AIR SAMPLING SUMMARY REPORT

Prepared for
AMERITIES WEST, LLC
August 17, 2012
Project No. 0181.01.03

Prepared by
Maul Foster & Alongi, Inc.
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

MAUL
FOSTER
ALONGI

AIR SAMPLING SUMMARY REPORT

The material and data in this report were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.

Bill Beadie, CIH
Principal Industrial Hygienist

Ted Wall, PE
Oregon Operations Director

CONTENTS

SUMMARY

This summary is not intended as a stand-alone document and must be evaluated in context with the entire document.

Maul Foster & Alongi, Inc. coordinated with the Oregon Department of Environmental Quality (DEQ) to conduct ambient air sampling near the AmeriTies West, LLC (AmeriTies) wood-treating facility in The Dalles, Oregon. The purpose of the sampling was to assess naphthalene concentrations during conditions under which odors are most frequently reported in residential areas near the AmeriTies facility. Sampling was conducted during calm weather conditions on September 7, 2011, and February 7, 2012, consistent with DEQ's assertion that odor complaints are most frequent during these conditions.

Results were similar to and in some cases lower than those measured at another wood-treating facility in Oregon at which a health effects evaluation was conducted by the Superfund Health Investigation and Education (SHINE) program, part of the Oregon Public Health Division. The assessment concluded that health effects were not anticipated at these concentrations.

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) has prepared this air sampling summary report on behalf of AmeriTies West, LLC (AmeriTies). The purpose of the sampling, which was conducted in September, 2011, and February, 2012, was to assess naphthalene concentrations during conditions under which odors are most frequently reported in residential areas near the AmeriTies facility. This effort is intended to be a screening survey to assess naphthalene concentrations near the AmeriTies facility, and is not expected to be a comprehensive study.

1.1 Background

AmeriTies is a startup company that acquired the Kerr McGee tie treatment plant in The Dalles in 2005. During Kerr McGee's ownership of the facility, residents near the facility complained about the odor of creosote, the material used to treat railroad ties. Kerr McGee made a number of improvements to the facility, substantially reducing odors at the plant. In 2002, the Oregon Department of Environmental Quality (DEQ) reissued the Kerr McGee permit; however, a substantial number of participants at the permit hearing were concerned about the odors. DEQ, in cooperation with Kerr McGee, established a citizen work group to discuss the Kerr McGee operation, particularly the control of odors. Kerr McGee established a spray system with chemicals to further reduce the organic aerosols emitted after the ties (charges) left the treatment vessels and before they were placed on a cooling pad. Later, the facility established a spray system (which was later abandoned) along the cooling pad. When AmeriTies purchased the facility in 2005, it continued the same control measures established by Kerr McGee. One suggestion from the work group discussions (which included a town hall meeting) was to conduct additional monitoring in the residential area above the plant site. This report describes the sampling that was performed in response to the suggestion for additional monitoring in the residential area above the plant site.

2 METHODOLOGY

2.1 Sample Planning

MFA prepared a sampling plan for review and approval by DEQ before each sampling event (MFA 2011, 2012). Sampling locations, indicated in the attached figure, were designed to be representative of:

- The area immediately adjacent to the cooling pad (location 1);
- Locations upwind and/or far enough away from AmeriTies to represent a background (i.e., not related to facility operations) concentration of naphthalene during the sampling period (locations 2 and 6); and

- Residential areas near AmeriTies (locations 3, 4, and 5).

Sampling was conducted during calm weather conditions on September 7, 2011, and February 7, 2012, consistent with DEQ's assertion that odor complaints were most frequent during these conditions.

2.2 Sampling and Analytical Methodology

All samples were collected with an evacuated 6-liter canister and analyzed for naphthalene, using U.S. Environmental Protection Agency (USEPA) Method TO-15 from the compendium of methods for the determination of toxic organic compounds in ambient air, second edition (USEPA, 1999). Naphthalene was selected for the analysis based on previous studies indicating that naphthalene is the primary non-water constituent emitted from the creosote wood-treating process (AquAeTer, 2010), and naphthalene's characteristic mothball-like odor is consistent with the nature of the odor complaints.

MFA staff deployed the canisters immediately before the start of production at AmeriTies on each day of sampling. In 2011, four samples were collected, each with a collection time of approximately eight hours to capture the time during which the plant was in operation. In 2012, five samples were collected, two of which were collected over the eight-hour production time frames and three of which were collected over 24 hours. One of the 24-hour samples was collected alongside an eight-hour sample at location 1, next to the cooling pad, to assess the difference in average naphthalene concentrations during the two sampling durations. The other 24-hour samples were collected in the residential areas for comparison with DEQ's proposed 24-hour benchmark concentration for naphthalene (see Section 3.2.1.2 of this report). The duration for each sample is indicated on the attached figure.

MFA staff periodically inspected each location during the assessment to measure temperature, humidity, and wind speed and to record observations. Relative humidity and temperature were measured with an Extech model 445580 humidity / temperature pen, and wind speed was measured with a Kestrel 1000 wind meter. Noticeable odors and any unusual conditions that may have affected the sample results were documented in the field notes if they were observed by MFA. Field notes and measurements are included in Appendix A.

Sampling conditions in 2011 were clear, calm, and hot, with peak temperatures exceeding 100 degrees Fahrenheit. Sampling conditions in 2012 were overcast and calm, with peak temperatures approaching 50 degrees Fahrenheit. There was a light drizzle, 0.01 inch of rain measured by the AmeriTies weather system between 04:00 and 05:00 on February 8, approximately three hours before the 24-hour samples were collected.

All samples were sent to Columbia Analytical Services for analysis.

3 RESULTS AND DISCUSSION

3.1 Results

Sampling results are summarized on the attached figure. Complete laboratory reports, field data sheets, and chain-of-custody forms are provided in Appendix A. A summary of production conditions during the sampling sessions is provided in Appendix B. The results show:

- Naphthalene concentrations measured in residential areas ranged from 0.88 microgram per cubic meter ($\mu g/m^3$) at sample location 5 in 2012 to 13 $\mu g/m^3$ at sample location 3 in 2011.
- A mothball-like odor typically associated with the presence of naphthalene was observed by MFA staff at the location intended to represent background concentrations during the 2011 sampling event. This suggests that the concentration measured at this location (13 $\mu g/m^3$) was not representative of background conditions. As noted below in section 3.2.1.1, there are multiple sources of naphthalene in urban environments, and this elevated result could have been influenced by various sources. A different background location was selected for the sampling in 2012 (sample location 6 on the figure), where the measured naphthalene concentration was 0.72 $\mu g/m^3$. No odors typically associated with naphthalene were observed at this location during sampling.
- Naphthalene concentrations measured directly adjacent to the cooling pad, sample location 1, ranged from 53 $\mu g/m^3$ in 2012 to 290 $\mu g/m^3$ in 2011.
- Results for side-by-side eight-hour and 24-hour samples collected in 2012 directly adjacent to the cooling pad were essentially the same at 53 $\mu g/m^3$ and 56 $\mu g/m^3$, respectively.

3.2 Discussion

3.2.1 Naphthalene Guidance and Limits

3.2.1.1 Background Concentrations

The Agency for Toxic Substances and Disease Registry (ATSDR), a federal public health agency of the U.S. Department of Health and Human Services, reported that typical background concentrations in everyday air for naphthalene are approximately 1 $\mu g/m^3$, but they report that background concentrations can vary significantly, based on the region and environmental conditions. The ATSDR reports ambient outdoor air measurements that range from 0.000129 $\mu g/m^3$ to 170 $\mu g/m^3$ (ATSDR, 2005).

Although naphthalene can come from a variety of sources in the urban environment, combustion is considered to be the single largest emission source of naphthalene in the United States (ATSDR, 2005). Vehicle emissions are a significant source of naphthalene in urban areas (ATSDR, 2005). The impact of vehicle emissions on ambient concentrations is a function of the traffic volume, the type of vehicle, and the mode of operation.

3.2.1.2 DEQ Benchmarks

DEQ develops ambient benchmark concentrations based on consensus recommendations from the Air Toxics Scientific Advisory Committee, a panel of experts that provides advice on the state air toxics program. The benchmarks are health-based goals that are designed to protect the most sensitive individuals, and do not consider technical and economic feasibility. Ambient benchmarks are not regulatory standards, but reference values by which air toxics problems can be evaluated. The benchmarks are considered screening values, below which the risk of adverse health effects is considered negligible under foreseeable circumstances. Concentrations above the ambient benchmark may or may not present a risk to exposed populations, depending on the specific circumstances of the exposure.

The current benchmarks are annual average concentrations, and are based on health effects from long-term (lifetime) exposure. DEQ is currently working on a report summarizing its investigation of short-term benchmarks, such as 24-hour average concentrations. The proposed 24-hour average benchmark concentration for naphthalene has been included for reference in the summary table below.

DEQ, like most organizations that set limits, considers the potential adverse health effects of overexposure when establishing a limit. The risk of developing cancer and a non-cancer health effect is typically evaluated in different ways, which can result in a "cancer" and "non-cancer" limit. Non-cancer health effects are presumed to have a threshold for exposure, below which there is no increased risk of experiencing the adverse health effect. For the purposes of establishing the benchmark concentrations, the risk of cancer, on the other hand, is presumed to be increased by ANY exposure, no matter how small. Therefore, the limit for carcinogens is determined by estimating a dose that is small enough to result in an increased cancer risk that is considered negligible by the standard-setting agency. DEQ considers one excess cancer case per 1,000,000 people over a lifetime of exposure to be a negligible cancer risk, and has established the cancer benchmark for naphthalene at that level.

There is currently debate among toxicologists and other health professionals as to the validity of the non-threshold model that is used to assess the risk of exposure to carcinogens. The background incidence of cancer in the United States is approximately one in two (American Cancer Society, 2012); it is difficult to observe, and therefore validate, assumptions about the dose-response relationship at such low levels. However, despite the ongoing debate, DEQ and most other organizations that establish exposure limits presume a non-threshold model for carcinogens.

3.2.1.3 Other Limits and Guidelines

There are many agencies and organizations that establish or recommend chemical exposure limits, and there are several factors that result in different limits between (and even within) organizations. These factors include the anticipated duration and frequency of exposure, the target population, the health effect the limit is intended to prevent, and the methodology of the limit-setting organization. Given the wide range of naphthalene exposure limits, it is difficult to provide a single value for comparison with sampling results. Therefore, in addition to the DEQ benchmarks, several limits are summarized in the following table for reference. The table includes limits established to protect worker health, including the permissible exposure limit (PEL) established by the Oregon Occupational Safety and Health Administration (OR-OSHA) and the threshold limit value (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH). The table also includes other limits established to protect the public health from non-cancer effects, such as the USEPA reference concentration (RfC) and ATSDR minimal risk level (MRL).

Table
Summary of Limits and Guidelines

Limit	Value ($\mu g/m^3$)	Notes
OR-OSHA PEL TWA	52,000	Eight-hour average limit to protect workers against non-cancer health effects.
ACGIH TLV TWA	26,000	Eight-hour average limit to protect workers against non-cancer health effects. Proposed value for 2013.
DEQ Proposed 24-hour Benchmark	22	Designed to protect the public against non-cancer health effects.
USEPA RfC	3	Designed to protect the public against non-cancer health effects.
ATSDR MRL	3	Designed to protect the public against non-cancer health effects.
DEQ Proposed 24-hour Benchmark	2	Designed to protect the public against cancer.
DEQ Annual Benchmark	0.03	Designed to protect the public against cancer.

3.2.2 J.H. Baxter Assessment Results

In addition to the various exposure limits established for naphthalene, results were compared to the results of another evaluation of a similar facility conducted by the Superfund Health Investigation and Education (SHINE) program, part of the Oregon Public Health Division. SHINE conducted air monitoring in neighborhoods near J.H. Baxter, another wood-treating facility in Oregon, and summarized the evaluation in a written report (Oregon Public Health Division, 2007).

The sampling and analytical methods used for the AmeriTies evaluation were different from the methods used by SHINE to measure naphthalene concentrations near J.H. Baxter. SHINE used a high-volume pump to collect samples on a polyurethane foam/XAD resin cartridge and subsequently analyzed them using USEPA Method TO-13A. As stated previously, the samples taken near AmeriTies were collected in evacuated canisters and analyzed using USEPA Method TO-15.

A comparison between the two sampling and analytical methods demonstrated that, on average, concentrations for naphthalene are reported as approximately four times higher when collected and analyzed using USEPA Method TO-15, in comparison to USEPA Method TO-13A (Fortune et al., 2010). In other words, the AmeriTies sampling data are likely to be artificially inflated by a factor of four compared to the J.H. Baxter results because of the two different analytical methods.

3.2.3 Comparison of Results with Limits and Guidelines

3.2.3.1 Background Concentrations

The 2012 sampling results from residential areas are consistent with the measured background concentration, which is also consistent with the expected background concentration indicated in the published literature (ATSDR, 2005). The 2011 sampling results indicate that naphthalene concentrations in residential areas may have exceeded background concentrations, but the lack of data from a representative background sampling location makes it difficult to assess the potential difference between background and residential area concentrations.

3.2.3.2 Limits and Guidelines

All results from both 2011 and 2012, including the background concentration, exceeded the DEQ annual benchmark of 0.03 $\mu g/m^3$. The DEQ benchmark is used as a screening value, below which the risk of adverse health effects is considered negligible under foreseeable circumstances. Concentrations above the ambient benchmark may or may not present a risk to exposed populations, depending on the specific circumstances of the exposure.

SHINE measured residential neighborhood naphthalene concentrations approximately equal to or greater than the concentrations measured near AmeriTies. For example, the highest 24-hour sample collected in a residential neighborhood by SHINE was 12.9 $\mu g/m^3$, and the highest short-term sample was 25.6 $\mu g/m^3$, which was collected over a one- to three- hour period. For comparison, the highest result in a residential area near AmeriTies was 13 $\mu g/m^3$, which was collected over an eight-hour period.

The SHINE report included an evaluation of risk based on the sample results and concluded that, "at the concentrations measured in air around J.H. Baxter, naphthalene and the other three polycyclic aromatic hydrocarbons (PAHs) are not expected to result in chronic non-cancer or cancer health effects." SHINE went on to state that "the current air monitoring data do not indicate that people will become chronically ill from the PAHs from J.H. Baxter creosote emissions."

3.2.4 Observations and Conclusions

The following observations and conclusions are provided based on the assessment results:

1. Samples collected in residential areas in February 2012 are consistent with measured background concentrations. The February 2012 sampling results may have been lower than the September 2011 results because of the lower temperatures in February.

2. During high temperatures, such as the greater-than-100-degree-Fahrenheit conditions experienced during the sampling in September 2011, it is possible that there is naphthalene above background levels in residential areas immediately adjacent to the AmeriTies facility. Although the naphthalene concentrations may be above background concentrations, the results were equal to or lower than the concentrations measured near the J.H. Baxter facility, which SHINE did not consider a public health concern.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

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FIGURE

SUMMARY OF SAMPLING RESULTS

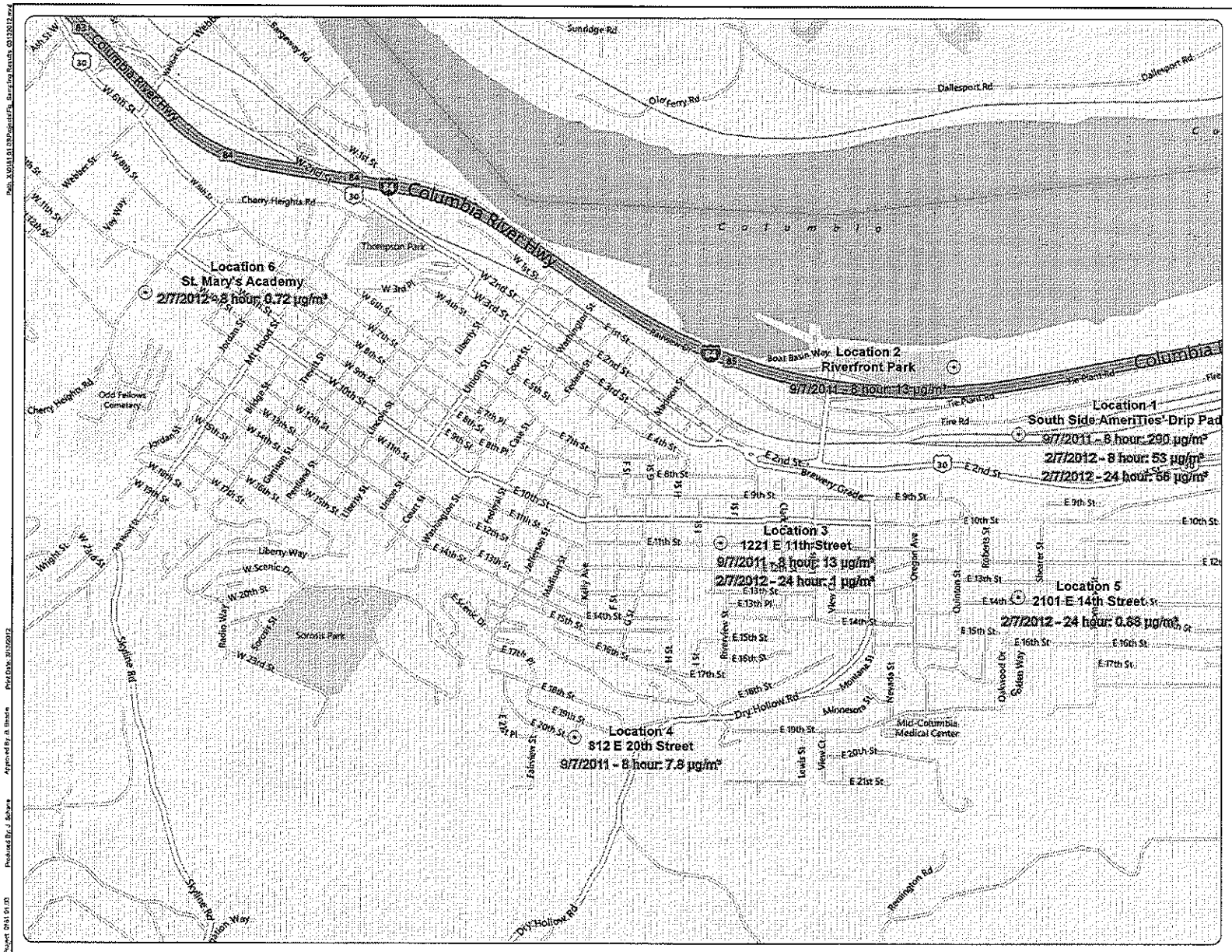

Figure
Sampling Results
September 7, 2011
February 7, 2012

AmeriTies
The Dalles, Oregon

Legend

⊕ Sample Location (with associated naphthalene concentration)

0 600 1,200
Feet

Source: Basemap obtained from ESRI, Inc. ArcGIS Online/Bing Maps.

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APPENDIX A

LABORATORY REPORTS, FIELD DATA SHEETS, AND CHAIN-OF-CUSTODY FORMS

LABORATORY REPORT

September 23, 2011

Bill Beadie
Maul Foster & Alongi, Incorporated
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Ambient Air Sampling / 0181.01.03 Task 2

Dear Bill:

Enclosed are the results of the samples submitted to our laboratory on September 9, 2011. For your reference, these analyses have been assigned our service request number P1103468.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3-R2; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-11-2; Minnesota Department of Health, NELAP Certificate No. 219474; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Kate Aguilera
Project Manager

Client: Maul Foster & Alongi, Incorporated CAS Project No: P1103468
Project: Ambient Air Sampling / 0181.01.03 Task 2

CASE NARRATIVE

The samples were received intact under chain of custody on September 9, 2011 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Naphthalene Analysis

The samples were analyzed in SIM mode for naphthalene in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

DETAIL SUMMARY REPORT

Client: Maul Foster & Alongi, Incorporated
Service Request: P1103468
Project ID: Ambient Air Sampling / 0181.01.03 Task 2

Date Received: 9/9/2011
Time Received: 10:10

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pil (psig)	Pfl (psig)	TO-15 - VOC SIM
Location 1	P1103468-001	Air	9/7/2011	00:00	AC01310	-2.92	3.55	X
Location 2	P1103468-002	Air	9/7/2011	00:00	AC00707	-2.66	3.55	X
Location 3	P1103468-003	Air	9/7/2011	00:00	AC01497	-2.54	3.55	X
Location 4	P1103468-004	Air	9/7/2011	00:00	AC01334	-2.18	3.55	X

Columbia Analytical Services

Air - Chain of Custody Record & Analytical Service Request

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2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No. P1103468

CAS Contact: Kate A.

Company Name & Address (Reporting Information)	Maul Foster Alongi 2001 NW 19th Ave, Suite 200 Portland, OR 97209
Project Name	Ambient Air Sampling
Project Number	0181.01.03 task 2
Project Manager	Bill Beadie
P.O. # / Billing Information	0181.01.03, task 2
Phone	503-501-5237
Fax	
Email Address for Result Reporting	bbeadie@maulfoster.com
Sampler (Print & Sign)	Bill Beadie,

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 SIM		Comments e.g. Actual Preservative or specific instructions
Location 1	(1)-2.82	9/7/11	499 min	AC0130	FCA00081	-27.5	-5.0	6 liters	X		
Location 2	(2)-2.55	9/7/11	518 min	AC00707	FCA00011	-28.0	-5.2	6 liters	X		
Location 3	(3)-2.43	9/7/11	489 min	AC01497	FCA00039	-27.5	-5.0	6 liters	X		
Location 4	(4)-2.06	9/7/11	482 min	AC01334	FCA00296	-28.5	-5.0	6 liters	X		

Report Tier Levels - please select

Tier I - Results (Default if not specified) _____
Tier II (Results + QC Summaries) _____
Tier III (Results + QC & Calibration Summaries) _____
Tier IV (Data Validation Package) 10% Surcharge _____

EDD required: Yes / No
Type: EQuIS

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)		Date: 9/8/2011	Time: 1:30 pm	Received by: (Signature)		Date: 9/9/11	Time: 1010
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:

Cooler / Blank Temperature ____ °C

4 of 9

COC AIR REV 3-11

Columbia Analytical Services™ 2655 Park Center Drive, Suite A, Simi Valley, CA 93065 | 805.526.7161 | www.caslab.com

Sample Acceptance Check Form

Client: Maul Foster & Alongi, Incorporated Work order: P1103468

Project: Ambient Air Sampling / 0181.01.03 Task 2

Sample(s) received on: 9/9/11 Date opened: 9/9/11 by: MZAMORA

Note: This form is used forall samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☐	☒	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1103468-001.01	6.0 L Ambient Can					
P1103468-002.01	6.0 L Ambient Can					
P1103468-003.01	6.0 L Ambient Can					
P1103468-004.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

Chain of Custody is missing time collected

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

Client: **Maul Foster & Alongi, Incorporated**
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Project ID: P1103468

Naphthalene

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date(s) Collected: 9/7/11
Analyst: Karen Ryan Date Received: 9/9/11
Sampling Media: 6.0 L Summa Canister(s) Date Analyzed: 9/14/11
Test Notes:

Client Sample ID	CAS Sample ID	Injection Volume Liter(s)	Canister Dilution Factor	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
Location 1	P1103468-001	0.050	1.55	**290**	3.1	**55**	0.59	
Location 2	P1103468-002	1.00	1.52	**13**	0.15	**2.5**	0.029	
Location 3	P1103468-003	1.00	1.50	**13**	0.15	**2.5**	0.029	
Location 4	P1103468-004	1.00	1.46	**7.8**	0.15	**1.5**	0.028	
Method Blank	P110914-MB	1.00	1.00	ND	0.10	ND	0.019	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Maul Foster & Alongi, Incorporated**
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Project ID: P1103468

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date(s) Collected: 9/7/11
Analyst: Karen Ryan Date(s) Received: 9/9/11
Sampling Media: 6.0 L Summa Canister(s) Date(s) Analyzed: 9/14/11
Test Notes:

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P110914-MB	**97**	**103**	**91**	70-130	
Lab Control Sample	P110914-LCS	**98**	**105**	**97**	70-130	
Location 1	P1103468-001	**96**	**101**	**94**	70-130	
Location 1	P1103468-001DUP	**96**	**101**	**95**	70-130	
Location 2	P1103468-002	**96**	**100**	**96**	70-130	
Location 3	P1103468-003	**96**	**103**	**98**	70-130	
Location 4	P1103468-004	**93**	**103**	**94**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

LABORATORY CONTROL SAMPLE SUMMARY

Client:	**Maul Foster & Alongi, Incorporated**		
Client Sample ID:	**Lab Control Sample**	CAS Project ID:	P1103468
Client Project ID:	**Ambient Air Sampling / 0181.01.03 Task 2**	CAS Sample ID:	P110914-LCS
Test Code:	EPA TO-15 SIM	Date Collected:	NA
Instrument ID:	Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7	Date Received:	NA
Analyst:	Karen Ryan	Date Analyzed:	9/14/11
Sampling Media:	6.0 L Summa Canister	Volume(s) Analyzed:	0.125 Liter(s)
Test Notes:			

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
91-20-3	Naphthalene	3.44	**2.32**	**67**	25-149	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Maul Foster & Alongi, Incorporated**
Client Sample ID: **Location 1** CAS Project ID: P1103468
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Sample ID: P1103468-001DUP

Test Code: EPA TO-15 SIM Date Collected: 9/7/11
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date Received: 9/9/11
Analyst: Karen Ryan Date Analyzed: 9/14/11
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:
Container ID: AC01310
Initial Pressure (psig): -2.92 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.55

CAS #	Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
91-20-3	Naphthalene	290	55.3	282	53.8	286	3	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

FIELD DATA FORM

Client Name: AmeriTies
Site: The Dalles
Project Number: 0181.01.03

Project Description: Ambient Naphthalene
Contact: Jeff Thompson

Sample No.	Sample Date	Area	Analyte	Media	Canister Number	Gauge Number	Regulator Number	Regulator setting	Start Time	Stop time	Total Time (min)	Start gauge reading ("Hg)	Stop gauge reading ("Hg)	Notes
Location 1	09/07/2011	South side of treating plant	Naphthalene	6 L Summa Canister	AC0130	AVG1723	FCA00081	8 hour	7:17	15:36	499	-27.5"	-5.0"	Approximately 100 feet south of the drip pad.
Location 2	09/07/2011	Riverfront park	Naphthalene	6 L Summa Canister	AC00707	AVG01860	FCA00011	8 hour	7:17	15:55	518	-28.0"	-5.2"	Far East Side along Fence (surrounded by overhanging tree branches)
Location 3	09/07/2011	1221 E. 11th Street	Naphthalene	6 L Summa Canister	AC01497	AVG01691	FCA00039	8 hour	7:17	15:26	489	-27.5"	-5.0"	On bench in front yard.
Location 4	09/07/2011	812 E. 20th Street	Naphthalene	6 L Summa Canister	AC01334	AVG01666	FCA00296	8 hour	7:17	15:19	482	-28.5"	-5.0"	On front porch.

FIELD DATA FORM

Client Name: AmeriTies
Site: The Dalles
Project Number: 0181.01.03

Location	Description	Time	Wind speed (mph)	Wind direction	Temp. (F)	RH (%)	Observations/Notes
1	South side of treating plant	7:58	1.4	From E	65.3	47.2	Distinct mothball-like odor and visible steam from the ties on the drip pad. Two sets of Ties pulled from chamber at 7:35 AM and 7:40 AM.
2	Riverfront park	8:11	<0.1	N/A	60.4	59.7	Slight mothball-like odor.
3	1221 E. 11th Street	8:21	<0.1	N/A	71.7	39.7	
4	812 E. 20th Street	8:30	<0.1	N/A	72.3	40.1	
2	Riverfront park	9:44	1	From N	73	36	
3	1221 E. 11th Street	9:54	1.3	From E	80.1	29.6	
4	812 E. 20th Street	10:01	<0.1	N/A	76.6	28.6	
1	South side of treating plant	10:12	<0.1	N/A	85.4	25.9	Distinct mothball-like odor.
1	South side of treating plant	11:12	1.3	From NE	90.1	22.4	
2	Riverfront park	11:25	<0.1	N/A	87.8	26.2	Slight mothball-like odor.
3	1221 E. 11th Street	13:16	<0.1	N/A	95.9	19.8	
4	812 E. 20th Street	13:24	<0.1	N/A	94.4	15.5	
2	Riverfront park	13:38	<0.1	N/A	90.5	28.1	Slight mothball-like odor.
1	South side of treating plant	13:49	2.4	From W	98.4	15.4	Distinct mothball-like odor.
4	812 E. 20th Street	15:19	<0.1	N/A	93.5	11.3	
3	1221 E. 11th Street	15:26	1.2	From E	97.8	19.6	
1	South side of treating plant	15:36	1.6	From N	101.2	10.2	
2	Riverfront park	15:55	<0.1	N/A	91.7	30.6	Distinct mothball-like odor.

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Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No.

Company Name & Address (Reporting Information)
Maul Foster Alongi
2001 NW 19th Ave, Suite 200
Portland, OR 97209

Project Name: Ambient Air Sampling

Project Number: 0181.01.03 task 2

Project Manager: Bill Beadie

P.O. # / Billing Information: 0181.01.03, task 2

Phone: 503-501-5237 Fax:

Email Address for Result Reporting: bbeadie@maulfoster.com

Sampler (Print & Sign): Bill Beadie,

CAS Contact: Kate A.

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 STAT		Comments e.g. Actual Preservative or specific instructions
Location 1		9/7/11	499 min	AC0130	FCA00081	-27.5	-5.0	6 liters	X		
Location 2		9/7/11	518 min	AC00707	FCA00011	-28.0	-5.2	6 liters	X		
Location 3		9/7/11	489 min	AC01497	FCA00039	-27.5	-5.0	6 liters	X		
Location 4		9/7/11	482 min	AC01334	FCA00296	-28.5	-5.0	6 liters	X		

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: EQuIS

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Bill Beadie	9/8/2011	1:30 pm			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

COC AIR REV 3-11

LABORATORY REPORT

March 16, 2012

Bill Beadie
Maul Foster & Alongi, Incorporated
2001 NW 19th Avenue, Suite 200
Portland, OR 97209

RE: Ambient Air Sampling / 0181.01.03 Task 2

Dear Bill:

Your CAS report number P1200536 has been amended for samples submitted on February 13, 2012. The Tier II components have been added to the report. The amended data pages have been indicated by the "Added Page" and Revised Page" footers located at the bottom right of the page.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3-R2; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-11-2; Minnesota Department of Health, NELAP Certificate No. 362188; Washington State Department of Ecology, ELAP Lab ID: C946, State of Utah Department of Health, NELAP Certificate No. CA015272011-1; Los Angeles Department of Building and Safety, Approval No: TA00001. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Kate Aguilera
Project Manager

Client: Maul Foster & Alongi, Incorporated CAS Project No: P1200536
Project: Ambient Air Sampling / 0181.01.03 Task 2

CASE NARRATIVE

The samples were received intact under chain of custody on February 13, 2012 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Naphthalene Analysis

The samples were analyzed in SIM mode for naphthalene in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

DETAIL SUMMARY REPORT

Client: Maul Foster & Alongi, Incorporated
Service Request: P1200536
Project ID: Ambient Air Sampling / 0181.01.03 Task 2

Date Received: 2/13/2012
Time Received: 10:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pil (psig)	Pfl (psig)	TO-15 - VOC SIM
020712-8-1	P1200536-001	Air	2/7/2012	00:00	AC00912	-2.24	3.70	X
020712-24-1	P1200536-002	Air	2/7/2012	00:00	AC01526	-2.01	3.71	X
020712-24-3	P1200536-003	Air	2/7/2012	00:00	AS00149	-2.78	3.66	X
020712-24-5	P1200536-004	Air	2/7/2012	00:00	AS00145	-0.31	3.72	X
020712-24-6	P1200536-005	Air	2/7/2012	00:00	AC01613	-0.58	3.71	X

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Please analyze and report separately from other COC

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day-Standard)

CAS Project No. P1200536

CAS Contact: Kate A.

Company Name & Address (Reporting Information)	Project Name	Analysis Method/Analytes
Maul Foster Alongi 2001 NW 19th Ave, Suite 200 Portland, OR 97209	Ambient Air Sampling	
Project Manager: Bill Beadie	Project Number: 0181.01.03 task 2	
Phone: 503-501-5237 / Fax:	P.O. # / Billing Information: 0181.01.03, task 2	
Email Address for Result Reporting: bbeadie@maulfoster.com	Sampler (Print & Sign): Thomas Ashton	

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tube/ Solid)	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller (Bar code - FC #)	Sample Volume	TO-15 SIM			Comments e.g. Actual Preservative or specific instructions
020712-8-1	(1)-1.96	2/7/12	461 min	Air	AC00912	FCA00235	6 liters	X			Start Pressure: 29.5" End Pressure: 1.5"
020712-24-1	(2)-1.73	2/7/12	1498 min	Air	AC01526	FCA00352	6 liters	X			Start: 20.5" End: 3.5"
020712-24-3	(3)-2.50	2/7/12	1491 min	Air	AS00149	FCA00324	6 liters	X			Start: 26.0" End: 4.0"
020712-24-5	(4)-0.91	2/7/12	1495 min	Air	AS00145	FCA00218	6 liters	X			Start: 26.5" End: 2.5"
020712-24-6	(5)-0.32	2/7/12	395 min	Air	AS01613	FCA00060	6 liters	X			Start: 27.0" End: 1.5"

Report Tier Levels - please select

Tier I - (Results/Default if not specified) _____
Tier II (Results + QC) _____
Tier III (Data Validation Package) 10% Surcharge _____
Tier V (client specified) _____

EDD required (Yes) / No
Type: Equis EDD Units: _____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	2/10/12	11:00 am		2/10/12	1015
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature _____ °C

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Sample Acceptance Check Form

Client: Maul Foster & Alongi, Incorporated Work order: P1200536
Project: Ambient Air Sampling / 0181.01.03 Task 2
Sample(s) received on: 2/13/12 Date opened: 2/13/12 by: MZAMORA

Note: This form is used forall samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1200536-001.01	6.0 L Ambient Can					
P1200536-002.01	6.0 L Ambient Can					
P1200536-003.01	6.0 L Silonite Can					
P1200536-004.01	6.0 L Silonite Can					
P1200536-005.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Client: **Maul Foster & Alongi, Incorporated**
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Project ID: P1200536

Naphthalene

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date(s) Collected: 2/7/12
Analyst: Karen Ryan Date Received: 2/13/12
Sampling Media: 6.0 L Summa Canister(s) Date Analyzed: 2/20 - 2/24/12
Test Notes:

Client Sample ID	CAS Sample ID	Injection Volume Liter(s)	Canister Dilution Factor	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
020712-8-1	P1200536-001	0.10	1.48	**53**	0.37	**10**	0.071	
020712-24-1	P1200536-002	0.10	1.45	**56**	0.36	**11**	0.069	
020712-24-3	P1200536-003	1.00	1.54	**1.0**	0.039	**0.19**	0.0073	
020712-24-5	P1200536-004	1.00	1.28	**0.88**	0.032	**0.17**	0.0061	
020712-24-6	P1200536-005	1.00	1.30	**0.72**	0.033	**0.14**	0.0062	
Method Blank	P120220-MB	1.00	1.00	ND	0.025	ND	0.0048	
Method Blank	P120224-MB	1.00	1.00	ND	0.025	ND	0.0048	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

SURROGATE SPIKE RECOVERY RESULTS

Client: **Maul Foster & Alongi, Incorporated**
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Project ID: P1200536

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7
Analyst: Karen Ryan
Sampling Media: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 2/7 - 2/9/12
Date(s) Received: 2/10 - 2/13/12
Date(s) Analyzed: 2/20 - 2/24/12

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P120220-MB	**98**	**101**	**102**	70-130	
Method Blank	P120224-MB	**93**	**98**	**102**	70-130	
Lab Control Sample	P120220-LCS	**97**	**99**	**105**	70-130	
Lab Control Sample	P120224-LCS	**93**	**99**	**106**	70-130	
Batch QC	P1200521-013	**98**	**103**	**100**	70-130	
Batch QC Dup	P1200521-013DUP	**96**	**102**	**101**	70-130	
020712-8-1	P1200536-001	**91**	**102**	**106**	70-130	
020712-24-1	P1200536-002	**91**	**101**	**108**	70-130	
020712-24-3	P1200536-003	**100**	**102**	**100**	70-130	
020712-24-5	P1200536-004	**100**	**100**	**101**	70-130	
020712-24-6	P1200536-005	**98**	**101**	**99**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Maul Foster & Alongi, Incorporated**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1200536
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Sample ID: P120220-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date Received: NA
Analyst: Karen Ryan Date Analyzed: 2/20/12
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
91-20-3	Naphthalene	3.44	**3.82**	**111**	25-149	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Maul Foster & Alongi, Incorporated**
Client Sample ID: **Lab Control Sample** CAS Project ID: P1200536
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Sample ID: P120224-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date Received: NA
Analyst: Karen Ryan Date Analyzed: 2/24/12
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	CAS Acceptance Limits	Data Qualifier
91-20-3	Naphthalene	3.44	**3.67**	**107**	25-149	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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LABORATORY DUPLICATE SUMMARY RESULTS

Client: **Maul Foster & Alongi, Incorporated**
Client Sample ID: **Batch QC Dup** CAS Project ID: P1200536
Client Project ID: **Ambient Air Sampling / 0181.01.03 Task 2** CAS Sample ID: P1200521-013DUP

Test Code: EPA TO-15 SIM Date Collected: 2/9/12
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS7 Date Received: 2/10/12
Analyst: Karen Ryan Date Analyzed: 2/20/12
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00608
Initial Pressure (psig): -0.88 Final Pressure (psig): 3.73

Canister Dilution Factor: 1.33

CAS #	Compound	Sample Result		Duplicate Sample Result		Average	% RPD	RPD Limit	Data Qualifier
		µg/m³	ppbV	µg/m³	ppbV	µg/m³			
91-20-3	Naphthalene	0.222	0.0424	0.225	0.0429	0.2235	1	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

FIELD DATA FORM 1

Client Name: AmeriTies
Site: The Dalles
Project Number: 0181.01.03

Project Description: Ambient Naphthalene
Date: 2.7.2012 - 2.8.2012
Contact: Jeff Thompson

Sample No.	Sample Info	Sample Start Date	Area	Analyte	Media	Canister Number	Gauge Number	Regulator Number	Regulator setting	Start Time	Stop time	Total Time (min)	Start gauge reading ("Hg)	Stop gauge reading ("Hg)	Notes
020712-8-1	Location 1	2.7.2012	South side of treating plant	Naphthalene	6 L Summa Canister	AC00912	AVG02052	FCA00235	8 hour	6:24	14:05	461	24.5	1.5	Approximately 100 feet south of the drip pad.
020712-24-1	Location 1	2.7.2012	South side of treating plant	Naphthalene	6 L Summa Canister	AC01526	AVG02078	FCA00352	24 hour	6:24	7:22	1498	20.5	3.5	Approximately 100 feet south of the drip pad.
020712-24-3	Location 3	2.7.2012	1221 E. 11th Street	Naphthalene	6 L Summa Canister	AS00149	AVG02048	FCA00324	24 hour	6:52	7:43	1491	26.0	4.0	On bench in front yard.
020712-24-5	Location 5	2.7.2012	2101 E. 14th Street	Naphthalene	6 L Summa Canister	AS00145	AVG01832	FCA00218	24 hour	6:39	7:34	1495	26.5	2.5	In the side yard.
020712-24-6	Location 6	2.7.2012	St. Mary's Academy (Cherry Heights Road and 10th Street)	Naphthalene	6 L Summa Canister	AC01613	AVG01668	FCA00060	24 hour	7:13	13:48	395	27.0	1.5	On the fence at the DEQ sampling station at Saint Mary's Academy.

FIELD DATA FORM

Client Name: AmeriTies
Site: The Dalles
Project Number: 0181.01.03
Date: 2.7.12 - 2.8.12

Location	Description	Time	Wind speed (mph)	Wind direction	Temp. (F)	RH (%)	Observations/Notes
1	South Side of AmeriTies Treatment Plant	6:20	1.4	from east	41.0	44.6	Moderate mothball-like odor.
5	2101 E. 14th Street	6:39	0.0	n/a	45.8	39.0	
3	121 E. 11th Street	6:51	0.0	n/a	41.0	45.4	
6	St. Mary's Academy (Cherry Heights Road and 10th Street)	7:13	0.0	n/a	39.0	49.0	
1	South Side of AmeriTies Treatment Plant	8:47	2.4	from east	38.8	49.5	Slight mothball-like odor.
5	2101 E. 14th Street	8:57	0.0	n/a	42.9	44.0	
3	121 E. 11th Street	9:06	0.9	from east	41.0	45.9	
6	St. Mary's Academy (Cherry Heights Road and 10th Street)	9:26	0.0	n/a	40.8	47.6	Vacuum gauge reading 15 inches.
1	South Side of AmeriTies Treatment Plant	11:32	5.6	from east	44.0	44.8	Distinct mothball-like odor.
5	2101 E. 14th Street	11:42	0.0	n/a	46.4	39.9	Slight mothball-like odor.
3	121 E. 11th Street	11:49	1.2	from north	44.9	41.0	Slight mothball-like odor.
6	St. Mary's Academy (Cherry Heights Road and 10th Street)	12:01	3.4	from north	42.0	48.8	Vacuum gauge reading 4.5 inches.
6	St. Mary's Academy (Cherry Heights Road and 10th Street)	13:01	2.9	from north	44.9	42.0	
3	121 E. 11th Street	13:11	1.1	from north	48.0	40.0	Slight mothball-like odor.
5	2101 E. 14th Street	13:18	0.0	n/a	49.6	35.3	Slight mothball-like odor.
1	South Side of AmeriTies Treatment Plant	13:27	5.1	from east	44.6	43.0	Distinct mothball-like odor.
6	St. Mary's Academy (Cherry Heights Road and 10th Street)	13:48	1.7	from north	46.5	37.2	
1	South Side of AmeriTies Treatment Plant	14:04	5.3	from east	42.4	48.7	Distinct mothball-like odor.
1	South Side of AmeriTies Treatment Plant	7:19 (day 2)	0.0	n/a	42.2	55.0	Moderate mothball-like odor.
5	2101 E. 14th Street	7:33 (day 2)	0.0	n/a	42.9	49.9	Railroad ties, presumed to be several years old, were observed in the yard within 5 feet of the sample.
3	121 E. 11th Street	7:43 (day 2)	0.0	n/a	45.3	51.3	

Columbia Analytical Services

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

Please analyze and report separately from other COC

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day-Standard)

CAS Project No.

Company Name & Address (Reporting Information)	Maul Foster Alongi 2001 NW 19th Ave., Suite 200 Portland, OR 97209
Project Manager	Bill Beadle
Phone	503-501-5237
Fax	
Email Address for Result Reporting	bbeadle@maulfoster.com
Project Name	Ambient Air Sampling
Project Number	0181.01.03 task 2
P.O. # / Billing Information	0181.01.03, task 2
Sampler (Print & Sign)	Thomas Ashton
CAS Contact:	Kate A.

Analysis Method/Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tube/ Solid)	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller (Bar code - FC#)	Sample Volume	TO-15 SIM			Comments e.g. Actual Preservative or specific instructions
020712-8-1		2/7/12	461 min	Air	AC00912	FCA00235	6 liters	X			Start Pressure: -29.5" End Pressure: -1.5"
020712-24-1		2/7/12	1498 min	Air	AC01526	FCA00352	6 liters	X			Start: -30.5" End: -3.5"
020712-24-3		2/7/12	1491 min	Air	AS00149	FCA00324	6 liters	X			Start: -26.0" End: -4.0"
020712-24-5		2/7/12	1495 min	Air	AS00145	FCA00218	6 liters	X			Start: -26.5" End: -2.5"
020712-24-6		2/7/12	395 min	Air	AS01613	FCA00060	6 liters	X			Start: -27.0" End: -1.5"

Report Tier Levels - please select

Tier I - (Results/Default if not specified) _____
Tier II (Results + QC) _____
Tier III (Data Validation Package) 10% Surcharge _____
Tier V (client specified) _____

EDD required (Yes) / No
Type: Equis EDD Units: _____

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Thomas Ashton	2/10/12	11:00 am			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature _____ °C

APPENDIX B

PRODUCTION LOG FOR SAMPLING EVENTS

Appendix B
Production Log
AmeriTies West, LLC
The Dalles, Oregon

Date	Charge Number	Charge Removal Start Time	Hold Time On Pad (Minutes)	Amount of Wood Treated (Cubic Feet)	Net Preservative Used (Gallons)	Absorbed Preservative (Pounds/Cubic Foot)	Wood Species	Preservative
09/07/2011	719	11:30	120	2701	2200	7.35	Fir	P2 Creosote
09/07/2011	720	7:25	120	2701	2172	7.25	Fir	P2 Creosote
09/07/2011	721	8:15	120	2701	2196	7.33	Fir	P2 Creosote
09/07/2011	722	9:30	120	2303	2117	8.29	Fir	P2 Creosote
09/07/2011	723	10:30	120	2701	2190	7.31	Fir	P2 Creosote
02/07/2012	168	7:42	50	2733	2217	7.32	Mixed Hardwoods	P2 Creosote
02/07/2012	169	7:02	50	2580	2033	7.11	Fir /MHW	P2 Creosote
02/07/2012	170	9:15	50	2744	2211	7.27	Fir	P2 Creosote
02/07/2012	171	12:45	50	2744	2210	7.26	Fir	P2 Creosote
02/07/2012	172	10:33	50	2744	2236	7.35	Fir	P2 Creosote