 %	NNE	6 mph	0 mph	29.93 in	0.0 in	Mostly Cloudy
2:53 PM	98 °F	59 °F	27 %	VAR	5 mph	0 mph	29.92 in	0.0 in	Mostly Cloudy
3:53 PM	101 °F	59 °F	25 %	CALM	0 mph	0 mph	29.90 in	0.0 in	Mostly Cloudy
4:53 PM	101 °F	60 °F	26 %	W	6 mph	0 mph	29.88 in	0.0 in	Mostly Cloudy
5:53 PM	102 °F	59 °F	24 %	WNW	8 mph	0 mph	29.86 in	0.0 in	Mostly Cloudy
6:53 PM	101 °F	60 °F	26 %	W	7 mph	0 mph	29.86 in	0.0 in	Mostly Cloudy
7:53 PM	99 °F	60 °F	28 %	WNW	3 mph	0 mph	29.87 in	0.0 in	Mostly Cloudy
8:53 PM	90 °F	63 °F	40 %	NNW	5 mph	0 mph	29.89 in	0.0 in	Partly Cloudy
9:53 PM	88 °F	62 °F	42 %	NW	7 mph	0 mph	29.92 in	0.0 in	Fair
10:53 PM	86 °F	59 °F	40 %	WNW	6 mph	0 mph	29.93 in	0.0 in	Fair
11:53 PM	82 °F	61 °F	49 %	W	5 mph	0 mph	29.94 in	0.0 in	Fair

ATTACHMENT C

Laboratory Analytical Results

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

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August 29, 2023

Jasmin Toro, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Toro:

Included are the results from the testing of material submitted on August 17, 2023 from the Monroe 210426, F&BI 308284 project. There are 11 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Aspect Data
ASP0829R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 17, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Monroe 210426, F&BI 308284 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
308284 -01	CH-AA-081423
308284 -02	CH-IA1-081423
308284 -03	CH-IA2-081423
308284 -04	CH-ES-081523
308284 -05	B4-AA-081423
308284 -06	B4-IA1-081423
308284 -07	B4-IA2-081423

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CH-AA-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-01
Date Analyzed:	08/18/23	Data File:	081820.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	0.17 j	0.032 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CH-IA1-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-02
Date Analyzed:	08/19/23	Data File:	081822.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	0.17 j	0.033 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CH-IA2-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-03
Date Analyzed:	08/19/23	Data File:	081823.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	<0.11 j	<0.02 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CH-ES-081523	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-04 1/3.0
Date Analyzed:	08/19/23	Data File:	081826.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	0.15 j	0.028 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	B4-AA-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-05
Date Analyzed:	08/19/23	Data File:	081821.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	0.21 j	0.040 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	B4-IA1-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-06
Date Analyzed:	08/19/23	Data File:	081824.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	2.8	0.54

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	B4-IA2-081423	Client:	Aspect Consulting, LLC
Date Received:	08/17/23	Project:	Monroe 210426, F&BI 308284
Date Collected:	08/14/23	Lab ID:	308284-07
Date Analyzed:	08/19/23	Data File:	081825.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Naphthalene	1.4	0.27

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Monroe 210426, F&BI 308284
Date Collected:	Not Applicable	Lab ID:	03-1942 MB
Date Analyzed:	08/18/23	Data File:	081815.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Naphthalene	<0.11 j	<0.02 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/29/23

Date Received: 08/17/23

Project: Monroe 210426, F&BI 308284

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 308266-02 1/5.8 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Naphthalene	ug/m3	<1.5	<1.5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	ug/m3	71	77	70-130

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ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY 08/17/23

308284

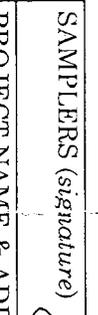
Report To Jessica Tere

Company Aspect Consulting

Address 710 2nd Ave #550 Seattle WA

City, State, ZIP Seattle WA 98104

Phone (206) 383-7443 Email jt@aspectconsulting.com

SAMPLERS (signature) 	
PROJECT NAME & ADDRESS MARRAS 10909 SE 37th Ave (Ally) Milwaukee, OR	PO # 210426
NOTES: Extra 1-L canister w/o label is a return Results Plus email data@aspectconsulting.com	INVOICE TO accounts payable @aspectconsulting.com

Page # 1 of 1

TURNAROUND TIME

Standard RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL
 Default: Clean following final report delivery
 Hold (Fee may apply): _____

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	ANALYSIS REQUESTED			Notes	
										TO15 Full Scan	TO15 BTEXN	TO15 cVOCs		
CH-AA-081423	01	40706	15209	IA SG	8/14/23	26.5	14:13	6	14:13				X	
CH-IA1-081423	02	28349	15211	IA SG	8/14/23	26	13:45	7	13:45				X	
CH-IA2-081423	03	20543	15214	IA SG	8/14/23	27	13:55	4	13:55				X	
CH-ES-081523	04	4175	66	IA SG	8/15/23	30	13:13	3	13:14				X	
B4-AA-081423	05	40703	15214	IA SG	8/14/23	26.2	15:05	3	14:30				X	
B4-IA1-081423	06	23229	15213	IA SG	8/14/23	30	14:40	6	14:40				X	
B4-IA2-081423	07	18574	15209	IA SG	8/14/23	730	14:55	2.5	14:55				X	
Samples received at 23 °C														

SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
Retinquished by: 		Alexandra Franco		Aspect Consulting		8/15/23	10:05
Received by: 		ANHPHAN		FS&		08/17/23	13:30
Retinquished by:							
Received by:							

Friedman & Bruya, Inc.
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 Fax (206) 283-5044

ATTACHMENT D

Photograph Log

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Photo 1. Clubhouse (north) Clubroom sample location general area during building site assessment (7/17/23).

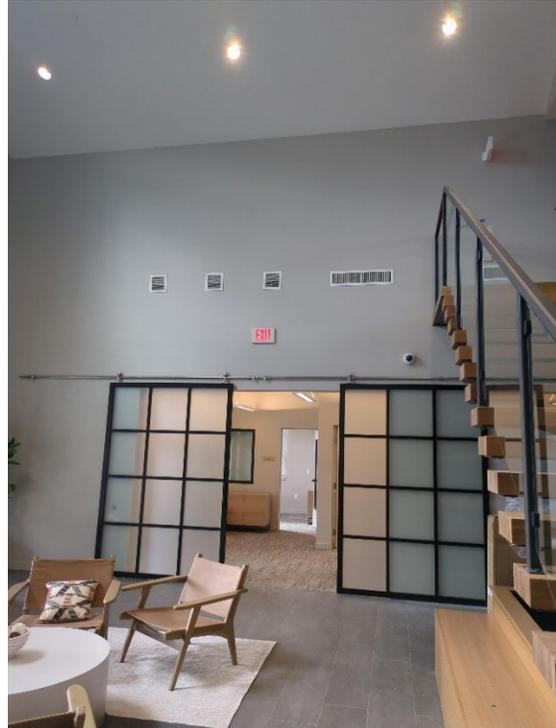


Photo 2. View into the Clubhouse (south) Work Room during building site assessment (7/17/23).



Photo 3. Sample CH-IA1-081423 collection in the Clubhouse (north) Clubroom (8/14/23).

ASPECT CONSULTING



Photo 4. Sample CH-IA2-081423 collection in Clubhouse (south) Work Room (8/14/23)



Photo 5. Ambient sample CH-AA-081423 collection outside of Clubhouse (east) (8/14/23).



Photo 6. Building 4 (west) Unit 102 sampling area during building evaluation (7/17/23).

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Photo 7. Sample B4-IA1-081423 collection in Building 4 (west) Unit 102 (8/14/23).



Photo 8. Sample B4-IA2-081423 collection in Building 4 (east) Unit 111 (8/14/23).



Photo 9. Ambient sample B4-AA-081423 collection at Building 4 (east) stairwell breezeway (8/14/23).



Photo 10. Sample CH-ES-081523 collection from passive venting system effluent stack in Clubhouse attic (8/15/23).



Photo 11. Sample CH-ES-081523 collection from passive venting system effluent stack in Clubhouse attic (8/15/23).