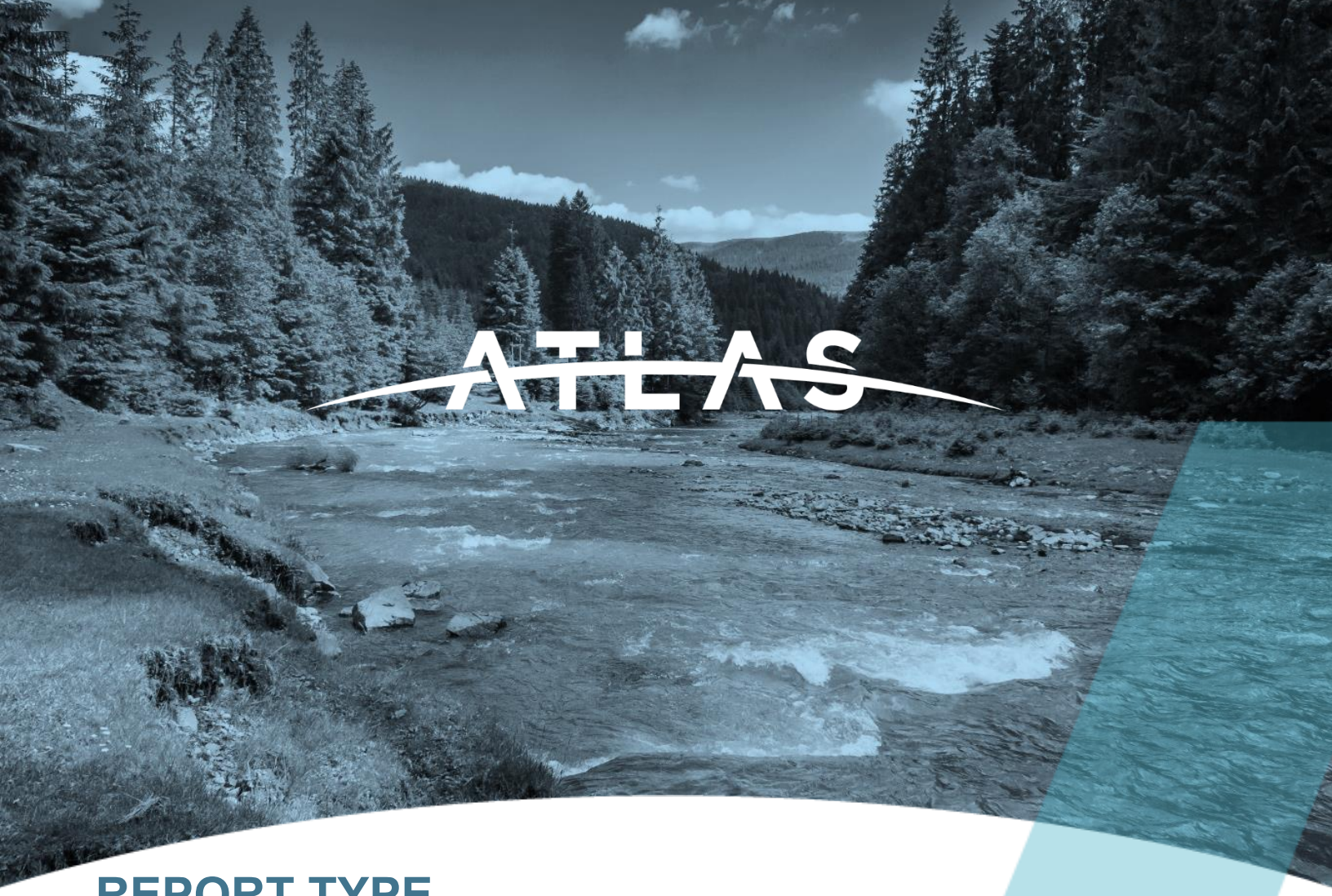

REPORT TYPE

LONG TERM MONITORING AND MAINTENANCE REPORT

THOMAS PRINCE SCHOOL

PRINCETON, MASSACHUSETTS

Atlas Project No. 0321663003

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November 15, 2021

Common Environmental Abbreviations and Acronyms

ACEC	Area of Critical Environmental Concern
ACO	Administrative Consent Order
ADC	Alternative Daily Cover
ADD	Average Daily Dose
ADE	Average Daily Exposure
AAI	All Appropriate Inquiry
AOC	Area of Concern
AWQC	Ambient Water Quality Criteria
APH	Air Petroleum Hydrocarbon
API	American Petroleum Institite
APS	Additional Polluting Substance
AS	Air Sparge
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
ATC Eclipse	ATC Eclipse Response Management Center (a Division of ATC Group Services, LLC)
ATG	Automatic Tank Gauge
ATSDR	Agency for Toxic Substances and Disease Registry
AUL	Activity and Use Limitation
BMP	Best Management Practice
BOL	Bill of Lading
BOH	Board of Health
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
BUD	Beneficial Use Determination
CAM	Compendium of Analytical Methods
CEP	Critical Exposure Pathway
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfm	Cubic feet per minute
cm^2	Square centimeter
CMR	Code of Massachusetts Regulations
COC	Contaminant of Concern
ConCom	Conservation Commission
CORRACTS	Corrective Action Report
CRA	Comprehensive Remedial Action
CREC	Controlled Recognized Environmental Conditions
CSA	Comprehensive Site Assessment
CSF	Cancer Slope Factor
CSM	Conceptual Site Model
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDPH	Connecticut Department of Public Health
dba	Doing business as
DDD	Dichlordiphenyl dichloroethane
DDE	Dichlordiphenyl dichloroethylene
DDT	Dichlordipheyl Trichloroethane
DEC (R/CI)	Direct Exposure Criteria (Residential/Commercial Industrial)
DEQE	Department of Environmental Quality Engineering
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DOS	Date of Service
DPS	Downgradient Property Status
DPW	Department of Public Works
DQA	Data Qaulity Assessment
DQO	Data Qaulity Objective
DTB	Depth to Bottom
DTL	Depth to Liquid
DTP	Depth to Product
DTW	Depth to Water
DUE	Data Usability Evaluation
DWSA	Drinking Water Source Area
ECS	Environmental Compliance Services, Inc.
EDB	Ethylene Dibromide
EDR	Environmental Data Resources Inc.
EDR Hist Auto	EDR Historical Automobile
EFR	Enhanced Fluid Recovery
EIP	Electronic Interface Probe
ELCR	Excess Lifetime Cancer Risk
ELUR	Environmental Land Use Restriction
EP	Exposure Point
EPC	Exposure Point Concentration
EPH	Extractable Petroleum Hydrocarbons, MADEP Method 04-1.1
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
ETPH	Extractable Total Petroleum Hydrocarbons
EW	Extraction Well
fbg	Feet Below Grade
Fe	Iron
FFPM	Fluid Flow in Porous Media
FIR	Final Inspection Report
frac tank	Fractionation Tank
ft	Foot
GA	Class GA Groundwater Classification Area
GAC	Granular Activated Carbon
GB	Class GB Groundwater Classification Area
GC/FID	Gas Chromatogram/Flame Ionization Detector
GIS	Geographic Information System
gpm	Gallons per minute
gpd	Gallons per Day
gpy	Gallons per Year
GPR	Ground Penetrating Radar
GW	Groundwater
GWPC	Ground Water Protection Criteria
GW P&T	Groundwater Pump and Treat
GWTS	Groundwater Treatment System
GW-l, GW-2, GW-3	MCP Method 1 Groundwater Categories
HI	Hazard Index
HITME	High Intensity Targeted Multi-Phase Extraction
hp	Horsepower
HREC	Historical Recognized Environmental Conditions
HW GEN	Hazardous Waste Generator
IAS	Indoor Air Sample
I/C DEC	Industrial/Commercial Direct Exposure Criteria
I/C VC	Industrial/Commercial Volatilization Criteria
in. HG	inches of mercury
ID	Inside Diameter
IHE	Imminent Hazard Evaluation
IRA	Immediate Response Action
IRIS	Integrated Risk Information System
ISCO	In Situ Chemical Oxidation

Common Environmental Abbreviations and Acronyms

ITRC	Interstate Technology and Regulatory Council
IW	Injection Well
IWPA	Interim Wellhead Protection Area
kg	Kilogram
LCS	Laboratory Control Spike
LCSD	Laboratory Control Spike Duplicate
LCSM	LNAPL Conceptual Site Model
LEL	Lower Explosive Limit
LEP	Licensed Environmental Professional
LGAC	Liquid-Phase Granular Activated Carbon
LNAPL	Light Non-Aqueous Phase Liquid
LRA	Limited Removal Action
LSI	Limited Subsurface Investigation
LSP	Licensed Site Professional
MBAS	Methyl Blue Active Substance
MCP	Massachusetts Contingency Plan
MDL	Method Detection Limit
M.G.L.c. 21E	Massachusetts General Law, chapter 21E
mg	milligram
mg/g	milligrams per gram
mg/m^3	milligrams per cubic meter
mg/L	milligrams per liter
MMIP	Monitoring and Maintenance Implementation Plan
MMIR	Monitoring and Maintenance Implementation Report
Mn	Manganese
MNA	Monitored Natural Attenuation
Mod	Modification
MS	Matrix Spike
MSDS	Matrix Spike Duplicate
MPE	Multi-Phase Extraction
MSDS	Material Safety Data Sheet
MSR	Material Shipping Record and Log
msl	Mean Sea Level
MtBE	Methyl Tertiary Butyl Ether
MW	Monitoring Well
ND	Non-detect - not detected above instrument detection limit.
NFRAP	No Further Remedial Action Planned
ng/m^3	Nanogram per cubic meter
NGVD	National Geodetic Vertical Datum
NHESP	National Heritage of Endangered Species Program
NOAF	Notice of Audit Findings
NOI	Notice of Intent
NON	Notice of Noncompliance
NOR	Notice of Responsibility
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRS	Numerical Ranking System
OD	Outside Diameter
OHM	Oil and Hazardous Materials
OMM	Operation, Maintenance and/or Monitoring
OOC	Order of Conditions
OOD	Organic Matter Oxidant Demand
ORC	Oxygen Releasing Compound
ORP	Oxidation-Reduction Potential
ORS	MassDEP Office of Research and Standards
OSHA	Occupational Safety and Health Administration
OSWER	EPA Office of Solid Waste and Emergency Response
OWS	Oil Water Separator
PFOA	Perfluorooctanoic acid
PFAS	Perfluoroalkyl and Polyfluoralkyl Substances
PFOS	Perfluorooctane sulfonate
PAH	Polynuclear Aromatic Hydrocarbon
PAOC	Potential Area of Concern
PARCSS	Precision, Accuracy, Representativeness, Comparability, Completeness and Sensitivity
PCB	Polychlorinated Biphenyl
PDWW	Private Drinking Water Well
PEL	Permissible Exposure Limit
Phase I	Phase I Initial Site Investigation
Phase I ESA	Phase I Environmental Site Assessment
Phase II CSA	Phase II Comprehensive Site Assessment
Phase II ESA	Phase II Environmental Site Assessment
Phase III RAP	Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives
Phase IV RIP	Phase IV – Implementation of Selected Remedial Action Alternative
PIANO	Parffin, isoparaffin, aromatic, naphthene, and olefin hydrocarbons
PID	Photoionization Detector
PLM	Positive Limiting Barrier (i.e. grooves in dispenser mat)
PMC (GA or GB)	Pollutant Mobility Criteria for groundwater classified as GA or GB groundwaters
POET	Point of Entry Treatment
POTW	Publicaly Owned Treatment Works
PPA	Potentially Productive Aquifer
ppb	Parts-per-Billion
ppm	Parts-per-Million
ppm(v)	Parts per million (by volume)
P-pump	Peristaltic Pump
ppt	Parts per thousand
PRP	Potentially Responsible Party
PSNC	Permanent Solution with No Conditions
PSS	Permanent Solution Statement
PUF	Polyurethane Foam
PVC	Polyvinyl Chloride
QAPP	Quality Assessment Project Plan
QA/QC	Quality Assurance/Quality Control
RA	Release Area
RAA	Remedial Action Alternative
RAF	Release Ammendment Form
RAF's	Relative Absorption Factors
RAM	Release Abatement Measure
RAO	Response Action Outcome
RAP	Remedial Action Plan
RAPS	Response Action Performance Standards
RBC	Risk Based Concentration
RC	Risk Characterization
RCs	Reportable Concentrations
RCGW-l & 2, RCS-l &2	Reportable Concentration Groundwater/Soil Categories - Massachusetts
RCP	Reasonable Confidence Protocols
RCRA	Resource Conservation and Recovery Act
RCSA	Regulations of Connecticut State Agencies
REC	Recognized Environmental Condition
RES DEC	Residential Direct Exposure Criteria
RES SAT	Residual Saturation
RES VC	Residential Volatilzation Criteria

Common Environmental Abbreviations and Acronyms

RfD	Reference Dose
RGP	Remedial General Permit
RIP	Remedy Implementation Plan
RMR	Remedial Monitoring Report
RLF	Release Log Form
RNF	Release Notification Form
ROS	Remedy Operation Status
RL	Reporting Limit
ROS Report	Phase V Inspection and Monitroing Report in Support of ROS
RSR	Remediation Standard Regulations
RTN	Release Tracking Number
RVC	Residential Volatilization Criteria
RW	Recovery Well
Scfm	Standard cubic feet per minute
sf	Square Feet
S-1, S-2, S-3	MCP Method 1 Soil Categories
SHWS	State Hazardous Waste Site
SOP	Standard Operating Procedures
SOW	Scope-of-Work
SPLP	Synthetic Percipitation Leaching Procedure
SQG	Small Quantity Generator
SRM	Substantial Release Migration
SSDS	Sub-Slab Depressurization System
SVE	Soil Vapor Extraction
SVOC	Semi Volatile Organic Compound
SVVP	Soil Vapor Volatilazation Criteria
SWPC	Surface Water Protection Criteria
SWQG	Surface Water Quality Guidance
TAC	Target Indoor Air Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TDA	Temporary Remedial Discharge Permit Authorization
T_n	Transmissivity
TOC	Total Organic Carbon
TOD	Total Oxidant Demand
TOR	Threat of Release
TOVs	Total Organic Vapors
TPH	Total Petroleum Hydrocarbons
UCL	Upper Concentration Limit
ug/g	micrograms per gram
ug/Kg	micrograms per kilogram
ug/L	micrograms per liter
ug/m^3	microgram per cubic meter
UHWM	Uniform Hazaradous Waste Manifest
UHWMTN	Uniform Hazaradous Waste Manifest Tracking Number
UR	Unit Risk
UST	Underground Storage Tank
USTCPA	Underground Storage Tank Petroleum Clean-Up Account
USTPCP	Underground Storage Tank Petroleum Clean-Up Account Program
UTM	Universal Transverse Mercator
Vactor	High Vacuum Extractor
VC	Volatilzation Criteria
VEGE	Vacuum Enhanced Groundwater Extraction
VGAC	Vapor-Phase Granular Activated Carbon
VIP	Vapor Intrusion Pathway
VOC	Volatile Organic Compound
VPH	Volatile Petroleum Hydrocarbons, MADEP Method 04-1.1
WPA	Wetlands Protection Act
WWTP	Waste Water Treatment Plant

REGULATORY AGENCIES

BWSC	Bureau of Waste Site Cleanup
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDPH	Connecticut Department of Public Health
MassDEP	Massachusetts Department of Environmental Protection
MassDOT	Massachusetts Department of Transportation
MassDOR	Massachusetts Department of Revenue
MassGIS	Massachusetts Geographic Information System
NHESP	National Heritage & Endangered Species Program
RIDEM	Rhode Island Department of Environmental Management
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Survey

SUBCONTRACTORS

ATC	ATC Group Services, LLC
CHI	Clean Harbors, Inc.
Contest	Contest Analytical Services
Drilex	Drilex Environmental, West Boylston, MA
ECS	Environmental Compliance Services, Inc.
ESMI	Environmental Soil Management, Inc., Loudon, NH
Eurofins/Spectrum	Eurofins/Spectrum Analytical, Inc. , Agawam, MA
Geolabs	Geolabs, Inc., Braintree, MA
Geosearch	Geosearch, Inc - Westminster, MA
LaMountain	LaMountain Brothers, Inc, Oxford, MA
New Hampshire Boring	New Hampshire Boring, Inc., Londonderry, NH
Ondrick	Ted Ondrick Company, LLC
STI	Service Tech, Inc.
Tanknology	Tanknology, Inc., Austin, TX

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Attachment A	Wipe Sample Laboratory Analytical Certificates – October 2021
Attachment B	Indoor Air Laboratory Analytical Certificates – October 2021
Attachment C	Epoxy Coated Surfaces Visual Inspection Logs – October 2021

1.0 INTRODUCTION

On behalf of the Town of Princeton, the purpose of this report is to present the results of annual long term monitoring and maintenance activities that were conducted at the Thomas Prince School in October 2021. Included within this report are the results and discussions related to indoor air and wipe samples that were collected on October 11, 2021. This report has been provided as public information via the website of the Wachusett Regional School District (WRSD). Refer to the acronym list which follows the Table of Contents for a listing of common acronyms utilized within this report.

1.1 BACKGROUND

The Thomas Prince School is a public elementary school located in the Town of Princeton, Massachusetts. The school building is operated by the WRSD and owned by the Town of Princeton. The school currently serves students in the grades of kindergarten through eight and fulltime/part time educators. The school is occupied for typical school session from late August through June between the hours of 8:30 AM to 3 PM on weekdays. School sponsored "before and after care programming" occurs for an additional 3.5 hours per day. The school is also used for childhood activities during the summer on a varying schedule. A locus map, showing the location of the school is presented as **Figure 1**. A plan showing the building and locations of rooms within the building is presented as **Figure 2**.

In April 2011, during preparation for a window replacement project being performed as part of Green Repair Program administered under the Massachusetts School Building Authority, analysis of samples of window caulking and window glazing material collected from the school indicated the presence of PCB's in those building materials. Additional sampling, conducted in June 2011, confirmed the presence of PCB's in window caulking and also indicated the presence of PCB's in structural joint caulking. PCB's in building materials is regulated under the Toxic Substances Control Act (TSCA, 40 CFR, Part 761). Use of PCB's in building materials is an unauthorized use under this act.

Based on conditional approvals by USEPA, PCB mitigation activities were previously completed at the school. These activities included the removal and/or disposal of *PCB Bulk Product Waste* (window and joint caulking), *PCB Remediation Waste* (building materials and soil), PCB fluorescent light ballasts/stained light housings, *PCB Capacitors* and the encapsulation of identified PCB contaminated porous surfaces (concrete, concrete block and brick) with two layers of an epoxy coating. Per USEPA, the presence of encapsulated PCB contaminated porous surfaces requires long term monitoring and maintenance consisting of surface wipe sampling, indoor air sampling, visual inspection of the encapsulated porous surfaces and maintenance of those surfaces, as required. Multiple rounds of indoor air sampling, surface wipe sampling, building materials sampling and associated analyses for PCB's have been performed at the school. This data is summarized in a report prepared for the school titled "Long Term Monitoring and Maintenance Report, 2012 – Present", dated September 30, 2017.

2.0 ANNUAL MONITORING AND MAINTENANCE

Data obtained during annual monitoring and maintenance activities that have been performed at the Thomas Prince School, as well as other documents related to the PCB assessment and remediation at the school, have been provided to the USEPA via hard copy and electronic copy formats and to the general public via posting on the WRSD website at https://www.wrsd.net/plans_documents/pcb_information. Included within this report are the following tables which summarize the analytical data obtained from wipe sampling and indoor air sampling that was completed at the school on October 11, 2021.

- **Table 1** presents a summary of the post-remedial, epoxy coated, *porous surface* wipe sample analytical results obtained in October 2021. The laboratory certificates of analysis associated with the wipe sample results are included in **Attachment A**.
- **Table 2** presents a summary of all indoor air sampling analytical results that which have been obtained at the school as part of pre/post PCB assessment and remedial mitigation activities. The laboratory certificates of analysis associated with the indoor air sampling performed in October 2021 are included in **Attachment B**.
- **Table 3** presents a summary of the field readings, primarily related to time and air flow rates, collected during the air sampling activities in October 2021.
- **Table 4** presents information related to the conversion of the raw laboratory air data (presented in the laboratory report in **Attachment B**) from ng/PUF cartridge to ng/m^3 of air.

All wipe samples collected as part of long term monitoring activities were done so in conformance with the methods recommended by USEPA[1]. The wipe samples were collected using hexane doused cotton gauze wipes over a 100 cm^2 area. The samples were extracted per EPA Method 3540C and analyzed for PCB's via EPA Method 8082. The results are compared to the EPA guideline for the cleanup of PCBs on surfaces in schools of 1 ug/100 cm^2.

As part of the long term monitoring activities performed at the school, indoor air samples were collected in general conformance with EPA Method TO-10A[2], using individual low flow air sampling pumps, calibrated to approximately 5 liters/minute flow rates, to pull interior air through laboratory supplied polyurethane foam sample media cartridges. The samples were typically collected over a duration of approximately 6 hours and 40 minutes at flow rates of approximately 5 liters per minute (for a total sample volume of air of approximately 2 cubic meters). The air samples were submitted for laboratory analysis via USEPA Method 680 for PCB Homologs by Gas Chromatography with Mass Spectrometry Detection. The results are compared to the current calculated EPA "Exposure Levels for Evaluating PCB's in Indoor School Air" (EPA guidance values) as presented in **Table 2**.

2.1 OCTOBER 11, 2021 – 8TH ROUND OF POST "FINAL MITIGATION" SURFACE WIPE AND INDOOR AIR SAMPLING

Surface Wipe Samples – October 11, 2021

The 8th round of "post final mitigation" surface wipe samples were collected on October 11, 2021 from the epoxy coated *porous surfaces* from 1) the interior substrate surrounding the windows of classrooms 102,

[1] Smith, John H. (1987). Wipe sampling and double wash/rinse cleanup as recommended by the Environmental Protection Agency PCB Spill Cleanup Policy. USEPA. June 23, 1987 (revised and clarified on April 18, 1991) and information presented in 40 CFR 761.123, Definition of Standard wipe test.

[2] USEPA. (1999). Compendium of methods for the determination of toxic organic compounds in ambient air. Second Edition. Compendium Method TO-10A. Determination of pesticides and polychlorinated biphenyls in ambient air using low volume polyurethane foam (PUF) sampling followed by gas chromatographic /multi-detector detection. USEPA Office of Research and Development, Center for Environmental Research Information. Cincinnati, OH 45268. January, 1999.

106, 110, 201, 205 and 209; and, 2) the exterior substrate surrounding the windows of classrooms 100/102, 104/106, 108/110, 205, 207 and 211. The surface wipe samples were collected and evaluated following procedures as presented in the Site specific Monitoring and Maintenance Implementation Plan dated October 2017. The samples were analyzed by the independent analytical laboratory Alpha Analytical, Inc. (Alpha) of Westborough, MA, per the methods indicated above. The laboratory analytical report is presented in **Attachment A** and the results are summarized in **Table 1**.

The results of the analytical testing shows that seven (7) of the twelve (12) wipe samples produced results below the laboratory reporting limit of 0.5 ug/100 cm^2. Of the five (5) remaining samples, one (1) sample (interior located sample at classroom 110) had a concentration of PCB below the guideline value of 1 ug/100 cm^2. The other four (4) samples (all exterior located samples) had concentrations of PCB's above the guideline of 1 ug/100 cm^2. The exterior samples collected from the epoxy coated porous surfaces associated with the windows for classrooms 100/102, 104/106, 108/110 and 211 revealed concentrations of PCB's at 10.1, 3.15, 4.74 and 4.97 ug/100 cm^2, respectively. In accordance with the October 2017 MMIP and/or USEPA requirements, "*an additional coating of two layers of Sikagard® 62 epoxy coating shall be applied to the area(s) of concern within 30 days of receipt of the analytical results and follow-up confirmatory wipe samples shall be collected within 15 days of re-coating to verify that PCB concentrations have been reduced to less than (<) 1 ug/100cm² . If analytical results indicate that PCBs are still present at concentrations greater than (>) 1 µg/100 cm² following re-coating, the Town of Princeton, in conjunction with EPA, will evaluate alternative solutions to attempt to reduce PCB concentrations to concentrations less than (<) 1 ug/100cm² ".*

The recoating activity is currently being scheduled and coordinated. Due to the cold temperatures, the re-coating activities will likely not occur until the weather warms. This is in agreement with the manufacturer's application recommendations. Warmer temperatures will be more conducive to applying an epoxy coating that will be effective in preventing the continued migration of residual concentrations of PCB's from the building materials.

Indoor Air Samples – October 11, 2021

The 8th round of "post final mitigation" indoor air samples were collected on April 22, 2020 from classrooms 100, 106, 108, 203, 207 and 209. The indoor air samples were collected and evaluated following procedures as presented in the Site specific MMIP dated October 2017. The samples were analyzed by Alpha per the methods indicated above. The laboratory analytical report is presented in **Attachment B** and the results are summarized in **Table 2**. The analytical results are reported in units of "ng/cart" (i.e. ng/PUF cartridge) which is a mass per unit measurement. To compare the laboratory reported value to the EPA guideline values, the data presented in the laboratory report were divided by the corresponding volume of sample air (recorded in cubic meters (m^3)), that was pulled through the individual PUF cartridge for a particular sample, to obtain a mass per volume measurement. The air sample volume conversions are presented in **Table 3** and the laboratory data conversion calculations are presented in **Table 4**.

The results of the indoor air analytical testing were favorable. Though very low levels of PCB's were detected in all of the classrooms sampled during this event, all values were below the lowest EPA Guidance value for evaluating PCB's in school indoor air of 100 ng/m^3, applicable for children aged 1-3 years[3]. The average concentration of PCB detected in the indoor air was 31.8 ng/m^3 with the highest result being 47.1 ng/m^3. In accordance with the October 2017 MMIP and/or USEPA requirements, since no

[3] This information was obtained on 04/30/2020 from the EPA website https://www.epa.gov/pcbs/exposure-levels-evaluating-polychlorinated-biphenyls-pcbs-indoor-school-air. The values presented therein are the EPA Calculated "Exposure Levels for Evaluating PCB's in School Indoor Air", Health Protective GUIDANCE Values.

indoor air sampling result exceeded 300 ng/m^3 (protective of children from age 6-12 years), no additional action is required at this time and future indoor air monitoring will continue in accordance with the MMIP.

2.2 REQUIRED MAINTENANCE

It is the opinion of Atlas that the findings of the confirmatory sampling performed on October 11, 2021 indicates that maintenance of the epoxy encapsulated porous surfaces at the exterior concrete surfaces between the windows for classrooms 100/102, 104/106, 108/110 and 211 is required at this time. This opinion is based on the laboratory analytical results which demonstrate PCB's greater than 1 ug/100cm^2 were detected in wipe samples collected from the substrate surfaces. Hence, it is recommended that an additional coating of two layers of Sikagard® 62 epoxy coating be applied to these surfaces and that post-application confirmatory sampling for PCB's be performed. This approach is in agreement with the October 2017 MMIP. Per the manufacturer's recommendations, Sikagard® 62 epoxy coatings should be applied when the temperature of the substrate is greater than 50º F and that of ambient air is greater than 40º F. Based on the manufacturers recommended application instructions, the current seasonal cold temperatures will prohibit the proper and effective application of the epoxy coatings. Thus, it is recommended that the application of the epoxy coatings to the exterior substrate materials be delayed until warmer seasonal temperatures are upon us (late spring/early summer 2022).

In accordance with the October 2017 MMIP, a visual inspection of the epoxy encapsulated porous surfaces was performed during the October 2021 sampling event. The inspection was performed to determine if the integrity of the epoxy encapsulate had become unacceptably deteriorated or compromised, thus potentially reducing the continued effectiveness of the coating in limiting potential formation of dust, limiting direct contact to and limiting potential volatilization of the low level of PCB's contained in the underlying substrate material. Observations of conditions of the epoxy coatings are presented on the inspection forms presented in **Attachment C**. The visual aspects considered during the inspections included, but were not limited to, the following:

- Physical condition of the coatings and new caulking (i.e. cracking, flaking, chipping, peeling, thinning, etc.);
- The presence of decorations or other items that are adhered to the coated surfaces; and,
- Other signs of disturbance of the coatings or new caulking.

Significant thinning of the epoxy coating was observed on several of the exterior window sills and concrete columns associated with the 200-Wing classrooms. Other cracking, flaking, and/or chipping of the epoxy coatings was observed in association with the exterior 200-Wing classroom windows. In addition to the exterior areas of the 100-wing and room 211 classroom windows as indicated above, it is recommended that an additional coating of two layers of Sikagard® 62 epoxy coating be applied to the surfaces of the concrete columns associated with the 200-wing classroom windows. Refer to **Attachment C**, the Annual Visual Inspection Forms, for specific observations and maintenance recommendations.

3.0 COMMUNICATION

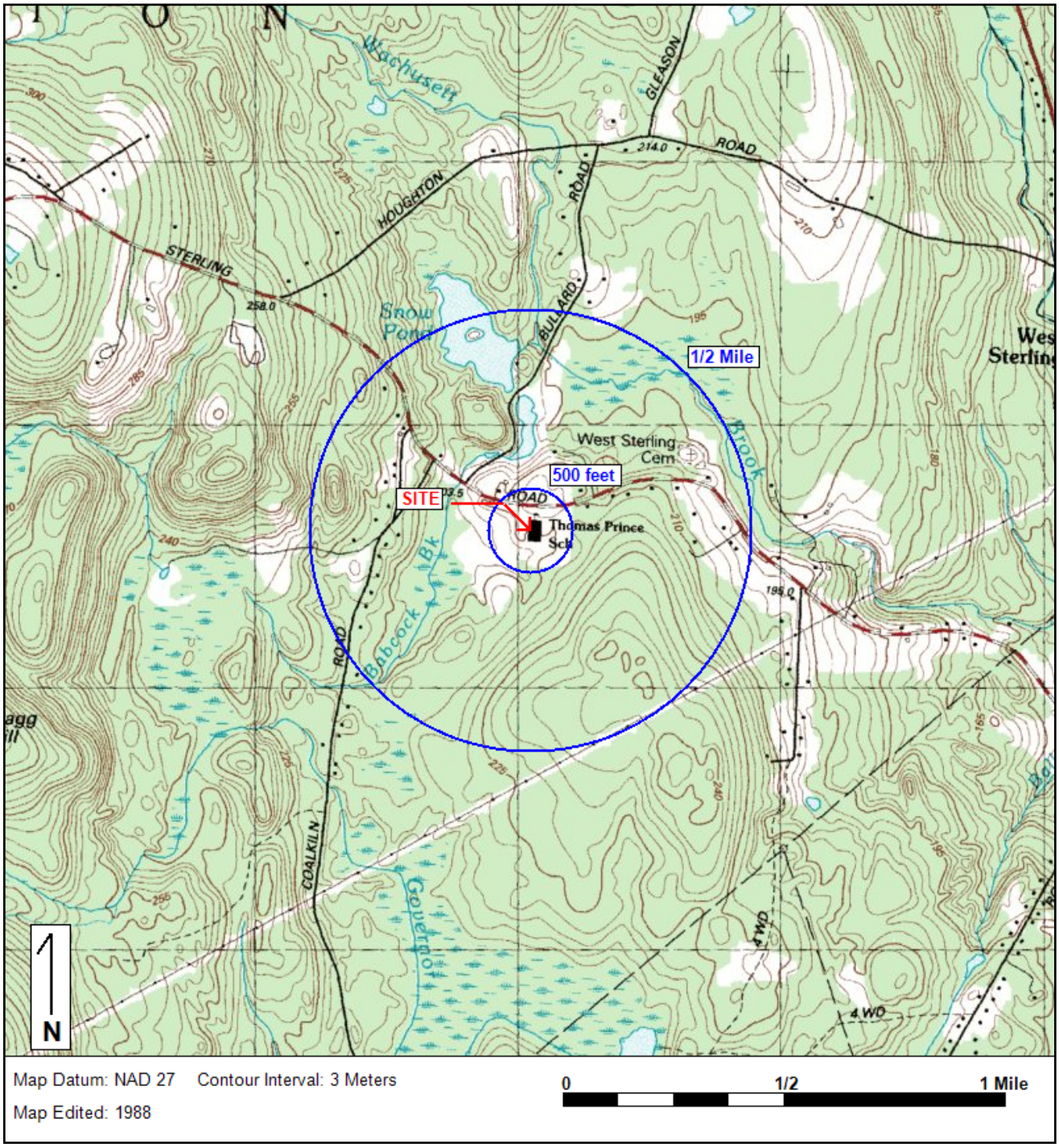
This report has been posted to the WRSD website under the heading *PCB Information* at https://www.wrsd.net/plans_documents/pcb_information. Links to this information can also be found on the Home Site of the WRSD website under the tab “Plans and Documents” as well as on the webpage specific to the Thomas Prince School under “School Info”.

FIGURES

ATLAS Technical
10 State Street
Woburn, MA 01801
Phone: 781-246-8897
www.oneatlas.com

Thomas Prince School
170 Sterling Street
Princeton, MA

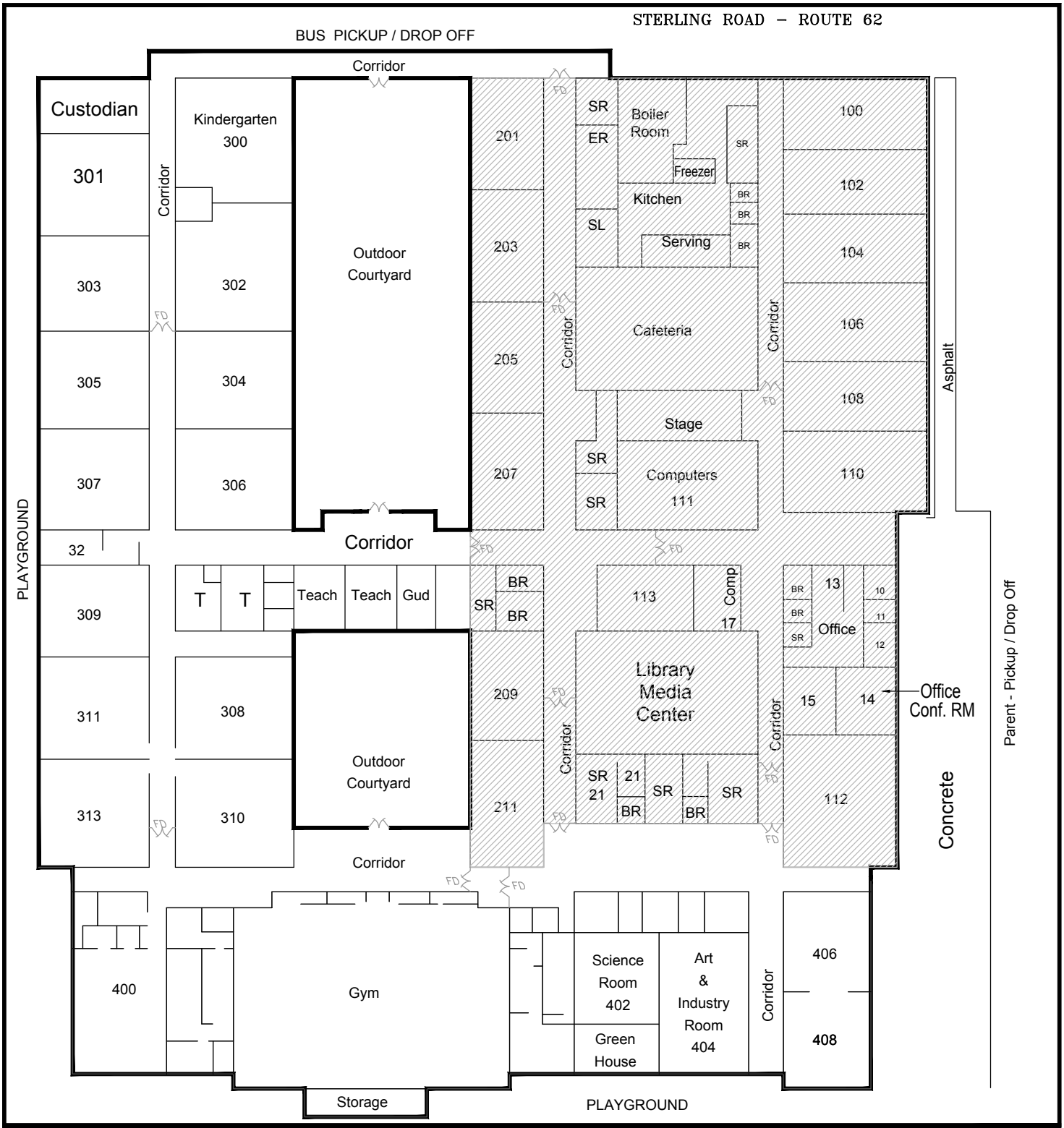
Figure 1: SITE LOCUS



Base Map: U.S. Geological Survey; Quadrangle Location: Sterling, MA

Lat/Lon: 42.4425 NORTH, 71.8438 WEST - UTM Coordinates: 19 266094.53 EAST / 4702820.5 NORTH

Generated By: Rick Starodoj



Legend

BR - Bathroom
SR - Storage Room
ER - Electrical Room
SL - Staff Lounge
FD - Fire Door

Building Constructed 1962
Un-hatched sections were constructed in 1991

ATLAS
10 State Street * Woburn, MA 01801
Phone: 781-246-8897 Fax: 781-246-8950

PROJECT:
Thomas Prince School
170 Sterling Road – Route 62
Princeton, Masschusetts

TITLE:
Room ID Plan

COMPUTER CADFILE : 216630e.dwg

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
RAS	CK	CK	CK
SCALE:	DATE:	JOB NO.:	FIGURE NO.:
NTS	11/12/21	216630	2

TABLES

Town of Princeton
Thomas Prince School
170 Sterling Road
Princeton, Massachusetts

Table 1
2021 - ANNUAL CLASSROOM WIPE SAMPLE RESULTS

Quantitative Analysis
Surface Wipes
USEPA Method 3540C 8082

SAMPLE ID	Date	Aroclor	Concentration ug/100cm^2	Notes	SAMPLE LOCATION and COMMENTS
102 Int	10/11/2021		<0.5	1	3rd blk above sill, S side, parallel and perpendicular facing block
106 INT	10/11/2021		<0.5	1	2nd Block S, below sill, perpendicular facing block (actual ceramic block)
110 INT	10/11/2021	1254	0.619	1	5th Block above Sill, N side of the window, parallel and perpendicular facing block
201 INT	10/11/2021		<0.5	2	2nd Block up from the Sill,in between the windows, parallel facing block
205 INT	10/11/2021		<0.5	2	4th Block up from the Sill,in between the windows, parallel facing block
209 INT	10/11/2021		<0.5	2	3rd Block up from the Sill,in between the windows, parallel facing block
100/102 EXT	10/11/2021	1254	10.1	1	Center between the windows 7' from grade
104/106 EXT	10/11/2021	1254	3.15	1	Center between the windows 6' from grade
108/110 EXT	10/11/2021	1254	4.74	1	Center between the windows 3' from grade
205 EXT	10/11/2021		<0.5	2	Middle N column N side 5' up, perpendicular face
207 EXT	10/11/2021		<0.5	2	Middle S column, S side 6' up, perpendicular face
211 EXT	10/11/2021	1254	4.97	2	Center, 4' above grade
Blank	10/11/2021		<0.5		

Notes:
All samples collected as hexane wipes over a 100 square centimeter (cm^2) area.
All 100 Wing Room Int samples collected from parrallel and perpendicular face of block.
All 200 Wing Room Int samples collected from face of block parrallel to interior of room.
Regulatory exposure limit for unrestricted use in school is 1 ug/100 cm^2
<0.5 = Not Detected above the laboratory reporting limit (RL).
Bold indicates value greater than 1 ug/100 cm^2
1). Epoxy coating covered by veneer of latex paint.
2). Epoxy coating not covered by veneer of latex paint.

Thomas Prince School
170 Sterling Road
Princeton, Massachusetts

Table 2
INDOOR AIR SAMPLING RESULTS
USEPA Method TO-10A

Indoor Air
USEPA Method TO-10A/680/8082
Polychlorinated Biphenyls

Sample Location	Sampling Date	Method		Notes	Sample Designation	Total Aroclor	Total Homolog's	Total Aroclor	Homolog's (EPA Method 680)									
		Aroclor (8082)	Homolog's (680)						Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Classroom 100	8/20/2011	x	x		RM 100	288		288										
	3/22/2012		x				21.83		<2.47	17.5	4.33	<4.94	<4.94	<4.94	<7.40	<7.40	<12.3	<12.3
	12/28/2012		x				ND		<2.17	<2.17	<2.17	<4.33	<4.33	<4.33	<6.49	<6.49	<10.8	<10.8
	12/23/2013		x				ND		<2.45	<2.45	<2.45	<4.89	<4.89	<4.89	<7.34	<7.34	<12.2	<12.2
	4/19/2017		x				4.98		<4.61	<4.61	<4.61	<4.61	4.98	<4.61	<4.61	<4.61	<4.61	<4.61
	11/6/2018		x				50.4		<5	12.6	9.7	14.9	13.2	<5	<5	<5	<5	<5
	10/11/2021		x				26.3		<5	5.0	5.2	8.2	7.9	<5	<5	<5	<5	<5
Classroom 102	8/20/2011	x			RM 102	102.7		102.7										
	12/28/2012		x				ND		<2.16	<2.16	<2.16	<4.31	<4.31	<4.31	<6.47	<6.47	<10.8	<10.8
	11/11/2014		x				ND		<2.50	<2.50	<2.50	<5.01	<5.01	<5.01	<7.51	<7.51	<12.5	<12.5
	4/22/2020		x				6.1		<10	<10	6.1	<10	<10	<10	<10	<10	<10	<10
Classroom 104	8/20/2011	x			RM 104	254		254										
	12/28/2012		x				ND		<2.16	<2.16	<2.16	<4.31	<4.31	<4.31	<6.47	<6.47	<10.8	<10.8
	11/11/2014		x				ND		<2.65	<2.65	<2.65	<5.30	<5.30	<5.30	<7.95	<7.95	<13.3	<13.3
	4/19/2017		x				ND		<4.56	<4.56	<4.56	<4.56	<4.56	<4.56	<4.56	<4.56	<4.56	<4.56
	4/22/2020		x				20.8		<10	14	6.8	<10	<10	<10	<10	<10	<10	<10
Classroom 106	8/20/2011	x			RM 106	534		534										
	9/22/2011		x				72.52		< 2.46	5.52	24.6	25.6	16.8	< 4.93	< 7.39	< 7.39	< 12.3	< 12.3
	3/22/2012		x				55.4		<2.47	26.7	28.7	<4.94	<4.94	<4.94	<7.41	<7.41	<12.4	<12.4
	12/28/2012		x				ND		<2.14	<2.14	<2.14	<4.27	<4.27	<4.27	<6.41	<6.41	<10.7	<10.7
	12/23/2013		x				ND		<2.40	<2.40	<2.40	<4.80	<4.80	<4.80	<7.20	<7.20	<12.0	<12.0
	2/16/2016		x				ND		<2.22	<2.22	<2.22	<4.80	<4.44	<4.44	<6.66	<6.66	<11.1	<11.1
	11/6/2018		x				35.3		<5	10.3	8.0	9.0	8.0	<5	<5	<5	<5	<5
	10/11/2021		x				12.2		<5	<5	6.5	5.7	<5	<5	<5	<5	<5	<5
Classroom 108	8/20/2011	x			RM 108	360		360										
	8/20/2011	x				171.6		171.6										
	11/8/2011		x				25.6		<2.5	13.7	11.9	<5	<5	<5	<7.5	<7.5	<12.5	<12.5
	12/28/2012		x				ND		<2.37	<2.37	<2.37	<4.74	<4.74	<4.74	<7.11	<7.11	<11.8	<11.8
	2/16/2016		x				ND		<2.22	<2.22	<2.22	<4.44	<4.44	<4.44	<6.66	<6.66	<11.1	<11.1
	11/6/2018		x				68.3		5.4	24.4	14.2	13.4	10.9	<5	<5	<5	<5	<5
	10/11/2021		x				36.7		<5	<5	6.5	7.3	11.0	11.9	<5	<5	<5	<5
Classroom 110	8/20/2011	x			RM 110	191.9		191.9										
	12/28/2012		x				ND		<2.43	<2.43	<2.43	<4.85	<4.85	<4.85	<7.28	<7.28	<12.1	<12.1
	12/23/2013		x				ND		<2.43	<2.43	<2.43	<4.87	<4.87	<4.87	<7.30	<7.30	<12.2	<12.2
	4/19/2017		x				ND		<4.53	<4.53	<4.53	<4.53	<4.53	<4.53	<4.53	<4.53	<4.53	<4.53
	4/22/2020		x				19.7		<10	7.6	7.5	4.6	<10	<10	<10	<10	<10	<10

Table 2
INDOOR AIR SAMPLING RESULTS
USEPA Method TO-10A

Sample Location	Sampling Date	Method		Notes	Sample Designation	Total Aroclor	Total Homolog's	Total Aroclor	Homolog's (EPA Method 680)									
		Aroclor (8082)	Homolog's (680)						Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Classroom 201	8/1/2011	x			RM 201	322		322										
	3/22/2012		x				171.47		<2.46	7.07	19.8	65.6	79	<4.92	<7.38	<7.38	<12.3	<12.3
	12/28/2012		x				ND		<2.36	<2.36	<2.36	<4.72	<4.72	<4.72	<7.08	<7.08	<11.8	<11.8
	12/23/2013		x				ND		<2.42	<2.42	<2.42	<4.83	<4.83	<4.83	<7.25	<7.25	<12.1	<12.1
	2/16/2016		x				ND		<2.36	<2.36	<2.36	<4.72	<4.72	<4.72	<7.08	<7.08	<11.8	<11.8
	4/19/2017		x				ND		<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60	<4.60
	4/22/2020		x				ND		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Classroom 203	8/1/2011	x			RM 203	318.9		318.9										
	3/22/2012		x				131.9		<2.50	26.1	20.7	48.5	36.6	<4.99	<7.49	<7.49	<12.5	<12.5
	12/28/2012		x				ND		<2.32	<2.32	<2.32	<4.63	<4.63	<4.63	<6.94	<6.94	<11.6	<11.6
	11/11/2014		x				ND		<2.48	<2.48	<2.48	<4.96	<4.96	<4.96	<7.43	<7.43	<12.4	<12.4
	11/6/2018		x				36.7		<5	<5	5.7	14.4	16.6	<5	<5	<5	<5	<5
	10/11/2021		x				33.0		<5	5.2	5.5	9.0	13.3	<5	<5	<5	<5	<5
Classroom 205	8/1/2011		x		RM 205	661.2		661.2										
	3/22/2012		x				220.59		<2.44	5.59	<2.44	102	113	<4.88	<7.31	<7.31	<12.2	<12.2
	12/28/2012		x				ND		<2.35	<2.35	<2.35	<4.70	<4.70	<4.70	<7.04	<7.04	<11.7	<11.7
	12/23/2013		x				ND		<2.47	<2.47	<2.47	<4.94	<4.94	<4.94	<7.40	<7.40	<12.3	<12.3
	2/16/2016		x				ND		<2.35	<2.35	<2.35	<4.70	<4.70	<4.70	<7.04	<7.04	<11.7	<11.7
	4/19/2017		x				ND		<2.35	<2.35	<2.35	<4.70	<4.70	<4.70	<7.04	<7.04	<11.7	<11.7
	4/19/2017		x	1			19.18		<4.62	<4.62	<4.62	8.23	10.95	<4.62	<4.62	<4.62	<4.62	<4.62
	4/22/2020		x				ND		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Classroom 207	8/1/2011	x			RM 207	591		591										
	3/22/2012		x				134.11		<2.49	6.71	15.4	71.3	40.7	<4.98	<7.47	<7.47	<12.4	<12.4
	12/28/2012		x				ND		<2.32	<2.32	<2.32	<4.63	<4.63	<4.63	<6.94	<6.94	<11.6	<11.6
	11/11/2014		x				ND		<2.47	<2.47	<2.47	<4.94	<4.94	<4.94	<7.41	<7.41	<12.3	<12.3
	11/11/2014		x	1			ND		<2.54	<2.54	<2.54	<5.07	<5.07	<5.07	<7.61	<7.61	<12.7	<12.7
	11/6/2018		x				45.1		<5	5.5	6.0	15.6	18.0	<5	<5	<5	<5	<5
	10/11/2021		x				39.7		<5	<5	5.2	12.8	16.5	5.2	<5	<5	<5	<5
	10/11/2021		x	1			47.2		<5	6.1	6.2	14.7	20.2	<5	<5	<5	<5	<5

Thomas Prince School
170 Sterling Road
Princeton, Massachusetts

Table 2
INDOOR AIR SAMPLING RESULTS
USEPA Method TO-10A

Indoor Air
USEPA Method TO-10A/680/8082
Polychlorinated Biphenyls

Sample Location	Sampling Date	Method		Notes	Sample Designation	Total Aroclor	Total Homolog's	Total Aroclor	Homolog's (EPA Method 680)									
		Aroclor (8082)	Homolog's (680)						Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Classroom 209	8/1/2011	x			RM 209	1021		1021										
	9/22/2011		x				900.87		5.87	12	77.1	250	487	68.9	< 7.45	< 7.45	< 12.4	< 12.4
	11/8/2011		x				179.01		3.3	6.55	20.8	48.2	94.6	5.56	<7.5	<7.5	<12.5	<12.5
	3/22/2012		x				311.8		<2.44	15.6	23.2	88.6	168	16.4	<7.31	<7.31	<12.2	<12.2
	3/22/2012		x	1			248.73		<2.45	11.0	7.23	84.5	146	<4.9	<7.35	<7.35	<12.2	<12.2
	12/28/2012		x				ND		<2.30	<2.30	<2.30	<4.61	<4.61	<4.61	<6.91	<6.91	<11.5	<11.5
	12/28/2012		x	1			ND		<2.30	<2.30	<2.30	<4.61	<4.61	<4.61	<6.91	<6.91	<11.5	<11.5
	12/23/2013		x				ND		<2.40	<2.40	<2.40	<4.81	<4.81	<4.81	<7.21	<7.21	<12.0	<12.0
	12/23/2013		x	1			ND		<2.41	<2.41	<2.41	<4.81	<4.81	<4.81	<7.22	<7.22	<12.0	<12.0
	2/16/2016		x				ND		<2.37	<2.37	<2.37	<4.74	<4.74	<4.74	<7.10	<7.10	<11.8	<11.8
	2/16/2016		x	1			ND		<2.44	<2.44	<2.44	<4.89	<4.89	<4.89	<7.33	<7.33	<12.2	<12.2
	11/6/2018		x				55.8		<5	7.7	11.2	18.8	18.2	<5	<5	<5	<5	<5
	11/6/2018		x	1			43.2		<4.8	7.2	8.8	12.1	15.1	<4.8	<4.8	<4.8	<4.8	<4.8
	10/11/2021		x				40.0		<4.8	5.4	5.7	9.8	19.1	<4.8	<4.8	<4.8	<4.8	<4.8
Classroom 211	8/1/2011	x			RM 211	396.3		396.3										
	3/22/2012		x				78.35		<2.43	21.3	8.25	25.0	23.8	<4.86	<7.29	<7.29	<12.2	<12.2
	12/28/2012		x				ND		<2.28	<2.28	<2.28	<4.57	<4.57	<4.57	<6.85	<6.85	<11.4	<11.4
	11/11/2014		x				ND		<2.46	<2.46	<2.46	<4.92	<4.92	<4.92	<7.38	<7.38	<12.3	<12.3
	4/19/2017		x				12.38		<4.65	<4.65	<4.65	<4.65	12.38	<4.65	<4.65	<4.65	<4.65	<4.65
	4/22/2020		x				ND		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cafeteria	8/20/2011	x			Cafeteria	169.1		169.1										
	8/20/2011	x				197.3		197.3										
	8/20/2011	x		1		197.7		197.7										
	9/22/2011		x				6.28		< 2.51	< 2.51	6.28	< 5.01	< 5.01	< 5.01	< 7.52	< 7.52	< 12.5	< 12.5
	9/22/2011		x	1			11.8		< 2.4	< 2.4	5.98	5.82	< 4.81	< 4.81	< 7.21	< 7.21	< 12	< 12
	3/22/2012		x				ND		<2.48	<2.48	<2.48	<4.95	<4.95	<4.95	<7.43	<7.43	<12.4	<12.4
	12/23/2013		x				ND		<2.51	<2.51	<2.51	<5.03	<5.03	<5.03	<7.54	<7.54	<12.6	<12.6
	11/11/2014		x				ND		<2.47	<2.47	<2.47	<4.94	<4.94	<4.94	<7.40	<7.40	<12.3	<12.3
	2/16/2016		x				ND		<2.43	<2.43	<2.43	<4.87	<4.87	<4.87	<7.30	<7.30	<12.22	<12.22
	4/19/2017		x				ND		<4.55	<4.55	<4.55	<4.55	<4.55	<4.55	<4.55	<4.55	<4.55	<4.55
Kitchen	8/20/2011	x			KITCHEN	146.9		146.9										
	9/22/2011		x				12.07		3.27	< 2.47	2.58	6.22	< 4.95	< 4.95	< 7.42	< 7.42	< 12.3	< 12.3
	3/22/2012		x				5.39		<2.41	5.39	<2.41	<4.82	<4.82	<4.82	<7.23	<7.23	<12.0	<12.0

Table 2
INDOOR AIR SAMPLING RESULTS
USEPA Method TO-10A

Sample Location	Sampling Date	Method		Notes	Sample Designation	Total Aroclor	Total Homolog's	Total Aroclor	Homolog's (EPA Method 680)									
		Aroclor (8082)	Homolog's (680)						Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Library	**8/20/2011**	x			**LIBRARY**	**144.2**		**144.2**										
	8/20/2011	x				**158.5**		**158.5**										
	9/22/2011		x				**18.64**		< 2.44	**3.04**	**15.6**	< 4.88	< 4.88	< 4.88	< 7.32	< 7.32	< 12.2	< 12.2
	3/22/2012		x				**3.86**		<2.48	<2.48	**3.86**	<4.96	<4.96	<4.96	<7.44	<7.44	<12.4	<12.4
	12/23/2013		x				**ND**		<2.44	<2.44	<2.44	<4.88	<4.88	<4.88	<7.31	<7.31	<12.2	<12.2
Computer Lab 111	**8/20/2011**	x			**RM 111**	**155.7**		**155.7**										
	9/22/2011		x				**23.29**		**8.69**	**4.17**	**3.91**	**6.52**	< 4.97	< 4.97	< 7.45	< 7.45	< 12.4	< 12.4
Home Economics 112	**8/20/2011**	x	x		**RM 112**	**24.8**	**ND**	**24.8**	< 12.2	< 12.2	< 12.2	< 24.4	< 24.4	< 24.4	< 36.7	< 36.7	< 61.1	< 61.1
	8/20/2011	x		1		**ND**												
Off Library 113	**8/20/2011**	x			**RM 113**	**140.3**		**140.3**										
	9/22/2011		x				**14.74**		< 2.46	2.92	6.72	5.1	< 4.93	< 4.93	< 7.39	< 7.39	< 12.3	< 12.3
Office Common Area 13	**8/20/2011**	x	x		**RM 13**	**148.6**	**13.3**	**148.6**	< 12.3	**13.3**	< 12.3	< 24.6	< 24.6	< 24.6	< 37	< 37	< 61.6	< 61.6
	9/22/2011		x				**4.98**		< 2.45	< 2.45	4.98	< 4.91	< 4.91	< 4.91	< 7.36	< 7.36	< 12.3	< 12.3
Stage Area	**8/20/2011**	x			**STAGE**	**144.3**		**144.3**										
Staff Lounge -- Off Kitchen	**8/20/2011**	x			**T LOUNGE**	**109.5**		**109.5**										
Electrical Room	**8/20/2011**	x			**ELEC ROOM**	**93.5**		**93.5**										
100 Corridor North	**8/20/2011**	x			**100 COR A**	**289**		**289**										
	9/22/2011		x		**100 COR N**		**64.33**		**4.53**	**17.9**	**18**	**10.9**	**13**	< 4.93	< 7.4	< 7.4	< 12.3	< 12.3
100 Corridor South	**8/20/2011**	x			**100 COR B**	**155.5**		**155.5**										
	9/22/2011		x		**100 COR S**		**29.31**		< 2.48	**11.8**	**10.1**	**7.41**	< 4.96	< 4.96	< 7.44	< 7.44	< 12.4	< 12.4
Central Corridor West	**8/20/2011**	x			**MID COR A**	**ND**												
	9/22/2011		x		**CENTRAL COR MID**		**41.8**		**6.24**	**3.71**	**7.22**	**5.13**	**19.5**	< 4.93	< 7.4	< 7.4	< 12.3	< 12.3
Central Corridor East	**8/20/2011**	x			**MID COR B**	**170.5**		**170.5**										
	9/22/2011		x		**CENTRAL COR E**		**10.6**		**3.95**	< 2.52	**6.65**	< 5.03	< 5.03	< 5.03	< 7.55	< 7.55	< 12.6	< 12.6
200 Corridor North	**8/20/2011**	x			**200 COR A**	**123**		**123**										
	9/22/2011		x		**200 COR N**		**16.34**		**4.25**	**2.65**	**3.01**	**6.43**	< 4.9	< 4.9	< 7.36	< 7.36	< 12.3	< 12.3
200 Corridor South	**8/20/2011**	x			**200 COR B**	**199**		**199**										
	9/22/2011		x		**200 COR S**		**34.1**		**5.59**	**3.85**	**6.36**	**7.8**	**10.5**	< 4.9	< 7.34	< 7.34	< 12.2	< 12.2
Storage Room Opposite 211	**8/20/2011**	x			**RM 21**	**274.4**		**274.4**										
South Corridor West	**8/20/2011**	x			**SOUTH COR A**	**38.9**		**38.9**										
South Corridor East	**8/20/2011**	x			**SOUTH COR B**	**35.2**		**35.2**										
	8/20/2011	x	x		**RM 300**	**ND**	**ND**		< 12.5	< 12.5	< 12.5	< 25.1	< 25.1	< 25.1	< 37.6	< 37.6	< 62.6	< 62.6

Thomas Prince School
170 Sterling Road
Princeton, Massachusetts

Table 2
INDOOR AIR SAMPLING RESULTS
USEPA Method TO-10A

Indoor Air
USEPA Method TO-10A/680/8082
Polychlorinated Biphenyls

Sample Location	Sampling Date	Method		Notes	Sample Designation	Total Aroclor	Total Homolog's	Total Aroclor	Homolog's (EPA Method 680)									
		Aroclor (8082)	Homolog's (680)						Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
Kindergarten	**8/20/2011**	x	x		**RM 302**	**20.1**	**ND**	**20.1**	< 12.4	< 12.4	< 12.4	< 24.8	< 24.8	< 24.8	< 37.1	< 37.1	< 61.9	< 61.9
		x		1		**33.9**		**33.9**										
300 Corridor North	**8/20/2011**	x			**300 COR A**	**ND**												
300 Corridor South	**8/20/2011**	x			**300 COR B**	**ND**												
North Corridor West	**8/20/2011**	x			**ENT COR B**	**22.3**		**22.3**										
North Corridor East	**8/20/2011**	x			**ENT COR A**	**ND**												
Classroom 303	**8/20/2011**	x	x		**RM 303**	**20.8**	**ND**	**20.8**	< 12.4	< 12.4	< 12.4	< 24.9	< 24.9	< 24.9	< 37.3	< 37.3	< 62.2	< 62.2
Classroom 308	**8/20/2011**	x	x		**RM 308**	**ND**	**ND**		< 12.3	< 12.3	< 12.3	< 24.5	< 24.5	< 24.5	< 36.8	< 36.8	< 61.3	< 61.3
Gymnasium West	**8/20/2011**	x			**GYM A**	**30.5**		**30.5**										
Gymnasium East	**8/20/2011**	x	x		**GYM B**	**37.1**	**ND**	**37.1**	< 12.2	< 12.2	< 12.2	< 24.5	< 24.5	< 24.5	< 36.7	< 36.7	< 61.2	< 61.2
Science Room	**8/20/2011**	x	x		**RM 402**	**ND**	**ND**		< 12.6	< 12.6	< 12.6	< 25.2	< 25.2	< 25.2	< 37.8	< 37.8	< 63.1	< 63.1
Art & Industry Room	**8/20/2011**	x	x		**RM 404**	**ND**	**ND**		< 12.2	< 12.2	< 12.2	< 24.4	< 24.4	< 24.4	< 36.5	< 36.5	< 60.9	< 60.9
Outside (NW Cnr. of Bldg.)	**8/20/2011**	x			**OUTSIDE A**	**ND**												
Outside (S. Courtyard)	**8/20/2011**	x			**OUTSIDE B**	**ND**												
	9/22/2011		x		**OUTSIDE S COURTYARD**		**ND**		< 2.42	< 2.42	< 2.42	< 4.84	< 4.84	< 4.84	< 7.26	< 7.26	< 12.1	< 12.1

Notes:

Concentrations in nanograms (billionth of a gram) per cubic meter (ng/m3).

"<" or "ND" denotes = Not Detected at laboratory reporting limit.

Yellow shading denotes most recent indoor air sampling results

1 = Denotes sample dulicate.

08/01/11 - Initial IAS round - limited to 200-wing classrooms

08/20/11 - 2nd IAS round - comprehensive round throughout building

09/22/11 - 3rd IAS round - targeted to show effects of initial "cleaning".

11/08/11 - 4th IAS round - Limited to classrooms 209 & 108.

3/22/12 - 5th IAS Round - Post Mitigation 200-Wing, Cafeteria & Kitchen

Post Abatement Indoor Air Sample Results - Blue Highlight

12/28/12 - 6th IAS Round - Initial Post-Mitigation

12/23/13 - 7th IAS Round - 2nd Post-Mitigation

11/11/14 - 8th IAS Round - 3rd Post-mitigation

2/16/16 - 9th IAS Round - 4th Post-Mitigation

4/19/17 - 10th IAS Round - 5th Post-Mitigation

11/06/18 - 11th IAS Round - 6th Post-Mitigation

4/22/20 - 12th IAS Round - 7th Post-Mitigation

10/11/22 - 13th IAS Round - 8th Post-Mitigation

EPA Calculated Exposure Levels for Evaluating PCB's in School Indoor Air (ng/m^3), Health Protective GUIDANCE Values

Age (years)	ng/m^3	
1-<2	100	
2-<3	100	
3-<6	200	
6-<12	300	Elementary School
12-<15	500	Middle School
15-<19	600	High School
19+	500	Adult

Table 3 - 2021 AIR SAMPLING LOG and AIR VOLUME CALCULATIONS

CLIENT: Town of Princeton
ECS Project: 0321663003
LOCATION: THOMAS PRINCE SCHOOL, 170 STERLING ROAD, PRINCETON, MA
DATE: 10/11/21
WEATHER: AM - 59˚ F, overcast & drizzle; afternoon partly cloudy - no wind all day
PERSONNEL: CEK
PURPOSE: IAS for PCB
Lab METHOD: TO-10A Method 680 Homologs
SMPL MEDIA: PUF
PUMP TYPE: Gilian
CAL EQUIP: Gilian Challenger Air Flow Calibrator and TSI 4200 Series
CONTRACT LAB Alpha Analytical
Barometric Ps. 30.11 "Hg start 30.06 "Hg end **30.09** Ave. Pressure "Hg
Altitude: 625'
SAMPLE Target Duration: 400 minutes (6 hr 40 min) @ 5L/min = 2 m^3 - Target flow rate to obtain target volume

SAMPLE ID	PUMP ID	On Loc Temp °F	Off Loc Temp °F	TIME Start (h/m/s)	TIME End (h/m/s)	Total Time (h/m/s)	Total Time (Mins)	Flow start (L/min)	Flow Mid (L/min)	Flow chng mid	Flow End (L/min)	AVE FLOW (L/min)	Vol of Air thru PUF (L)	Vol of Air Thru PUF (m^3)	ALPHA PUF ID	COMMENTS
RM 100	028511	73.5		0:17:30	6:59:10	6:41:40	400.67	5.00	5.20	0.20	5.15	5.12	**2,050.1**	**2.1**		Gilian GilAir PLUS Air Sampling Pump
RM 106	043544	73.5		0:08:16	6:54:00	6:45:44	405.73	5.00	5.18	0.18	5.18	5.12	**2,077.3**	**2.1**		Gilian GilAir PLUS Air Sampling Pump
RM 108	043485	73.5		0:00:00	6:44:25	6:44:25	404.42	5.00	5.19	0.19	5.19	5.13	**2,073.3**	**2.1**		Gilian GilAir PLUS Air Sampling Pump
RM 203	036107	73.5		0:27:54	7:06:00	6:38:06	398.10	5.00	5.15	0.15	5.15	5.10	**2,030.3**	**2.0**		Gilian GilAir PLUS Air Sampling Pump
RM 207	028497	73.5		0:45:00	7:12:00	6:27:00	387.00	5.00	5.20	0.20	5.21	5.14	**1,987.9**	**2.0**		Gilian GilAir PLUS Air Sampling Pump
RM 207 DUP	028513	73.5		0:45:00	7:12:00	6:27:00	387.00	5.00	5.18	0.18	5.16	5.11	**1,978.9**	**2.0**		Gilian GilAir PLUS Air Sampling Pump
RM 209	R217220	73.5		0:53:20	7:21:00	6:27:40	387.67	5.00	5.18	0.18	5.17	5.12	**1,983.6**	**2.0**		Gilian GilAir PLUS Air Sampling Pump
BLANK		73.5		0:00:00		0:00:00										
																Total time in min. x ave. flow rate in L/min.= total vol. of air in Liters passed through PUF. Total vol. of air in liters x (m^3/ 1000 Liters) = flow in m^3
																Samples collected with lights on and doors closed.
Flow Calibration Device	See Notes below															

Pine - Dry Cal Defender flow calibrator was for Low flow (<500 cc/min). So obtained Gillian Challenger (serial # 363, USE # C363AL) from US Env.another , flow 1-30 LPM…but… cal was 7/18/2019 so ordered another from USE (TSI 4100 Series, model 414 003, Cal date of March 2021. For flow rate, took avarage of the flow readings to be conservative.

Thomas Prince School
170 Sterling Road
Princeton, Massachusetts

Table 4
2021 - Indoor Air Sample Concentration Conversions
(ng/cartridge to ng/m^3)

Indoor Air
USEPA Method TO-10A/680/8082
Polychlorinated Biphenyls

Sample Designation	Sampling Date	Measurement	Units	Total Homolog's	Homolog's (EPA Method 680)									
					Monochlorobiphenyl	Dichlorobiphenyl	Trichlorobiphenyl	Tetrachlorobiphenyl	Pentachlorobiphenyl	Hexachlorobiphenyl	Heptachlorobiphenyl	Octachlorobiphenyl	Nonachlorobiphenyl	Decachlorobiphenyl
RM 100	10/11/2021	conc.	ng/cart	55.3	<10	10.6	10.9	17.3	16.5	<10	<10	<10	<10	<10
		flow	m^3		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
		conc.	ng/m^3	26.3	#VALUE!	5.0	5.2	8.2	7.9	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 106	10/11/2021	conc.	ng/cart	25.6	<10	<10	13.7	11.9	<10	<10	<10	<10	<10	<10
		flow	m^3		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
		conc.	ng/m^3	12.2	#VALUE!	#VALUE!	6.5	5.7	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 108	10/11/2021	conc.	ng/cart	77.0	<10	13.7	15.3	23	25	<10	<10	<10	<10	<10
		flow	m^3		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
		conc.	ng/m^3	36.7	#VALUE!	6.5	7.3	11.0	11.9	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 203	10/11/2021	conc.	ng/cart	65.8	<10	10.4	10.9	18	26.5	<10	<10	<10	<10	<10
		flow	m^3		2	2	2	2	2	2	2	2	2	2
		conc.	ng/m^3	32.9	#VALUE!	5.2	5.5	9.0	13.3	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 207	10/11/2021	conc.	ng/cart	79.4	<10	<10	10.4	25.6	33	10.4	<10	<10	<10	<10
		flow	m^3		2	2	2	2	2	2	2	2	2	2
		conc.	ng/m^3	39.7	#VALUE!	#VALUE!	5.2	12.8	16.5	5.2	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 207 DUP	10/11/2021	conc.	ng/cart	94.1	<10	12.2	12.3	29.3	40.3	<10	<10	<10	<10	<10
		flow	m^3		2	2	2	2	2	2	2	2	2	2
		conc.	ng/m^3	47.1	#VALUE!	6.1	6.2	14.7	20.2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RM 209	10/11/2021	conc.	ng/cart	79.8	<10	10.7	11.3	19.6	38.2	<10	<10	<10	<10	<10
		flow	m^3		2	2	2	2	2	2	2	2	2	2
		conc.	ng/m^3	39.9	#VALUE!	5.4	5.7	9.8	19.1	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

Bolded value indicates detected compound

Light highlight indicates compound not detected above laboratory reporting limit

conc in ng/cartridge x total flow through cartridge in m^3 = conc. in ng/m^3

11/9/2021

ANALYTICAL REPORT

Lab Number:	L2155473
Client:	ATC Group Services LLC 240 Barber Ave. Worcester, MA 01606
ATTN:	Matt Lyne
Phone:	(508) 756-0151
Project Name:	THOMAS PRICE SCHOOL
Project Number:	0321663003
Report Date:	10/19/21

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003

Lab Number: L2155473
Report Date: 10/19/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2155473-01	RM 102 INT	WIPE	PRINCETON, MA	10/11/21 10:25	10/12/21
L2155473-02	RM 106 INT	WIPE	PRINCETON, MA	10/11/21 10:20	10/12/21
L2155473-03	RM 110 INT	WIPE	PRINCETON, MA	10/11/21 10:15	10/12/21
L2155473-04	RM 201 INT	WIPE	PRINCETON, MA	10/11/21 10:30	10/12/21
L2155473-05	RM 205 INT	WIPE	PRINCETON, MA	10/11/21 10:35	10/12/21
L2155473-06	RM 209 INT	WIPE	PRINCETON, MA	10/11/21 10:40	10/12/21
L2155473-07	RM 100/102 EXT	WIPE	PRINCETON, MA	10/11/21 11:45	10/12/21
L2155473-08	RM 104/106 EXT	WIPE	PRINCETON, MA	10/11/21 11:49	10/12/21
L2155473-09	RM 108/110 EXT	WIPE	PRINCETON, MA	10/11/21 11:52	10/12/21
L2155473-10	RM 205 EXT	WIPE	PRINCETON, MA	10/11/21 12:10	10/12/21
L2155473-11	RM 207 EXT	WIPE	PRINCETON, MA	10/11/21 12:05	10/12/21
L2155473-12	RM 211 EXT	WIPE	PRINCETON, MA	10/11/21 12:15	10/12/21
L2155473-13	BLANK	WIPE	PRINCETON, MA	10/11/21 12:20	10/12/21

Project Name:	THOMAS PRICE SCHOOL	**Lab Number:**	L2155473
Project Number:	0321663003	**Report Date:**	10/19/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

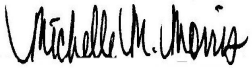
When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative Date: 10/19/21

ORGANICS

PCBS

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-01
Client ID: RM 102 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:25
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 11:38
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	60		30-150	B
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	53		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-02
Client ID: RM 106 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:20
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 11:51
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	B
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	63		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	52		30-150	A

Project Name: THOMAS PRICE SCHOOL **Lab Number:** L2155473

Project Number: 0321663003 **Report Date:** 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-03
Client ID: RM 110 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:15
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 12:03
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	0.619		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	0.619		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	62		30-150	B
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	48		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-04
Client ID: RM 201 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:30
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 12:16
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	49		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-05
Client ID: RM 205 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:35
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 12:29
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	62		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	54		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-06
Client ID: RM 209 INT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 10:40
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 12:42
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	49		30-150	A

Project Name: THOMAS PRICE SCHOOL **Lab Number:** L2155473

Project Number: 0321663003 **Report Date:** 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-07 D
Client ID: RM 100/102 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 11:45
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/17/21 21:56
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	2.50	--	5	A
Aroclor 1221	ND		ug/100cm2	2.50	--	5	A
Aroclor 1232	ND		ug/100cm2	2.50	--	5	A
Aroclor 1242	ND		ug/100cm2	2.50	--	5	A
Aroclor 1248	ND		ug/100cm2	2.50	--	5	A
Aroclor 1254	10.1		ug/100cm2	2.50	--	5	A
Aroclor 1260	ND		ug/100cm2	2.50	--	5	A
Aroclor 1262	ND		ug/100cm2	2.50	--	5	A
Aroclor 1268	ND		ug/100cm2	2.50	--	5	A
PCBs, Total	10.1		ug/100cm2	2.50	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	61		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-08
Client ID: RM 104/106 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 11:49
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 13:08
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	3.15		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	3.15		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	56		30-150	B
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	50		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-09
Client ID: RM 108/110 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 11:52
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 13:21
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	4.74		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	4.74		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	55		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-10
Client ID: RM 205 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 12:10
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 13:33
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	59		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	53		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-11
Client ID: RM 207 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 12:05
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 13:46
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	63		30-150	B
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	57		30-150	A

Project Name: THOMAS PRICE SCHOOL **Lab Number:** L2155473

Project Number: 0321663003 **Report Date:** 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-12
Client ID: RM 211 EXT
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 12:15
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 13:59
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	4.97		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	4.97		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	60		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	55		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

SAMPLE RESULTS

Lab ID: L2155473-13
Client ID: BLANK
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 12:20
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/15/21 14:12
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	--	1	A
Aroclor 1221	ND		ug/100cm2	0.500	--	1	A
Aroclor 1232	ND		ug/100cm2	0.500	--	1	A
Aroclor 1242	ND		ug/100cm2	0.500	--	1	A
Aroclor 1248	ND		ug/100cm2	0.500	--	1	A
Aroclor 1254	ND		ug/100cm2	0.500	--	1	A
Aroclor 1260	ND		ug/100cm2	0.500	--	1	A
Aroclor 1262	ND		ug/100cm2	0.500	--	1	A
Aroclor 1268	ND		ug/100cm2	0.500	--	1	A
PCBs, Total	ND		ug/100cm2	0.500	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	58		30-150	B
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	55		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003
Lab Number: L2155473
Report Date: 10/19/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/15/21 10:59
Analyst: CW

Extraction Method: EPA 3540C
Extraction Date: 10/13/21 09:00
Cleanup Method: EPA 3665A
Cleanup Date: 10/15/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/15/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-13 Batch: WG1557925-1						
Aroclor 1016	ND		ug/100cm2	0.500	--	A
Aroclor 1221	ND		ug/100cm2	0.500	--	A
Aroclor 1232	ND		ug/100cm2	0.500	--	A
Aroclor 1242	ND		ug/100cm2	0.500	--	A
Aroclor 1248	ND		ug/100cm2	0.500	--	A
Aroclor 1254	ND		ug/100cm2	0.500	--	A
Aroclor 1260	ND		ug/100cm2	0.500	--	A
Aroclor 1262	ND		ug/100cm2	0.500	--	A
Aroclor 1268	ND		ug/100cm2	0.500	--	A
PCBs, Total	ND		ug/100cm2	0.500	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	69		30-150	B
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	62		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: THOMAS PRICE SCHOOL

Project Number: 0321663003

Lab Number: L2155473

Report Date: 10/19/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-13 Batch: WG1557925-2 WG1557925-3									
Aroclor 1016	56		63		40-140	13		50	A
Aroclor 1260	54		64		40-140	16		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		58		30-150	B
Decachlorobiphenyl	54		64		30-150	B
2,4,5,6-Tetrachloro-m-xylene	54		60		30-150	A
Decachlorobiphenyl	50		57		30-150	A

Project Name: THOMAS PRICE SCHOOL
Project Number: 0321663003

Lab Number: L2155473
Report Date: 10/19/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155473-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-11A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-12A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)
L2155473-13A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.8	Y	Absent		PCB-8082-3540C_CM2(365)

*Values in parentheses indicate holding time in days

Project Name:	THOMAS PRICE SCHOOL	**Lab Number:**	L2155473
Project Number:	0321663003	**Report Date:**	10/19/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	THOMAS PRICE SCHOOL	**Lab Number:**	L2155473
Project Number:	0321663003	**Report Date:**	10/19/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	THOMAS PRICE SCHOOL	**Lab Number:**	L2155473
Project Number:	0321663003	**Report Date:**	10/19/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	THOMAS PRICE SCHOOL	**Lab Number:**	L2155473
Project Number:	0321663003	**Report Date:**	10/19/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA ANALYTICAL — Mass Data Quality

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 10/12/21

ALPHA Job #: L2155473

Client Information

Client: Atlas (ATC)
Address: 10 State St. Woburn MA
Phone: 774-272-2212
Email: Charles.klingler@greatlot.com

Project Information

Project Name: TPS
Project Location: Princeton, MA
Project #: 0321663003
Project Manager: Klingler
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:
Extraction by 3540C
PCB's by 8082

Lab RL < 1ug/wipe

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: TPS 2021

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets) school
☐ Yes ☒ No NPDES RGP
☐ Other State /Fed Program EPA Criteria < 1 ug/wipe

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☒ PCB ☐ PEST 8082
TPH: ☐ Quant Only ☐ Fingerprint
3540C extraction

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

Sample Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	PCB 8082	3540C extraction	TOTAL # BOTTLES
55473-01	Rm 102 INT	10/11/21	10:25	Wipe	CEK	X	X	
02	Rm 106 INT		10:20	Wipe	CEK	X	X	
03	Rm 110 INT		10:15	Wipe	CEK	X	X	
04	RM 201 INT		10:30	Wipe	CEK	X	X	
05	RM 205 INT		10:35	Wipe	CEK	X	X	
06	RM 209 INT		10:40	Wipe	CEK	X	X	
07	RM 100/102 EXT		11:45	Wipe	CEK	X	X	
08	RM 104/106 EXT		11:49	Wipe	CEK	X	X	
09	RM 108/110 EXT		11:52	Wipe	CEK	X	X	
10	RM 205 EXT		12:10	Wipe	CEK	X	X	

Container Type
Preservative

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
DAO's AGL	10-12-21 15:10	DAVSHARK	10/12/21 1310

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 10/12/21

ALPHA Job #: L2155473

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: Atlas (ATC)
Address: 10 State St. Woburn, MA
Phone: 774-272-2212
Email: charles.klingler@oneatlas.com

Project Information

Project Name: TPS
Project Location: Princeton, MA
Project #: 03216630G3
Project Manager: Klingler
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #: TPS 2021

Regulatory Requirements & Project Information Requirements

☐ Yes ☒ No MA MCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☒ No NPDES RGP
☐ Other State /Fed Program US EPA Criteria < 1ug/wipe

Additional Project Information:
Extraction by 3540C
PCB's by 8082

Lab RL < 1ug/wipe

School

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☒ PCB ☐ PEST 8082	TPH: ☐ Quant Only ☐ Fingerprint 3540C Extraction					Sample Comments	TOTAL # BOTTLES
5547B-11	RM 207 EXT	10/11/21	12:05	Wipe	CHK							X	X						
12	RM 211 EXT	10/11/21	12:15	Wipe	CHK							X	X						
13	BLANK	10/11/21	12:20	Wipe	CHK							X	X						

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

Container Type																			
Preservative																			

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H = $Na_2S_2O_3$
I= Ascorbic Acid
J = NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
Charles Klingler	10/12/21 13:48	David DAVIS AAL	10/12/21 10:00
David DAVIS AAL	10/12/21 13:48	[signature]	10/12/21 13:30

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

ANALYTICAL REPORT

Lab Number:	L2155429
Client:	ATC Group Services LLC 240 Barber Ave. Unit 6 Worcester, MA 01607
ATTN:	Charles Klingler
Phone:	(508) 756-0151
Project Name:	TPS
Project Number:	0321663003
Report Date:	10/26/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: TPS
Project Number: 0321663003

Lab Number: L2155429
Report Date: 10/26/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2155429-01	RM 100	AIR MEDIA	PRINCETON, MA	10/11/21 06:59	10/12/21
L2155429-02	RM 106	AIR MEDIA	PRINCETON, MA	10/11/21 06:54	10/12/21
L2155429-03	RM 108	AIR MEDIA	PRINCETON, MA	10/11/21 06:44	10/12/21
L2155429-04	RM 203	AIR MEDIA	PRINCETON, MA	10/11/21 07:06	10/12/21
L2155429-05	RM 207	AIR MEDIA	PRINCETON, MA	10/11/21 07:12	10/12/21
L2155429-06	RM 207 DUP	AIR MEDIA	PRINCETON, MA	10/11/21 07:12	10/12/21
L2155429-07	RM 209	AIR MEDIA	PRINCETON, MA	10/11/21 07:21	10/12/21
L2155429-08	BLANK	AIR MEDIA	PRINCETON, MA	10/11/21 07:21	10/12/21

Project Name:	TPS	**Lab Number:**	L2155429
Project Number:	0321663003	**Report Date:**	10/26/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	TPS	**Lab Number:**	L2155429
Project Number:	0321663003	**Report Date:**	10/26/21

Case Narrative (continued)

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 10/26/21

ORGANICS

PCBS

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-01
Client ID: RM 100
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 06:59
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 13:46
Analyst: MJS

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	10.6		ng/cart	10.0	--	1
Trichlorobiphenyls	10.9		ng/cart	10.0	--	1
Tetrachlorobiphenyls	17.3		ng/cart	10.0	--	1
Pentachlorobiphenyls	16.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	55.3		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	88		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-02
Client ID: RM 106
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 06:54
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 15:07
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	13.7		ng/cart	10.0	--	1
Tetrachlorobiphenyls	11.9		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	25.6		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	92		50-125
Cl8-BZ#202-C13	89		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-03
Client ID: RM 108
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 06:44
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 16:27
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	13.7		ng/cart	10.0	--	1
Trichlorobiphenyls	15.3		ng/cart	10.0	--	1
Tetrachlorobiphenyls	23.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	25.0		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	77.0		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	98		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-04
Client ID: RM 203
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 07:06
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 17:47
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	10.4		ng/cart	10.0	--	1
Trichlorobiphenyls	10.9		ng/cart	10.0	--	1
Tetrachlorobiphenyls	18.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	26.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	65.8		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	95		50-125
Cl8-BZ#202-C13	96		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-05
Client ID: RM 207
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 07:12
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 21:38
Analyst: MJS

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	10.4		ng/cart	10.0	--	1
Tetrachlorobiphenyls	25.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	33.0		ng/cart	10.0	--	1
Hexachlorobiphenyls	10.4		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	79.4		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	92		50-125
Cl8-BZ#202-C13	91		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-06
Client ID: RM 207 DUP
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 07:12
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 22:59
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	12.2		ng/cart	10.0	--	1
Trichlorobiphenyls	12.3		ng/cart	10.0	--	1
Tetrachlorobiphenyls	29.3		ng/cart	10.0	--	1
Pentachlorobiphenyls	40.3		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	94.1		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	96		50-125
Cl8-BZ#202-C13	95		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-07
Client ID: RM 209
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 07:21
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/22/21 00:19
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	10.7		ng/cart	10.0	--	1
Trichlorobiphenyls	11.3		ng/cart	10.0	--	1
Tetrachlorobiphenyls	19.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	38.2		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	79.8		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	91		50-125
Cl8-BZ#202-C13	92		50-125

Project Name: TPS
Project Number: 0321663003
Lab Number: L2155429
Report Date: 10/26/21

SAMPLE RESULTS

Lab ID: L2155429-08
Client ID: BLANK
Sample Location: PRINCETON, MA

Date Collected: 10/11/21 07:21
Date Received: 10/12/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air Media
Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/22/21 01:40
Analyst: CC

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Volume of Air: --

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	100		50-125
Cl8-BZ#202-C13	95		50-125

Project Name: TPS
Project Number: 0321663003

Lab Number: L2155429
Report Date: 10/26/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 105,8270D-SIM/680(M)
Analytical Date: 10/21/21 11:05
Analyst: MJS

Extraction Method: EPA 3540C
Extraction Date: 10/18/21 19:00

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab for sample(s): 01-08 Batch: WG1560075-1					
Monochlorobiphenyls	ND		ng/cart	10.0	--
Dichlorobiphenyls	ND		ng/cart	10.0	--
Trichlorobiphenyls	ND		ng/cart	10.0	--
Tetrachlorobiphenyls	ND		ng/cart	10.0	--
Pentachlorobiphenyls	ND		ng/cart	10.0	--
Hexachlorobiphenyls	ND		ng/cart	10.0	--
Heptachlorobiphenyls	ND		ng/cart	10.0	--
Octachlorobiphenyls	ND		ng/cart	10.0	--
Nonachlorobiphenyls	ND		ng/cart	10.0	--
Decachlorobiphenyl	ND		ng/cart	10.0	--
Total Homologs	ND		ng/cart	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	108		50-125
Cl8-BZ#202-C13	103		50-125

Lab Control Sample Analysis

Batch Quality Control

Project Name: TPS

Project Number: 0321663003

Lab Number: L2155429

Report Date: 10/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-08 Batch: WG1560075-2								
Cl1-BZ#1	97		-		40-140	-		30
CL1-BZ#3	97		-		40-140	-		30
Cl2-BZ#4/#10	88		-		40-140	-		30
Cl2-BZ#8	88		-		40-140	-		30
Cl3-BZ#19	85		-		40-140	-		30
Cl3-BZ#18	85		-		40-140	-		30
Cl2-BZ#15	88		-		40-140	-		30
Cl4-BZ#54	84		-		40-140	-		30
Cl3-BZ#29	86		-		40-140	-		30
Cl4-BZ#50	83		-		40-140	-		30
Cl3-BZ#-31	78		-		40-140	-		30
Cl3-BZ#28	77		-		40-140	-		30
Cl4-BZ#45	81		-		40-140	-		30
Cl4-BZ#52	78		-		40-140	-		30
Cl4-BZ#49	78		-		40-140	-		30
Cl5-BZ#104	90		-		40-140	-		30
Cl4-BZ#47	77		-		40-140	-		30
Cl4-BZ#44	79		-		40-140	-		30
Cl3-BZ#37	80		-		40-140	-		30
Cl5-BZ#121/#95/#88	95		-		40-140	-		30
Cl4-BZ#74	79		-		40-140	-		30
Cl6-BZ#155	84		-		40-140	-		30
Cl4-BZ#70	82		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TPS

Project Number: 0321663003

Lab Number: L2155429

Report Date: 10/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-08 Batch: WG1560075-2								
Cl4-BZ#66	77		-		40-140	-		30
Cl5-BZ#101/#90	98		-		40-140	-		30
Cl4-BZ#56	81		-		40-140	-		30
Cl5-BZ#99	94		-		40-140	-		30
Cl5-BZ#87/#111	95		-		40-140	-		30
Cl6-BZ#154	82		-		40-140	-		30
Cl5-BZ#110	92		-		40-140	-		30
Cl4-BZ#81	76		-		40-140	-		30
Cl6-BZ#151	92		-		40-140	-		30
Cl6-BZ#147/#149	88		-		40-140	-		30
Cl4-BZ#77	70		-		40-140	-		30
Cl5-BZ#107/#123	86		-		40-140	-		30
Cl7-BZ#188	83		-		40-140	-		30
Cl5-BZ#118	100		-		40-140	-		30
Cl6-BZ#146	88		-		40-140	-		30
Cl5-BZ#114	105		-		40-140	-		30
Cl6-BZ#153	96		-		40-140	-		30
Cl5-BZ#105	96		-		40-140	-		30
Cl6-BZ#138	89		-		40-140	-		30
Cl6-BZ#129/#158	92		-		40-140	-		30
Cl7-BZ#187	82		-		40-140	-		30
Cl7-BZ#183	88		-		40-140	-		30
Cl5-BZ#126	93		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TPS

Project Number: 0321663003

Lab Number: L2155429

Report Date: 10/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-08 Batch: WG1560075-2								
Cl7-BZ#174	82		-		40-140	-		30
Cl6-BZ#128	86		-		40-140	-		30
Cl6-BZ#167	88		-		40-140	-		30
Cl8-BZ#202	88		-		40-140	-		30
Cl7-BZ#177	92		-		40-140	-		30
Cl8-BZ#204/#200-CAL	84		-		40-140	-		30
Cl6-BZ#156	89		-		40-140	-		30
Cl6-BZ#157	84		-		40-140	-		30
Cl7-BZ#180	79		-		40-140	-		30
Cl8-BZ#201	76		-		40-140	-		30
Cl7-BZ#170	88		-		40-140	-		30
Cl6-BZ#169	82		-		40-140	-		30
Cl9-BZ#208	83		-		40-140	-		30
Cl7-BZ#189	82		-		40-140	-		30
Cl8-BZ#195	75		-		40-140	-		30
Cl8-BZ#194	74		-		40-140	-		30
Cl8-BZ#205	74		-		40-140	-		30
Cl9-BZ#206	78		-		40-140	-		30
Cl10-BZ#209	68		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TPS

Project Number: 0321663003

Lab Number: L2155429

Report Date: 10/26/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-08 Batch: WG1560075-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Cl3-BZ#19-C13	92				50-125
Cl8-BZ#202-C13	93				50-125

Project Name: TPS
Project Number: 0321663003

Lab Number: L2155429
Report Date: 10/26/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155429-01A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-02A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-03A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-04A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-05A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-06A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-07A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)
L2155429-08A	PUF Air Cartridge (PCB) - Low	A	NA		6.1	Y	Absent		A2-PCBHOMS-8270SIML(7)

*Values in parentheses indicate holding time in days

Project Name:	TPS	**Lab Number:**	L2155429
Project Number:	0321663003	**Report Date:**	10/26/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	TPS	**Lab Number:**	L2155429
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Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report

Project Name:	TPS	**Lab Number:**	L2155429
Project Number:	0321663003	**Report Date:**	10/26/21

Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	TPS	**Lab Number:**	L2155429
Project Number:	0321663003	**Report Date:**	10/26/21

REFERENCES

105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with NOAA Technical Memorandum NMFS-NWFSC-59: Extraction, Cleanup and GC/MS Analysis of Sediments and Tissues for Organic Contaminants, March 2004 and the Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680, EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS - SORBENT MEDIA
CHAIN OF CUSTODY

Page 1 of 1

Date Rec'd in Lab: 10/12/21

ALPHA Job #: L2155429

Westborough, MA TEL: 508-898-9220 FAX: 508-822-3288
Mansfield, MA TEL: 508-822-9300 508-822-3288

Client Information
- Client: Atles (ATC)
- Address: 10 State St, Woburn MA
- Phone: 774-272-2212
- Fax:
- Email: Charles.Klingler@oneatlas.com

Project Information
- Project Name: TPS
- Project Location: Princeton, MA
- Project #: 03216630003
- (Use Project name as Project #)
- Project Manager: Klingler
- ALPHA Quote #:

Turn-Around Time
- Standard: X Due Date:
- Rush (only if pre approved): ☐ Time:

These samples have been previously analyzed by Alpha: ☐

Report Information - Data Deliverables
- ☐ FAX
- ☐ ADEX

Criteria Checker:
Other Formats:
- X EMAIL
- ☐ Add'l Deliverables

Report to: (if different than Manager)

Billing Information
- X Same as Client Info
- PO # TPS 2021

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria
EPA	School	< 50 ng/m3

Other Project Specific Requirements / Comments/Detection Limits
RL to be < 50 ng/m3
Air sample collected per Method TO-10A

For PCBs Selection is REQUIRED
- ☐ Congeners
- X Homologs
- ☐ Aroclors (low Vol only)

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Start Time	End Time	Flow Rate (L/min)	Total Volume(L)	Sample Matrix*	Sampler's Initials	Media ID# (1)	TO-13A	PCBs (High Vol)	PCBs (Low Vol) EPA mod 680	Hg via NIOSH 6009 Mod.	Metals	PM-10 Filter	TSP Filter		Sample Comments (i.e. PID)
5429-01	RM 100	10/11/21	0:17:30	6:59:10	5.12	2.1	P	CEK	100			X						
-02	RM 106		0:08:16	6:54:0	5.12	2.1	P	CEK	106			X						
-03	RM 108		0:00:00	6:44:25	5.13	2.1	P	CEK	108			X						
-04	RM 203		0:22:54	7:06:0	5.10	2.0	P	CEK	203			X						
-05	RM 207		0:45:00	7:12:0	5.14	2.0	P	CEK	207			X						
-06	RM 207DUP		0:45:00	7:12:0	5.11	2.0	P	CEK	207DUP			X						
-07	RM 209		0:53:20	7:21:0	5.12	2.0	P	CEK	209			X						
-08	BLANK		0:0:0	7:21:0	—	—	P	CEK	Blank			X						

NOTE: For metals, please specify elements of interest and media type.
- ☐ PM-10 Filter
- ☐ TSP Filter
- ☐ MCE

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

(1) Required for PUF cartridges, PM- 10 and TSP filters

Media Type	P	P	P	T	F	F	F	

Media Code
F = Filter
P = PUF Cartridge
T = Sorbent Tube
O = Other

Relinquished By:	Date/Time	Received By:	Date/Time
			10-12-21 10:00
	10-12-21 13:10		10/12/21 1310
	10/12/21 1500		10/12/21 1500
	10/12/21 1622		10/12/21 1622

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 101-20 (rev 23-MARCH 2020)

ANNUAL VISUAL INSPECTION FORM

Thomas Prince School
170 Sterling Road, Princeton, Massachusetts

Date: 1/11/2021 **Room #:** INT 100, 102, 104, 106, 108 & 110

Weather: Overcast, Cool

Name of Inspector: Klingler

Inspection Criteria	Epoxy Coated Porous Surfaces
Is the coating peeling, chipping, or otherwise compromised?	☐ **Yes** **if yes, describe:** ☑ **No**
Is maintenance of the coating needed?	☑ **Yes** **if yes, describe Yes** ☐ **No**
Were wipe samples collected?	☑ **Yes** Wipe samples collected from classrooms 102, 106 & 110. ☐ **No**

ANNUAL VISUAL INSPECTION FORM

Thomas Prince School
170 Sterling Road, Princeton, Massachusetts

Date: 10/11/202 **Room #:** EXT 100/102, 104/106 & 108/110

Weather: Overcast, Cool

Name of Inspector: Klingler

Inspection Criteria	Epoxy Coated Porous Surfaces
Is the coating peeling, chipping, or otherwise compromised?	☐ **Yes** **if yes, describe:** ☑ **No**
Is maintenance of the coating needed?	☐ **Yes** **if yes, describe Yes** ☑ **No**
Were wipe samples collected?	☑ **Yes** Wipe samples collected from 100/102 Ext, 104/106 Ext & 108/110 Ext. concrete between the windows. PCB concentrations greater than 1 ug/100cm2 were detected which requires re-coating with Sikagard 62 epoxy coating. ☐ **No**

Air Intake Grates looked Good.

ANNUAL VISUAL INSPECTION FORM

Thomas Prince School
170 Sterling Road, Princeton, Massachusetts

Date: 1/11/2021 **Room #:** INT 201, 203, 205, 207, 209 & 211

Weather: Overcast, Cool

Name of Inspector: Klingler

Inspection Criteria	Epoxy Coated Porous Surfaces
Is the coating peeling, chipping, or otherwise compromised?	❑ **Yes** **if yes, describe:** ☑ **No**
Is maintenance of the coating needed?	❑ **Yes** **if yes, describe Yes** ☑ **No**
Were wipe samples collected?	☑ **Yes** Wipe samples collected from classrooms, 201, 205 & 209. ❑ **No**

ANNUAL VISUAL INSPECTION FORM

Thomas Prince School
170 Sterling Road, Princeton, Massachusetts

Date: 1/11/2021 **Room #:** EXT 201, 203, 205, 207, 209 & 211

Weather: Overcast, Cool

Name of Inspector: Klingler

Inspection Criteria	Epoxy Coated Porous Surfaces
Is the coating peeling, chipping, or otherwise compromised?	☑ **Yes** As described below **if yes, describe:** ☐ **No**
Is maintenance of the coating needed?	☑ **Yes** Epoxy re-coating is recommended as indicated below **if yes, describe Yes** ☐ **No**
Were wipe samples collected?	☑ **Yes** Wipe samples collected from exterior of classroom windows 205, 207 & 211. PCB concentrations greater than 1 ug/100cm2 were detected at 211 which requires re-coating with Sikagard 62 epoxy coating. ☐ **No**

201 - Epoxy coating on horizontal surface of window sills appears to be thinning - consider re-coat
203 - Window sill horizontal surface has surficial spider-web type cracks and minor thinning over several areas - consider re-coat
205 - Epoxy coating is thinning, minor flaking/chipping observed - consider removing chipping epoxy and re-coat
207 - Window sill horizontal surface has surficial spider-web type cracks, minor flaking/chipping/thinning - consider re-coat
209 - Window sill horizontal surface has surficial spider-web type cracks, thinning - consider re-coat
211 - Epoxy coating is flaking/chipping/thinning in several areas - need re-coat as lab results were unfavorable

Bricks at Air Intake Vents look OK at 201, 207 & 211

Bricks at AIR Intake Vents appears to be thinning at 203, 205 & 209