October 29, 2024

Mr. Shad Bernhoft
Walls Property Management
5210 Russell Avenue NW #100
Seattle, Washington 98107
shad@wallspropertymanagement.com

RE: TECHNICAL MEMORANDUM – Follow-Up Vapor Assessment Results
Chinook Development
1446 NW 53rd Street
Seattle, Washington 98107
AEG Atlas Project No. 21-101
VCP ID No. NW3324

Dear Mr. Bernhoft:

AEG Atlas, LLC (AEG), has prepared this Technical Memorandum for the purpose of presenting a summary of the follow-up vapor sampling activities at the *Chinook Development* located at the above-referenced address in Seattle, Washington (Site) (Figure 1, *Vicinity Map*). Following installation and startup of the sub-slab depressurization (SSD) systems at the Site, AEG sampled sub-slab vapor and indoor air in April 2024. Following their review of the results, the Washington State Department of Ecology requested that a follow-up event be performed to evaluate any potential seasonal variation in the results. The Site's current layout is illustrated on Figure 2, *Site Map*.

VAPOR ASSESSMENT

On October 23, 2024, AEG performed a vapor assessment that included the following:

- Collected two sub-slab vapor samples (53rd-108-SG and 53rd-BR-SG) from the SSD system sampling ports on the first floor of the Site building in Room 108 and the Bike Room, respectively, using 1-liter (L) Summa canisters equipped with 10-minute regulators.
- Collected two indoor air samples (53rd-108-IA and 53rd-BR-IA) from Room 108 and the Bike Room, respectively, using 6-L Summa canisters equipped with 24-hour regulators.
- Collected one background ambient air sample (53rd-OUT-IA), which was placed outside and upgradient of any suspected contamination, using a 6-L Summa canister equipped with a 24-hour regulator.

- Submitted all samples to a Washington State-accredited analytical laboratory, following industry-standard chain-of-custody procedures, for the following laboratory analyses:
    - Air-phase hydrocarbons (APH), benzene, toluene, ethylbenzene, xylenes, naphthalene, and tetrachloroethylene (PCE) and daughter products via Method TO-15.

ANALYTICAL RESULTS

The analytical results of the sub-slab vapor samples collected from Room 108 (53rd-108-SG) and the Bike Room (53rd-BR-SG) indicated the constituents analyzed were not detected at the laboratory reporting limits (non-detect).

The analytical results of the indoor air samples were adjusted for contributions of contaminants from outdoor air using the analytical results of the ambient air sample (53rd-OUT-IA). The adjusted analytical results of the indoor air sample collected from the Bike Room (53rd-BR-IA) indicated the presence of naphthalene at a concentration flagged by the laboratory as an estimate due to the analyte reporting below the standard reporting limit. All other constituents were either non-detect, or detected at concentrations below their respective cleanup levels.

Sample locations are illustrated in Figure 2, *Site Map*, and Figure 4, *Floor Plans – Main Level*. Analytical results are presented in Table 1, *Soil Gas, Sub-Slab Vapor, and Indoor Air Analytical Results.* Laboratory datasheets are provided in Appendix A, Supporting Documents, *Laboratory Datasheets.*

DATA EVALUATION AND RECOMMENDATIONS

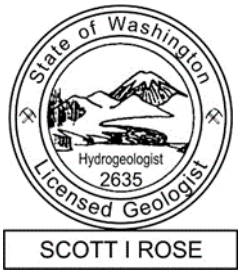
Significant soil disturbance occurred at the Site during building construction, and a vapor barrier and two SSD systems were installed as part of the building foundation. These efforts have proved to be successful in mitigating any potential impacts in soil gas from migrating into indoor air of the finished building. The source of naphthalene detected in the indoor air sample collected from the Bike Room is unclear. Given this sample was collected adjacent to the sample collected from the SSD system (53rd-BR-SG), which was non-detect for naphthalene, suggests the source is not due to vapor intrusion but elsewhere in Bike Room.

AEG recommends Ecology review of the work performed to date in consideration of a No Further Action (NFA) opinion. An environmental covenant summarizing the engineering controls in place at the Site was previously provided to Ecology for review.

If you have comments or questions, please contact our office at your convenience.

Sincerely,

AEG Atlas, LLC



Scott Rose, L.H.G.
Director of Technical Services

Attachments: Figure 1 – *Site Location Map*
Figure 2 – *Site Map*
Figure 3 – *SSD Detail*
Figure 4 – *Floor Plans – Main Level*

Table 1 – *Summary of Soil Gas, Sub-Slab Vapor, and Indoor Air Analytical Results*

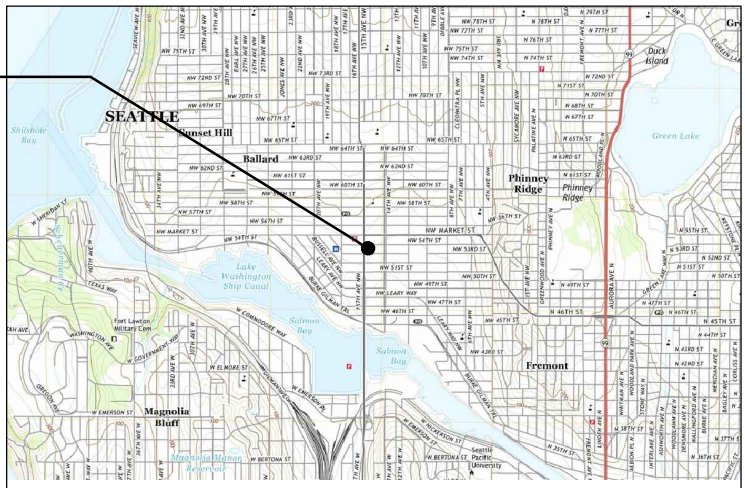
Appendix A – Supporting Documents*:*
Laboratory Datasheets

FIGURES

2633 PARKMONT LANE SW SUITE A • OLYMPIA, WA • 98502-5751
Phone: 360.352.9835 • Fax: 360.352.8164 • Email: admin@aegwa.com

FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
21-101_21Q2.DWG	ICD	6/8/2021	JS	6/8/2021	JS	6/8/2021	21-101

PROJECT LOCATION



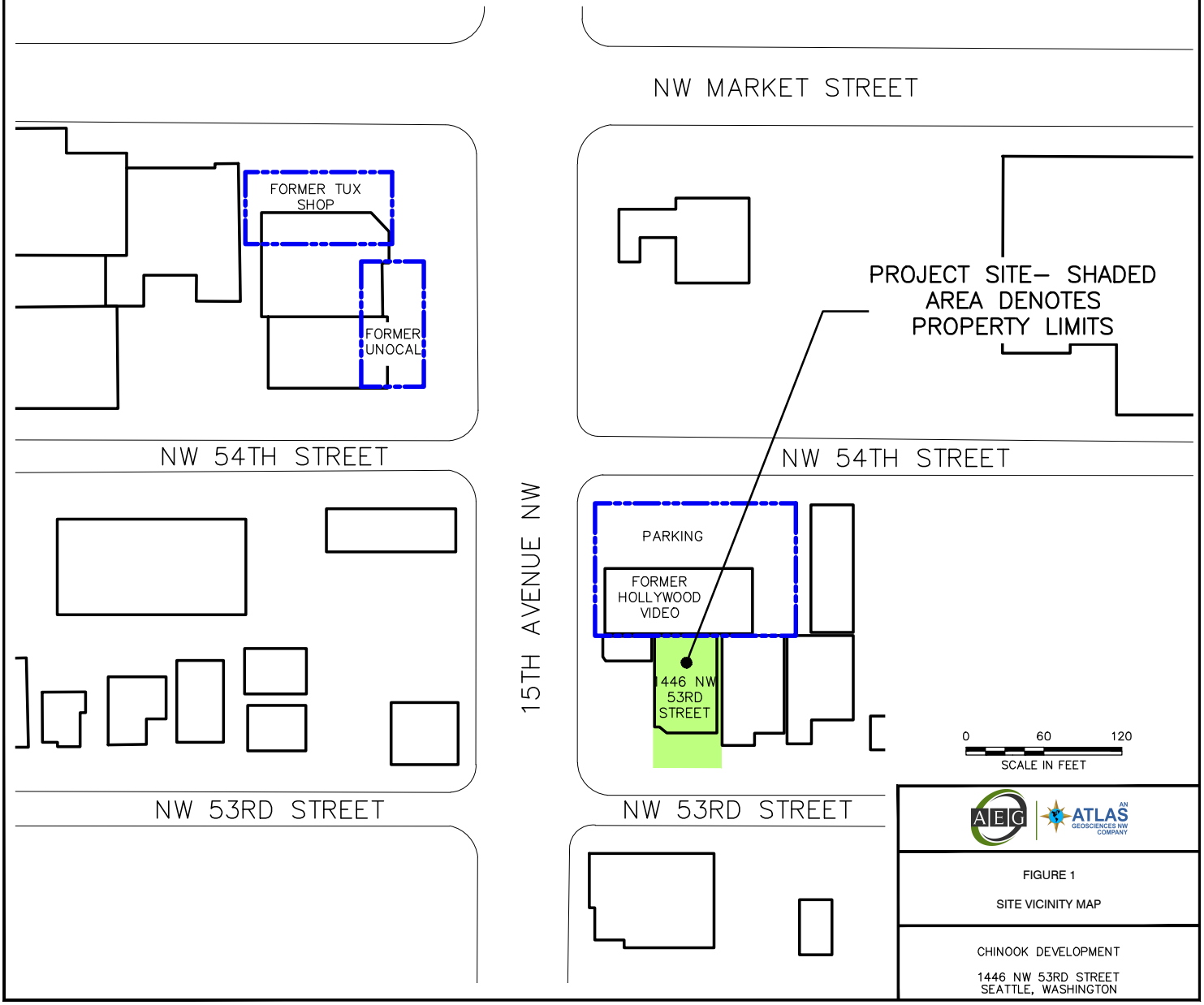
VICINITY MAP

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY–2020, 7.5 MINUTE QUADRANGLE MAP SEATTLE NORTH, WASHINGTON



AEG | AN ATLAS GEOSCIENCES NW COMPANY

FIGURE 1

SITE VICINITY MAP

CHINOOK DEVELOPMENT

1446 NW 53RD STREET
SEATTLE, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
21-101_SITE.DWG	ICD 7/17/2024	JS 7/17/2024	JS 7/17/2024	21-101

N
W E
S

LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- MW-4R — MONITORING WELL LOCATION
- B-1 — BORING LOCATION (MAY 2021)
- MW-1 — DECOMMISSIONED MONITORING WELL
- 53rd-BR — AIR SAMPLE LOCATION

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG ATLAS, LLC.

0 15 30
SCALE IN FEET

AEG | AN ATLAS GEOSCIENCES NW COMPANY

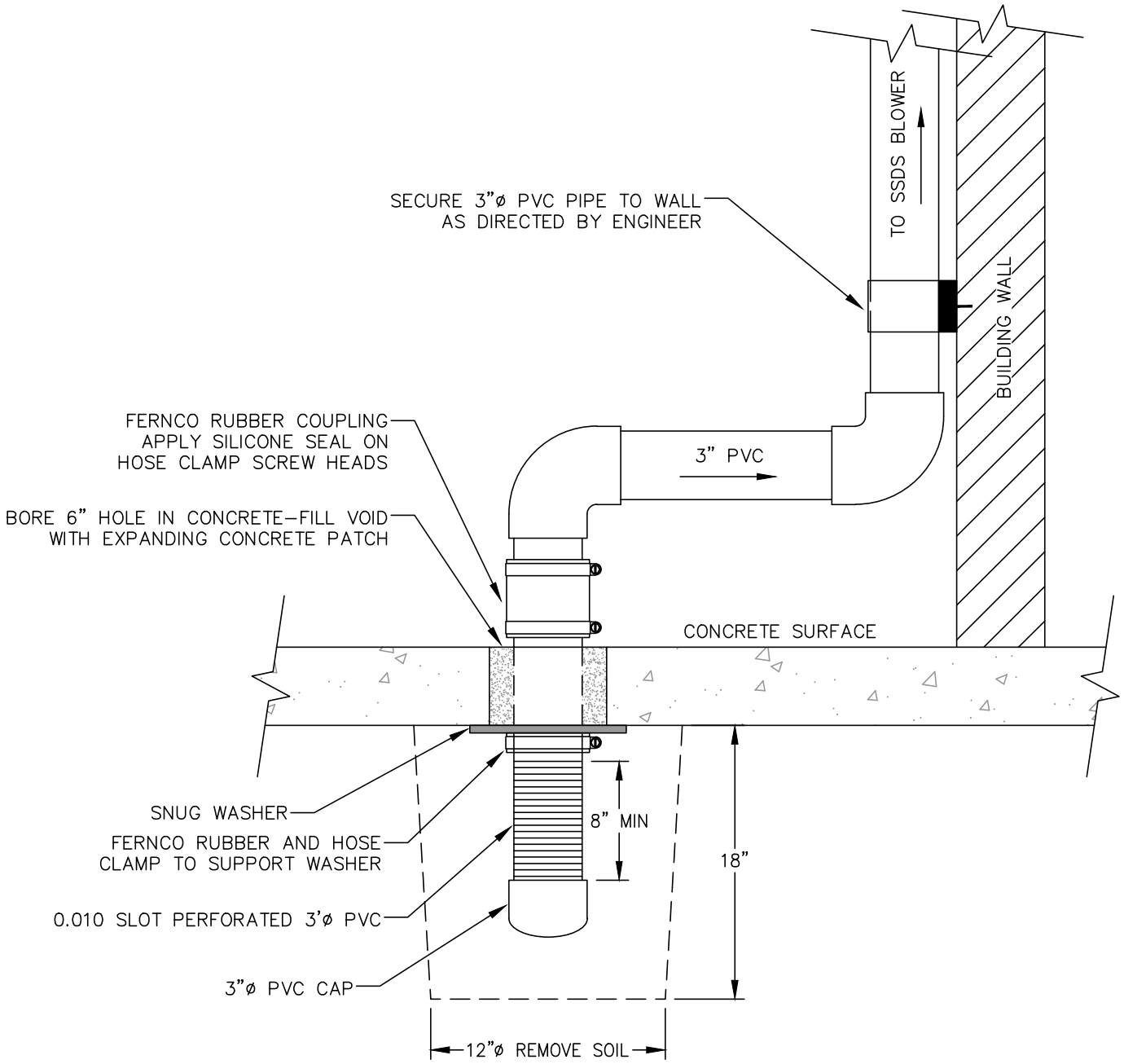
FIGURE 2

SITE MAP

CHINOOK DEVELOPMENT

1446 NW 53RD STREET
SEATTLE, WASHINGTON

FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
SSD-SYSTEM-DETAIL.DWG	JGM	4/1/2024	EM	4/1/2024	EM	4/1/2024	- - - -



NOT TO SCALE

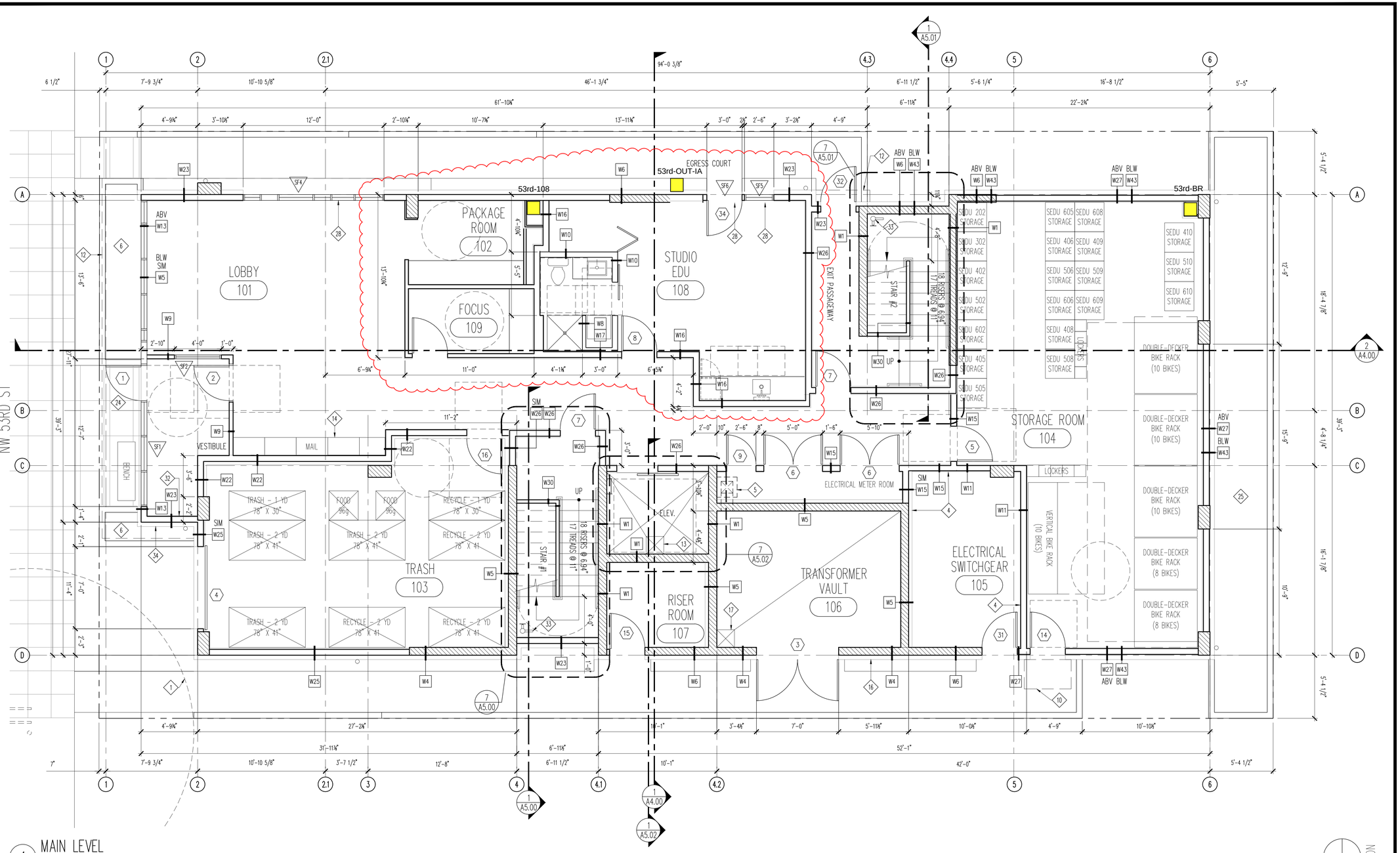
AEG | ATLAS GEOSCIENCES NW COMPANY

FIGURE 3

SSD DETAIL

CHINOOK DEVELOPMENT

1446 NW 53RD STREET
SEATTLE, WASHINGTON



1 MAIN LEVEL

SCALE: 1/4"=1'-0"

NORTH

GENERAL NOTES:

1. DIMENSIONS ARE TO GRIDLINE, FACE OF CONCRETE, FACE OF FRAMING AT AND NOMINAL ROUGH OPENINGS.
2. ALL EXTERIOR WALLS 2x6 PER STRUCTURAL, UNO.
3. EXTERIOR WALLS ALIGN TO GRIDS AND/OR ALIGN FINISH MATERIAL. SEE WALL ASSEMBLIES AND DETAILS FOR MORE INFORMATION.
4. CORRIDOR WALLS, ALIGN FACE G.W.B WITH ADJACENT STAIR CORRIDOR WALLS AND ELEVATOR CORRIDOR WALLS.
5. HEADERS PER STRUCTURAL.
6. WINDOW SIZES ARE NOMINAL ROUGH OPENING, WIDTH AND HEIGHT.
7. SEE ELEVATIONS FOR WINDOW CONFIGURATIONS.
8. INSIDE DOOR JAMB 3" FROM WALL AT HINGE SIDE, UNO.
9. PROVIDE FIREBLOCKING AT ALL PLUMBING OPENINGS.
10. PROVIDE SOLID BLOCKING OVER SUPPORTS.
11. EVERY LANDING SHALL HAVE A MIN DIMENSION OF 36 INCHES IN THE DIRECTION OF TRAVEL.
12. UNDERCUT DOOR 1/2" MIN.
13. SEC 1311.1 & 1311.3 – TO THE MAXIMUM EXTENT POSSIBLE, INSULATION SHALL EXTEND OVER THE FULL COMPONENT AREA TO THE INTENDED R-VALUE, & EXTERIOR WALL CAVITIES ISOLATED DURING FRAMING SHALL BE FULLY INSULATED TO THE LEVELS OF THE SURROUNDING WALLS.
14. WINDOW AND DOOR HEADERS SHALL BE INSULATED WITH A MINIMUM OF R-10 INSULATION.
15. SEE G SHEETS FOR ADDITIONAL INFORMATION REGARDING ADA REQUIREMENTS.
16. SEE G SHEETS FOR ADDITIONAL INFORMATION REGARDING SEDU REQUIREMENTS.
17. SEE REFLECTED CEILING PLANS FOR LIGHTING, VENTING, SMOKE AND CARBON MONOXIDE DETECTOR LOCATIONS.

KEY NOTES:

1. HIGH VOLTAGE POWER LINE BEGINS AT "1" POLE AND CONTINUES EASTWARD. 14'-0" RADIUS SETBACK REQUIRED.
2. 2-HR SHAFT
3. 3-HR SHAFT – SEE WALL TYPE W8 FOR ASSEMBLY
4. ADDITIONAL LAYER OF ⅝" PLYWOOD TO BE ADDED TO WALL ASSEMBLY. VERIFY LOCATION W/ELECTRICAL SUBCONTRACTOR.
5. TRANSFORMER EXHAUST VENT, DUCT TO ROOF. VENTILATION WILL BE PROVIDED BY MECHANICAL CIRCULATION (PERMITTED SEPARETLY). SEE A2.08 & WALL ASSEMBLIES FOR MORE INFORMATION.
6. PLANTERS WITH LANDSCAPING. SEE LANDSCAPING FOR ADDITIONAL INFORMATION.
7. DESIGNATED SOLAR AREA. 144.44 SF ON ROOF DECK AND 143.89 SF ON PENTHOUSE ROOF.
8. LADDER TO LOFT
9. GLASS GUARD RAIL
10. METAL CANOPY ABOVE
11. SHORT-TERM BIKE PARKING
12. OUTLINE OF STRUCTURE ABOVE
13. SUMP, SEE STRUCTURAL
14. MAILBOXES WITHIN 15" TO 48" REACH HEIGHT PER A117.1-2009 SECTION 308.
15. MACHINE ROOM/CONTROL ROOM WORKING CLEARANCES PER SBC 3020, TYP.
16. TRANSFORMER VAULT AIR INTAKE PER SCL & SBC 428.8 REQUIREMENTS. PROVIDE 3-HR FIRE RATED DAMPER AT INLET (SERVICED/INSPECTED FROM OUTSIDE VAULT).
17. DRY SUMP WITH 6" MINIMUM DIAMETER OPENING WITH A STEEL GRATE PER SCL REQUIREMENTS.
18. 36" METAL GUARDRAIL
19. METAL SCUPPER
20. BUILT IN BBQ – PROVIDE TWO GAS CONNECTIONS
21. WATER CONNECTION FOR DOG WASH STATION
22. 36" HORIZONTAL METAL BAR GUARDRAIL WITH WOOD CAP
23. PACKAGED TERMINAL AIR CONDITIONER UNIT
24. ELECTRONIC TELEPHONE ENTRY SYSTEM
25. BIO-RETENTION PLANTER, SEE CIVIL FOR ADDITIONAL INFORMATION
26. REQUIRED YARD PER SBC 1206.2 & DR9-2017
27. 8'-0" SETBACK PER 23.47A.014.C.1.
28. 45 MINUTE, OPENING PROTECTIVE ALONG EGRESS COURT.
29. WATER HEATER, AO SMITH BTH-500. 34" DIAMETER
30. DOMESTIC HOT WATER MIXING VALVE, ARMSTRONG DRV40. 48"X10" WITH PIPING
31. HOT WATER CIRCULATION PUMP, BELL & GOSSET PL55B. 30"X14" WITH PIPING
32. FIRE ALARM CONTROL PANEL
33. CLASS I STANDPIPE SYSTEM. HOSE VALVE OUTLETS ON EACH INTERMEDIATE LANDING.
34. EXTERIOR SPRINKLER AND STANDPIPE CONNECTION.

LEGEND:

- 48"x48" ADA CLEARANCE
- 54"x60" ADA CLEARANCE
- ADA ACCESSIBLE UNIT (TYPE A) / ACCESSIBLE PARKING STALL
- 3 HR BEARING WALL PER SBC TABLE 601.

N5
2562 DEXTER AVENUE N SEATTLE, WA 98109 | 206-300-5339

10009 REGISTERED ARCHITECT SETH LENTON DALE STATE OF WASHINGTON

53RD APARTMENTS

1446 NW 53RD ST
SEATTLE, WA 98107

SDCI PERMIT#: 6691152-CN

MARK	REVISION	DATE
	MUP SUBMITTAL	05/06/2019
	MUP RESUBMITTAL	02/08/2021
	PERMIT SUBMITTAL	06/03/2019
	PRELIMINARY PRICING	11/22/2019
	PERMIT RESUBMITTAL	08/17/2020
	MUP RESUBMITTAL	02/01/2020
	MUP RESUBMITTAL	07/15/2021
	PERMIT RESUBMITTAL	08/01/2021
	POST PERMIT SUBMITTAL	01/20/2022

SDCI STAMP:

PROJECT NUMBER:

2018.031

SHEET TITLE:

FLOOR PLANS - MAIN LEVEL

SHEET NUMBER:

FIGURE 4

TABLES

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Phone: 360-352-9835 • Fax: 360-352-8164 • E-mail: admin@aegwa.com

Table 1 - Summary of Soil Gas, Sub-Slab Vapor, and Indoor Air Analytical Results
Chinook Development (21-101)
Seattle, WA

Sample Number		SG-1	SG-2	SG-3	SG-4	53rd-108-SG	53rd-BR-SG	53rd-108-SG	53rd-BR-SG	Method B Sub-Slab Screening Level	53rd-108-IA	53rd-BR-IA	53rd-OUT-IA	53rd-108-IA	53rd-BR-IA	53rd-OUT-IA	53rd-108-IA (Adjusted)	53rd-BR-IA (Adjusted)	53rd-108-IA (Adjusted)	53rd-BR-IA (Adjusted)	Method B Indoor Air Cleanup Level
Date Collected		8/2/2021	8/2/2021	8/2/2021	8/2/2021	4/29/2024	4/29/2024	10/23/2024	10/23/2024		4/29/2024	4/29/2024	4/29/2024	10/23/2024	10/23/2024	10/23/2024	4/29/2024	4/29/2024	10/23/2024	10/23/2024	
Sample Type		SG	SG	SG	SG	SSV	SSV	SSV	SSV		IA	IA	AA	IA	IA	AA	IA	IA	IA	IA	
Sample Collected Before or After Installation of SSDs		Before	Before	Before	Before	After	After	After	After		After	After	After	After	After	After	After	After	After	After	
APH - Air Phase Hydrocarbons	EC5-8 Aliphatics	**2,400**	**1,900**	**3,200 ve**	**2,100**	<380	<400	<380	<370	--	<75	<75	<75	**130**	**120**	**140**	<75	<75	ND	ND	--
	EC 9-12 Aliphatics	**960**	**11,000 ve**	**550**	**580**	**190**	**140**	<130	<120	--	**64**	**74**	**40**	<37	<35	**68**	**24**	**34**	<37	<35	--
	EC 9-10 Aromatics	<130	**680**	<130	<130	<130	<130	<130	<120	--	<25	<25	<25	<37	<35	<40	<25	<25	<37	<35	--
	Total TPH	**3,360**	**13,580**	**3,750**	**2,680**	**190**	**140**	<640	<610	1,500	**64**	**74**	**40**	**130**	**120**	**208**	**24**	**34**	ND	ND	46.0
TO-15 - Volatile Organic Compounds	Benzene	**13**	**27**	**37**	**20**	**23**	<1.7	<1.6	<1.6	11.0*	**0.45**	<0.32	<0.32	**0.60**	**0.55**	**0.64**	**0.45**	<0.32	ND	ND	0.321*
	Toluene	<100	<96	<98	<98	<38	<40	<38	<38	76,000	<7.5	<7.5	<7.5	<11	<11	<12	<7.5	<7.5	<11	<11	2,290
	Ethylbenzene	**6.4**	**10**	**10**	**10**	<2.2	<2.3	<2.2	<2.2	15,000	<0.43	<0.43	<0.43	**1.5**	**1.2**	<0.69	<0.43	<0.43	**1.5**	**1.2**	457
	m,p-Xylene	**22**	**36**	**32**	**38**	**7.6**	**5.9**	<4.4	<4.3	1,500	<0.87	<0.87	<0.87	**5.5**	**4.4**	**2.6**	<0.87	<0.87	**2.9**	**1.8**	45.7
	o-Xylene	**9.3**	**16**	**11**	**13**	**3.4**	<2.3	<2.2	<2.2	1,500	<0.43	<0.43	<0.43	**1.6**	**1.3**	**0.86**	<0.43	<0.43	**0.7**	**0.4**	45.7
	Naphthalene	**1.4**	**12**	**1.9**	**2.2**	<1.3	<1.4	<1.3	<1.3	2.50*	**0.15 j**	**0.17 j**	**0.34**	<0.073 j	**0.13 j**	<0.084 j	ND	ND	<0.073 j	**0.13 j**	0.0735*
	Vinyl Chloride	<1.4	<1.3	<1.3	<1.3	<1.3	<1.4	<1.3	<1.3	9.50*	<0.26	<0.26	<0.26	<0.23 j	<0.22 j	<0.26 j	<0.26	<0.26	<0.23 j	<0.22 j	0.284*
	trans-1,2-DCE	<2.1	<2	<2.1	<2.1	<2	<2.1	<2	<2	610	<0.4	<0.4	<0.4	<0.59	<0.56	<0.63	<0.4	<0.4	<0.59	<0.56	18.3
	cis-1,2-DCE	<2.1	<2	<2.1	<2.1	<2	<2.1	<2	<2	610	<0.4	<0.4	<0.4	<0.59	<0.56	<0.63	<0.4	<0.4	<0.59	<0.56	18.3
	TCE	**1.3**	<0.55	**5.8**	<0.56	<0.55	<0.57	<0.55	<0.54	11.0*	<0.11	<0.11	<0.11	<0.16	<0.15	<0.17	<0.11	<0.11	<0.16	<0.15	0.334*
	PCE	**110**	<35	**83**	<35	<35	<36	<35	<34	320*	<6.8	<6.8	<6.8	<0.82 j	<9.5	<8.7 j	<6.8	<6.8	<0.82 j	<9.5	9.62*

Notes:

All values presented in micrograms per cubic meter ($\mu g/m^3$)
< = Not detected above laboratory reporting limits
(Adjusted) = Adjusted value determined by subtracting the Ambient value from the Indoor value.
-- = Not Listed; no screening/cleanup level has been established for this constituent.
* Cancer screening level (all other constituents listed do not have cancer values)
Red Bold indicates the detected concentration exceeds MTCA Method B indoor air cleanup levels or sub-slab screening levels
Bold indicates the detected concentration is below MTCA Method B indoor air cleanup levels or sub-slab screening levels
ve = The analyte response exceeded the valid instrument calibration range. The value reported is an estimate
j = Analyte concentration reported below the standard reporting limit. The value is an estimate
ND = Not Detected; adjusted value is less than zero.

SG = Soil Gas
SSV = Sub-Slab Vapor
IA = Indoor Air
AA = Ambient Air
SSDs = Sub-Slab Depressurization Systems
TPH = Total Petroleum Hydrocarbons
PCE = Tetrachloroethylene
TCE = Trichloroethylene
DCE = Dichloroethylene

APPENDIX A

Supporting Documents:

Laboratory Datasheets

2633 PARKMONT LANE SW SUITE A • OLYMPIA, WA • 98502-5751
Phone: 360.352.9835 • Fax: 360.352.8164 • Email: admin@aegwa.com

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.

5500 4th Ave South
Seattle, WA 98108-2419
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office@friedmanandbruya.com
www.friedmanandbruya.com

October 29, 2024

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on October 24, 2024 from the Chinook 53rd Apartments 1446 NW 53rd St Seattle WA 21-101, F&BI 410454 project. There are 17 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG1029R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 24, 2024 by Friedman & Bruya, Inc. from the AEG Chinook 53rd Apartments 1446 NW 53rd St Seattle WA 21-101, F&BI 410454 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	AEG
410454 -01	53rd-108-SG
410454 -02	53rd-BR-SG
410454 -03	53rd-108-IA
410454 -04	53rd-BR-IA
410454 -05	53rd-OUT-IA

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	53rd-108-SG	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-01 1/5.1
Date Analyzed:	10/24/24	Data File:	102416.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<380
APH EC9-12 aliphatics	<130
APH EC9-10 aromatics	<130

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	53rd-BR-SG	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-02 1/5.0
Date Analyzed:	10/24/24	Data File:	102417.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<370
APH EC9-12 aliphatics	<120
APH EC9-10 aromatics	<120

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	53rd-108-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-03 1/1.5
Date Analyzed:	10/24/24	Data File:	102413.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	130
APH EC9-12 aliphatics	<37
APH EC9-10 aromatics	<37

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	53rd-BR-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-04 1/1.4
Date Analyzed:	10/24/24	Data File:	102414.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	120
APH EC9-12 aliphatics	<35
APH EC9-10 aromatics	<35

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	53rd-OUT-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-05 1/1.6
Date Analyzed:	10/24/24	Data File:	102412.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	140
APH EC9-12 aliphatics	68
APH EC9-10 aromatics	<40

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/24/24	Lab ID:	04-2524 mb
Date Analyzed:	10/24/24	Data File:	102411.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	53rd-108-SG	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-01 1/5.1
Date Analyzed:	10/24/24	Data File:	102416.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<1.3	<0.51
trans-1,2-Dichloroethene	<2	<0.51
cis-1,2-Dichloroethene	<2	<0.51
Benzene	<1.6	<0.51
Trichloroethene	<0.55	<0.1
Toluene	<38	<10
Tetrachloroethene	<35	<5.1
Ethylbenzene	<2.2	<0.51
m,p-Xylene	<4.4	<1
o-Xylene	<2.2	<0.51
Naphthalene	<1.3	<0.25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	53rd-BR-SG	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-02 1/5.0
Date Analyzed:	10/24/24	Data File:	102417.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<1.3	<0.5
trans-1,2-Dichloroethene	<2	<0.5
cis-1,2-Dichloroethene	<2	<0.5
Benzene	<1.6	<0.5
Trichloroethene	<0.54	<0.1
Toluene	<38	<10
Tetrachloroethene	<34	<5
Ethylbenzene	<2.2	<0.5
m,p-Xylene	<4.3	<1
o-Xylene	<2.2	<0.5
Naphthalene	<1.3	<0.25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	53rd-108-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-03 1/1.5
Date Analyzed:	10/24/24	Data File:	102413.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.23 j	<0.09 j
trans-1,2-Dichloroethene	<0.59	<0.15
cis-1,2-Dichloroethene	<0.59	<0.15
Benzene	0.60	0.19
Trichloroethene	<0.16	<0.03
Toluene	<11	<3
Tetrachloroethene	<8.2 j	<1.2 j
Ethylbenzene	1.5	0.34
m,p-Xylene	5.5	1.3
o-Xylene	1.6	0.36
Naphthalene	<0.073 j	<0.014 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	53rd-BR-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-04 1/1.4
Date Analyzed:	10/24/24	Data File:	102414.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.22 j	<0.08 j
trans-1,2-Dichloroethene	<0.56	<0.14
cis-1,2-Dichloroethene	<0.56	<0.14
Benzene	0.55	0.17
Trichloroethene	<0.15	<0.028
Toluene	<11	<2.8
Tetrachloroethene	<9.5	<1.4
Ethylbenzene	1.2	0.28
m,p-Xylene	4.4	1.0
o-Xylene	1.3	0.29
Naphthalene	0.13 j	0.025 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	53rd-OUT-IA	Client:	AEG
Date Received:	10/24/24	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/23/24	Lab ID:	410454-05 1/1.6
Date Analyzed:	10/24/24	Data File:	102412.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

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

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.26 j	<0.1 j
trans-1,2-Dichloroethene	<0.63	<0.16
cis-1,2-Dichloroethene	<0.63	<0.16
Benzene	0.64	0.20
Trichloroethene	<0.17	<0.032
Toluene	<12	<3.2
Tetrachloroethene	<8.7 j	<1.3 j
Ethylbenzene	<0.69	<0.16
m,p-Xylene	2.6	0.60
o-Xylene	0.86	0.20
Naphthalene	<0.084 j	<0.016 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	Chinook 53rd Apartments 1446 NW 53rd St
Date Collected:	10/24/24	Lab ID:	04-2524 mb
Date Analyzed:	10/24/24	Data File:	102411.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.16 j	<0.06 j
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Benzene	<0.32	<0.1
Trichloroethene	<0.11	<0.02
Toluene	<7.5	<2
Tetrachloroethene	<5.4 j	<0.8 j
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.053 j	<0.01 j

Date of Report: 10/29/24
Date Received: 10/24/24
Project: Chinook 53rd Apartments 1446 NW 53rd St Seattle WA 21-101, F&BI 410454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 410454-01 1/5.1 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	<380	<380	nm
APH EC9-12 aliphatics	ug/m3	<130	<130	nm
APH EC9-10 aromatics	ug/m3	<130	<130	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	94	70-130
APH EC9-12 aliphatics	ug/m3	67	108	70-130
APH EC9-10 aromatics	ug/m3	67	89	70-130

Date of Report: 10/29/24
Date Received: 10/24/24
Project: Chinook 53rd Apartments 1446 NW 53rd St Seattle WA 21-101, F&BI 410454

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

Laboratory Code: 410454-01 1/5.1 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.3	<1.3	nm
trans-1,2-Dichloroethene	ug/m3	<2	<2	nm
cis-1,2-Dichloroethene	ug/m3	<2	<2	nm
Benzene	ug/m3	<1.6	<1.6	nm
Trichloroethene	ug/m3	<0.55	<0.55	nm
Toluene	ug/m3	<38	<38	nm
Tetrachloroethene	ug/m3	<35	<35	nm
Ethylbenzene	ug/m3	<2.2	<2.2	nm
m,p-Xylene	ug/m3	<4.4	<4.4	nm
o-Xylene	ug/m3	<2.2	<2.2	nm
Naphthalene	ug/m3	<1.3	<1.3	nm

Date of Report: 10/29/24
Date Received: 10/24/24
Project: Chinook 53rd Apartments 1446 NW 53rd St Seattle WA 21-101, F&BI 410454

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	127	70-130
trans-1,2-Dichloroethene	ug/m3	54	120	70-130
cis-1,2-Dichloroethene	ug/m3	54	113	70-130
Benzene	ug/m3	43	114	70-130
Trichloroethene	ug/m3	73	123	70-130
Toluene	ug/m3	51	113	70-130
Tetrachloroethene	ug/m3	92	126	70-130
Ethylbenzene	ug/m3	59	113	70-130
m,p-Xylene	ug/m3	120	107	70-130
o-Xylene	ug/m3	59	117	70-130
Naphthalene	ug/m3	71	89	70-130

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.

~~404~~ AP 410454

SAMPLE CHAIN OF CUSTODY

10/24/24

Report To Scott Rose

Company AEG Atlas, LLC

Address 2633 Parkmont Ln SW, Suite A

City, State, ZIP Olympia, WA 98502

Phone 360-352-9835 Email SROSE@AEGWA.COM

SAMPLERS (*signature*) Paul Hitch

PROJECT NAME & ADDRESS: Chinook 53rd Apartments, 1446 NW 53rd St, Seattle, WA

PO # 21-101

NOTES:

INVOICE TO: AEG Atlas, LLC

TURNAROUND TIME: Standard (RUSH)

Rush charges authorized by:

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

SAMPLE INFORMATION / ANALYSIS REQUESTED

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	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	PCE & Daughters	Notes
53rd - 108 - SG	01	2438	111	IA / (SG)	10/23/2024	30"	1025	4"	1031		x		x		x	Report low-level naphthalene
53rd - BR - SG	02	2437	31	IA / (SG)	10/23/2024	30"	1010	4"	1018		x		x		x	
53rd - 108 - IA	03	21453	06607	(IA) / SG	10/23/2024 - 10/24/2024	30"	1002	7"	0845		x		x		x	
53rd - BR - IA	04	20554	20468	(IA) / SG	10/23/2024 - 10/24/2024	30"	1005	5"	0847		x		x		x	
53rd - OUT - IA	05	32100	20490	(IA) / SG	10/23/2024 - 10/24/2024	30"	1006	8"	0848		x		x		x	
				IA / SG												
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Paul Hitch	PAUL HITCH	AEG Atlas	10/24/24	0924
~~Received by:~~	Michael Erdahl	FB	10/24/24	0924
Relinquished by:		Samples received at 15 °C		
Received by:				

FORMS\COC\COCTO-15.DOC

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 410454 CLIENT AEG Atlas INITIALS/ DATE: AP 10/24/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 15 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☐ YES ☒ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ AP Date: 10/24/24
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes ☐ No	☐ Not on COC/label
Date Sampled	☒ Yes ☐ No	☐ Not on COC/label
Time Sampled	☒ Yes ☐ No	☐ Not on COC/label
# of Containers	☒ Yes ☐ No	
Relinquished	☒ Yes ☐ No	
Requested analysis	☒ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☐ NA ☐ YES ☒ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____