LANDAU ASSOCIATES

TECHNICAL MEMORANDUM

TO: Steve Teel, Washington State Department of Ecology

CC: Amy Sikora, Washington State Department of Natural Resources

FROM: Katie Gauglitz, LG

DATE: November 2, 2023

RE: Third Quarter 2023 Groundwater Monitoring Results
Webster Nursery Site, Site Identification 3380
Tumwater, Washington
Project No. 0774006.040.048

INTRODUCTION

This technical memorandum summarizes the results of the final quarterly groundwater monitoring event completed by Landau Associates, Inc. (Landau) at the Washington State Department of Natural Resources (DNR) Webster Nursery site, a former pesticide-storage warehouse in Tumwater, Washington (Site; Figure 1). The Site is associated with past releases of organochlorine pesticides to soil and groundwater. Constituents of concern include the organochlorine pesticides heptachlor epoxide (HE; breakdown product of heptachlor) and chlordanes.

Remedial action excavation and disposal of HE-contaminated soil was completed in August 2018. A summary of the remedial action was provided in a Cleanup Action Completion Report (Landau 2020). The Washington State Department of Ecology (Ecology)-approved Compliance Monitoring Plan (CMP) was finalized on April 14, 2023 (Landau 2023).

GROUNDWATER MONITORING

Four consecutive quarters of monitoring results from February to November 2022 indicated that HE was not detected at concentrations above cleanup levels (CULs) at either of the Site wells. At Ecology's request, an additional fifth (and final) quarter of groundwater sampling was completed in August 2023. Third quarter 2023 (3Q23) groundwater monitoring was completed on August 11, 2023 in accordance with the framework established by Ecology Agreed Order Number DE 13181, the Remedial Action Work Plan (Landau 2017), and the CMP (Landau 2019).

Groundwater samples were collected from two wells (SW-10R and SW-11R; Figure 2) using a peristaltic pump and dedicated tubing following low-flow groundwater sampling procedures. Low-flow groundwater monitoring consists of measuring the depth-to-water with an electronic groundwater level indicator, monitoring field parameters with a YSI Professional Plus multi-parameter instrument, and measuring turbidity with a handheld meter. One duplicate sample (SW-99 at SW-11R) was collected for quality control purposes. Analytical Resources, LLC of Tukwila, Washington analyzed the groundwater

samples for organochlorine pesticides using US Environmental Protection Agency Method 8081B low-level.

GROUNDWATER MONITORING RESULTS

Groundwater monitoring results are summarized below:

- HE was not detected in SW-10R or SW-11R above the laboratory reporting limit.
- No other analytes were detected in either well during 3Q23 groundwater monitoring.

August 2023 organochlorine pesticide data are provided in Table 1 and the laboratory data package is provided in Attachment 1. Time series data of recent HE concentrations in groundwater at SW-10R and SW-11R (dating back to January 2010) are presented on Figure 3. As shown in Table 1 and on Figure 3, the 3Q23 sampling event represents the fifth consecutive quarter where the concentration of HE was below CULs at both SW-10R and SW-11R. Concentrations of HE at SW-10R ranged between non-detect at the laboratory reporting limit and an estimated concentration of 0.0029 micrograms per liter (µg/L), and concentrations of HE at SW-11R ranged between non-detect at the laboratory reporting limit and an estimated 0.0021 µg/L during the most recent five quarters of monitoring. The Model Toxics Contract Act Method B CUL for HE is 0.00481 µg/L. No other analytes were detected above the laboratory reporting limit in either well during the last five quarters of monitoring.

The August 2023 groundwater elevation at SW-10R was 181.69 feet mean sea level.[1] Depth-to-water and groundwater elevation data are provided in Table 2 and SW-10R groundwater elevation data collected since the remedial action is shown on Figure 3. Figure 3 indicates that the groundwater elevation measured during August 2023 was similar compared to that time in previous years, based on historical trends.

ENVIRONMENTAL INFORMATION MANAGEMENT SUBMITTAL

An Environmental Information Management (EIM) submittal is required. The 3Q23 submittal was completed on October 23, 2023, and confirmation that the results have been uploaded to the EIM database is pending.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater monitoring has been conducted at SW-10R and SW-11R in accordance with the Site sampling and analysis plan, and overall performance has been evaluated to determine compliance. In accordance with the CMP, a direct comparison evaluation and a statistical approach has been used to demonstrate the long-term effectiveness of the remedial action and that Site wells have achieved CULs. The monitoring results from August 2023 indicated that HE was not detected at concentrations above the CULs at either of the Site wells, and additional groundwater monitoring is not recommended at this

[1] The groundwater elevation at SW-10R was relatively low (i.e., less than or equal to an elevation of 183.7 feet mean sea level).

time. Five quarters of groundwater monitoring results below CULs empirically demonstrates that concentrations of HE remaining in soil are protective of groundwater. Groundwater confirmational monitoring and cleanup is complete.

Per the Agreed Order, DNR is requesting Ecology, 1) evaluate the overall success of the groundwater cleanup, 2) issue a letter indicating the confirmational monitoring requirements are satisfied, and 3) provide concurrence that groundwater cleanup is complete. Following receipt of written notification from Ecology that DNR has completed the groundwater remedial activities and that DNR has complied with the confirmational groundwater monitoring requirements of the CMP, Site groundwater wells may be decommissioned. DNR expects to submit a sub-slab soil characterization work plan to Ecology prior to the end of this year outlining the proposed plan for collecting additional soil data from within the footprint of the warehouse.

USE OF THIS REPORT

This technical memorandum has been prepared for the exclusive use of Washington State Department of Natural Resources and Washington State Department of Ecology for specific application to the Webster Nursery Site. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. Landau Associates makes no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

LANDAU ASSOCIATES, INC.

Katie M. Gauglitz

Katie Gauglitz, LG
Senior Geologist

Sierra Mott

Sierra Mott
Associate Scientist

KMG/SMM/kjg
[Y:\774\006 WEBSTER\R\QUARTERLY GW MONITORING REPORTS\2023_08_3Q23\LANDAU_WEBSTER NURSERY 3Q23 GW MONITORING_TM.DOCX]

REFERENCES

Landau. 2017. Remedial Action Work Plan, Webster Nursery, 9805 Blomberg Street SW, Tumwater, Washington. Landau Associates, Inc.

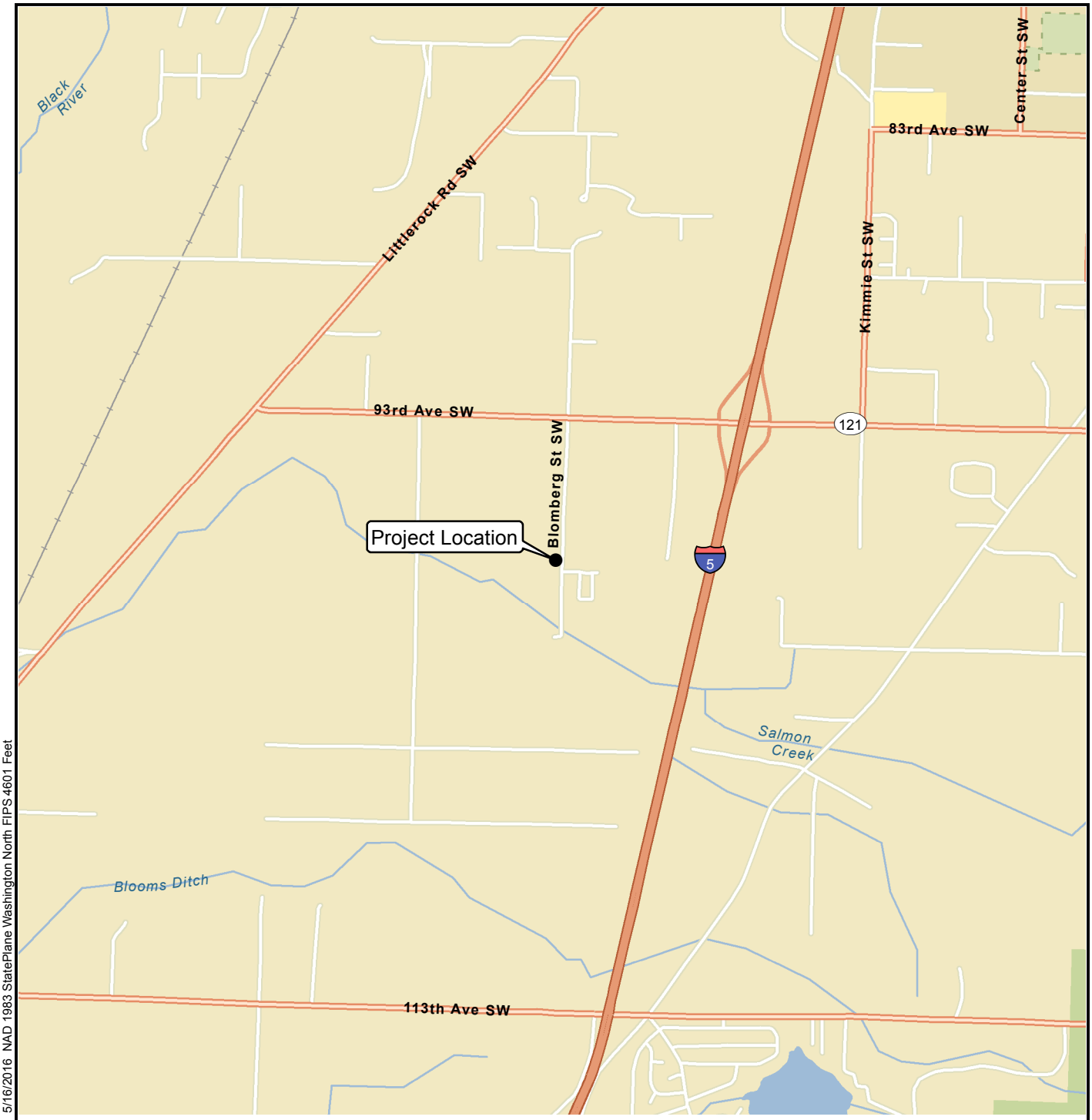
Landau. 2019. Compliance Monitoring Plan, Washington State Department of Natural Resources Webster Nursery, Tumwater, Washington. Tacoma, Washington: Landau Associates, Inc.

Landau. 2020. Cleanup Action Completion Report, Washington State Department of Natural Resources Webster Nursery, Tumwater, Washington. Tacoma, WA: Landau Associates, Inc.

Landau. 2023. Compliance Monitoring Plan, Webster Nursery Site, Site Identification 3380, Tumwater, Washington. edited by Katie Gauglitz and Sierra Mott. Tacoma, Washington: Landau Associates, Inc.

ATTACHMENTS

Figure 1	Vicinity Map
Figure 2	Monitoring Well Network
Figure 3	Heptachlor Epoxide and Groundwater Elevation Time Series SW-10(R) and SW-11(R)
Table 1	Groundwater Analytical Results – Five Quarters
Table 2	Groundwater Level Measurements
Attachment 1	August 2023 Laboratory Data Package



N

0 0.5 1

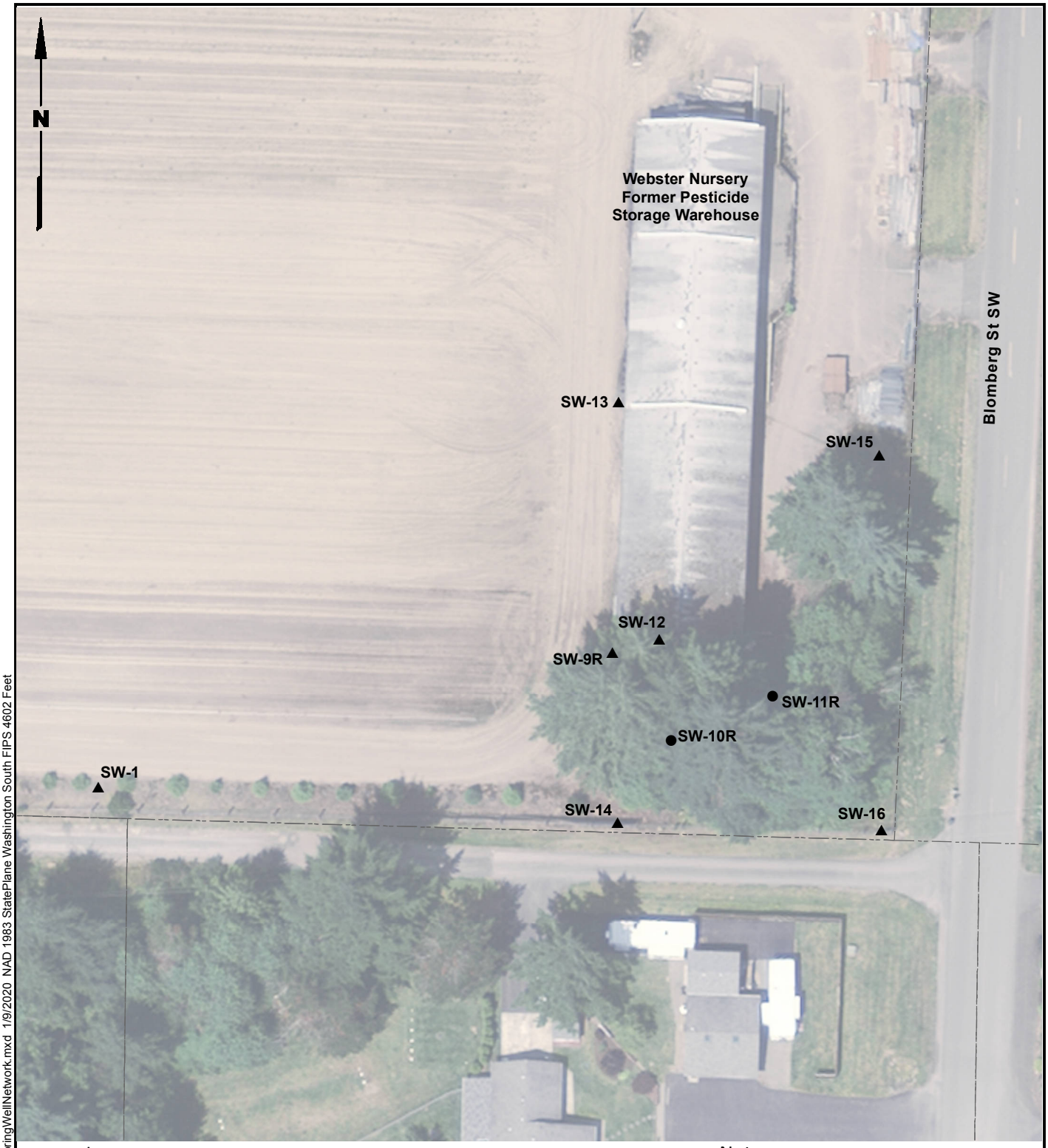
Miles

Data Source: Esri 2012

G:\Projects\774\006\020\026\FSIF01 VicinityMap.mxd 5/16/2016 NAD 1983 StatePlane Washington North FIPS 4601 Feet

LANDAU ASSOCIATES

Webster Nursery Site Tumwater, Washington	**Vicinity Map**	Figure 1



G:\Projects\774\006\040\045\F02MonitoringWellNetwork.mxd 1/9/2020 NAD 1983 StatePlane Washington South FIPS 4602 Feet

Legend

- ● Pesticide Monitoring Well
- ▲ Other Monitoring Well
- Tax Parcels

0 50 100

Scale in Feet

Notes

1. SW-9R, SW-10R, and SW-11R are new (replacement) wells.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Thurston County GIS; WA DNR Survey, 2018.

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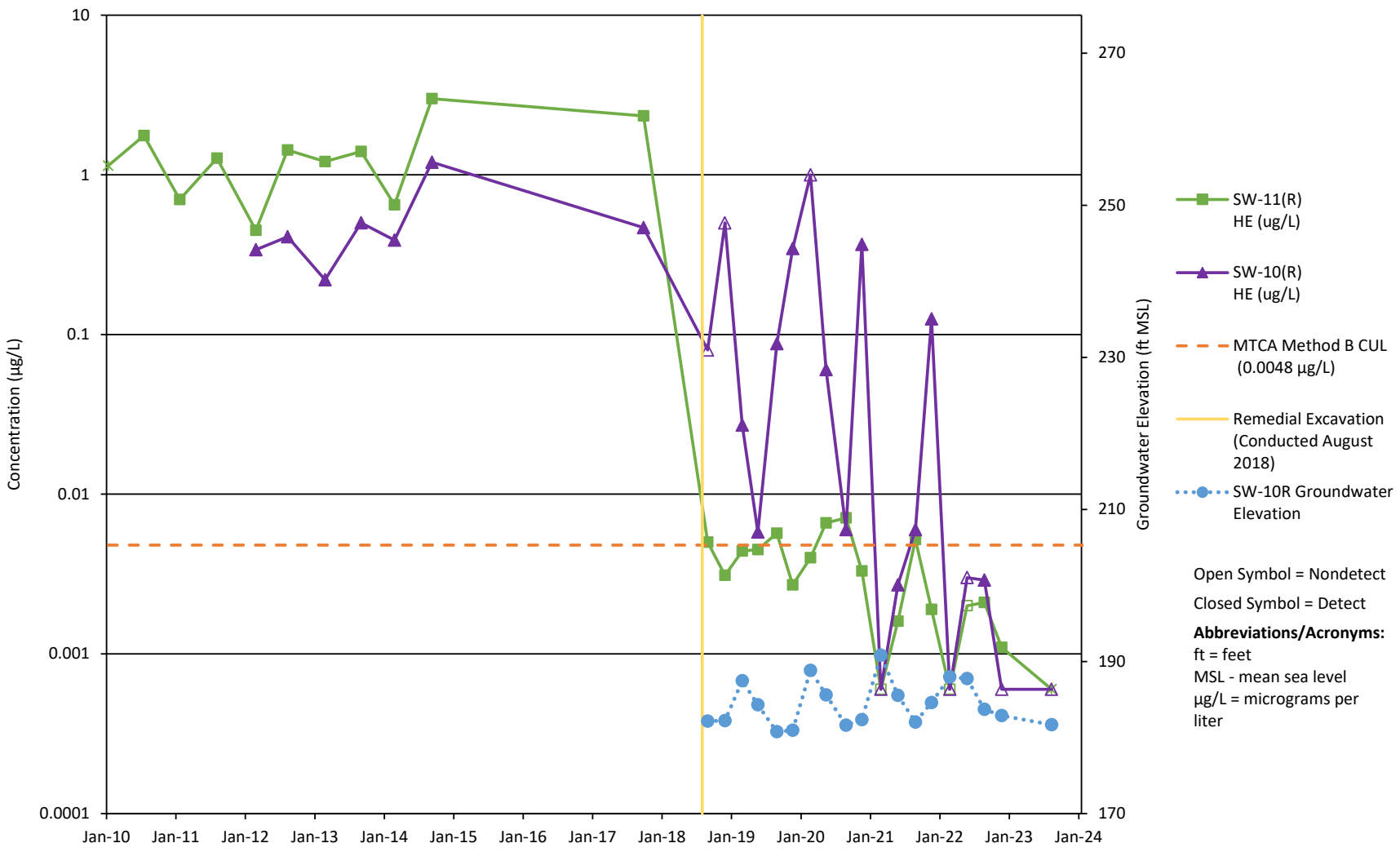
Webster Nursery Site Tumwater, Washington	**Monitoring Well Network**	Figure 2

Y:\774\006 Webster\R\Quarterly GW Monitoring Reports\2023_08_3Q23\Figures\F03_HE and GWE Timeseries 3Q



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Webster Nursery Site
Tumwater, Washington

Heptachlor Epoxide and Groundwater Elevation Time Series SW-10(R) and SW-11(R)

Figure
3

Table 1
Groundwater Analytical Results - Five Quarters
Webster Nursery
Tumwater, Washington

Analyte	MTCA Method B Cleanup Levels	Sample Location, Sample ID, Laboratory SDG, Sample Date, and Sample Type															
		SW-10R SW-10R-20220222 22B0320 2/22/2022	SW-10R SW-10R-20220524 22E0392 5/24/2022	SW-10R 22H0430-01 22H0430 8/23/2022	SW-10R 22K0429-01 22K0429 11/22/2022	SW-10R 23H0307-01 23H0307 8/11/2023	SW-11R SW-11R-20220222 22B0320 2/22/2022	SW-11R SW-99-20220222 22B0320 2/22/2022	SW-11R SW-11R-20220524 22E0392 5/24/2022	SW-11R SW-99-20220524 22E0392 5/24/2022	SW-11R 22H0430-02 22H0430 8/23/2022	SW-11R 22H0430-03 22H0430 8/23/2022	SW-11R 22K0429-02 22K0429 11/22/2022	SW-11R 22K0429-03 22K0429 11/22/2022	SW-11R 23H0307-02 23H0307 8/11/2023	SW-11R 23H0307-03 23H0307 8/11/2023
	Cancerous	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD	N	FD
Pesticides (µg/L; SW-846 8081B)																
4,4'-DDD	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
4,4'-DDE	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
4,4'-DDT	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Aldrin	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
alpha-BHC	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
beta-BHC	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Chlordane	0.25	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U
cis-Chlordane	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
delta-BHC	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Dieldrin	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Endosulfan I	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Endosulfan II	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Endosulfan Sulfate	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Endrin	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Endrin Aldehyde	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Endrin Ketone	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
gamma-BHC	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Heptachlor	0.0194	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Heptachlor Epoxide	0.00481	0.0006 U	0.0030 U	**0.0029 J**	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0020 U	**0.0010**	**0.0021 J**	**0.0028 J**	**0.0011**	0.0006 U	0.0006 U	0.0006 U
Methoxychlor	--	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U
Toxaphene	--	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 UJ	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 U	0.0625 UJ	0.0625 UJ
trans-Chlordane	--	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U

Notes:
-- = cleanup level not applicable
Bold text = Indicates detected analyte.
Green Box = Detected concentration is greater than the cleanup level
U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Abbreviations and Acronyms:
FD = field duplicate
ID = identification
µg/L = micrograms per liter
MTCA = Model Toxics Control Act
N = primary sample
SDG = sample delivery group

Table 2
Groundwater Level Measurements
Webster Nursery
Tumwater, Washington

Well ID	Top of Casing Elevation (ft)	Depth to Water (ft bgs)	Groundwater Elevation (ft)
SW-10R	193.41	11.72	181.69
SW-11R	192.50	11.36	181.14

Notes:

Groundwater elevation data was measured August 11, 2023.

Abbreviations:

bgs = below ground surface
ft = feet
ID = identification

ATTACHMENT 1

August 2023 Laboratory Data Packages

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

29 September 2023

Katie Gauglitz
Landau Associates, Inc. - Tacoma
2107 South C Street
Tacoma, WA 98402

RE: Webster Nursery (0774006.040.048)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23H0307	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC

Kelly Bottem, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

23H0307

Chain-of-Custody Record

LANDAU ASSOCIATES

- [ ] North Seattle (206) 631-8660
- [x] Tacoma (253) 926-2493
- [x] Olympia (360) 791-3178
- [ ] Spokane (509) 327-9737
- [ ] Portland (503) 542-1080
- [ ]

Date 8/11/23

Page 1 of 1

Turnaround Time: (Standard) / Accelerated

Project Name Webster Nursery Project No. 0774006.040.048

Project Location/Event Olympia, WA / 3Q2023

Sampler's Name Samantha Lindstrom

Project Contact Katie Gaveglitz

Send Results To K. Gaveglitz, S. Mott, E. Weber, data@landauinc.com

Special Handling Requirements:

Shipment Method: drop-off

Stored on ice: (Yes) / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Organochlorine Pesticides (8081B)
SW-10R-20230811	8/11/23	828	AQ	2	X
SW-11R-20230811	8/11/23	908	AQ	2	X
SW-99-20230811	8/11/23	928	AQ	2	X

Observations/Comments

- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other no preservatives

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature [signature]	Signature [signature]
Printed Name Samantha Lindstrom	Printed Name DANIEL PURCELL	Printed Name DANIEL PURCELL	Printed Name SEAN RAHMAN
Company Landau	Company LANDAU ASSOCIATES	Company LANDAU ASSOCIATES	Company ARI LLC
Date 8/11/23 Time 1208	Date 8/11/23 Time 1208	Date 8/11/23 Time 12:49	Date 8-11-23 Time 12:49

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client R

23H0307

Chain-of-Custody Record

LANDAU ASSOCIATES

☐ North Seattle (206) 631-8660	☐ Spokane (509) 327-9737	Date 8/11/23	Turnaround Time:
☒ Tacoma (253) 926-2493	☐ Portland (503) 542-1080	Page 1 of 1	(Standard) / Accelerated
☒ Olympia (360) 791-3178	☐		

Project Name: Webster Nursery Project No.: 0774006.040.048

Project Location/Event: Olympia, WA / 3Q2023

Sampler's Name: Samantha Lindstram

Project Contact: Katie Gaylitz

Send Results To: K. Gaylitz, S. Matt, E. Weber, data@landauinc.com

Special Handling Requirements:

Shipment Method: drop-off

Stored on ice: (Yes) / No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	Organochlorine Pesticides (8081B)	Observations/Comments
SW-10R-20230811	8/11/23	828	AQ	2	X	
SW-11R-20230811	8/11/23	908	AQ	2	X	
SW-99-20230811	8/11/23	928	AQ	2	X	

Observations/Comments:

- ___ Allow water samples to settle, collect aliquot from clear portion ☐
- ___ NWTPH-Dx - Acid wash cleanup ☐ - Silica gel cleanup ☐
- ___ Dissolved metal samples were field filtered

Other: no preservatives

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature: [signature]	Signature: [signature]	Signature: [signature]
Printed Name: Samantha Lindstram	Printed Name: DANIEL PURCELL	Printed Name: DANIEL PURCELL	Printed Name: SEAN RAHMAN
Company: Landau	Company: LANDAU ASSOCIATES	Company: LANDAU ASSOCIATES	Company: ARI LLC
Date: 8/11/23 Time: 1208	Date: 8/11/23 Time: 1208	Date: 8/11/23 Time: 12:49	Date: 8-11-23 Time: 12:49

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-10R-20230811	23H0307-01	Water	11-Aug-2023 08:28	11-Aug-2023 12:49
SW-11R-20230811	23H0307-02	Water	11-Aug-2023 09:08	11-Aug-2023 12:49
SW-99-20230811	23H0307-03	Water	11-Aug-2023 09:28	11-Aug-2023 12:49

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Work Order Case Narrative

Pesticides - EPA Method SW8081B

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on associated forms.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits with the exception of analytes flagged on the associated forms.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau Associates
COC No(s): ~~07-1006-00-01~~ NA
Assigned ARI Job No: 23H0307 MD 08/11/23

Project Name: Webster Nursery
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 8.6

Time 12:49

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: ~~00070~~

Cooler Accepted by: SR Date: 8-11-23 Time: 12:49

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: Equipment: Split by:

Samples Logged by: MD Date: 08/11/23 Time: 1309 Labels checked by: MD

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

ARI Work Order: 23H0307

Cooler#: 1 **Temperature(°C):** 8.6

Sample ID	Bottle Count	Bottle Type
Samples received above 6°	8	1L Amber Glass

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ **Temperature(°C):** _____

Sample ID	Bottle Count	Bottle Type

Completed by: SM Date: 8-11-23 Time: 12:40

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

SW-10R-20230811
23H0307-01 (Water)

Chlorinated Pesticides

Method: EPA 8081B — Sampled: 08/11/2023 08:28
Instrument: ECD6 Analyst: EM — Analyzed: 09/25/2023 13:58

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23H0307-01 A 01
Preparation Batch: BLH0456 — Sample Size: 1000 mL
Prepared: 08/18/2023 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Sulfur — Extract ID:23H0307-01 A 01
Cleanup Batch: CLI0108 — Initial Volume: 0.5 uL
Cleaned: 18-Sep-2023 — Final Volume: 0.5 uL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.0006	ND	ug/L	U
beta-BHC	319-85-7	1	0.0006	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.0006	ND	ug/L	U
delta-BHC	319-86-8	1	0.0006	ND	ug/L	U
Heptachlor	76-44-8	1	0.0006	ND	ug/L	U
Aldrin	309-00-2	1	0.0006	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.0006	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.0006	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.0006	ND	ug/L	U
Endosulfan I	959-98-8	1	0.0006	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.0013	ND	ug/L	U
Dieldrin	60-57-1	1	0.0013	ND	ug/L	U
Endrin	72-20-8	1	0.0013	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.0013	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.0013	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.0013	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.0013	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.0013	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.0013	ND	ug/L	U
Methoxychlor	72-43-5	1	0.0063	ND	ug/L	U
Toxaphene	8001-35-2	1	0.0625	ND	ug/L	U
Chlordane (NOS)	57-74-9	1	0.0050	ND	ug/L	U
Surrogate: Decachlorobiphenyl			*30-160 %*	*65.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*30-160 %*	*101*	*%*	
Surrogate: Tetrachlorometaxylene			*30-160 %*	*70.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*30-160 %*	*84.4*	*%*	

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

SW-11R-20230811

23H0307-02 (Water)

Chlorinated Pesticides

Method: EPA 8081B — Sampled: 08/11/2023 09:08

Instrument: ECD6 Analyst: EM — Analyzed: 09/25/2023 14:16

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BLH0456; Prepared: 08/18/2023; Sample Size: 1000 mL; Final Volume: 0.5 mL — Extract ID: 23H0307-02 A 01

Sample Cleanup: Cleanup Method: Sulfur; Cleanup Batch: CLI0108; Cleaned: 18-Sep-2023; Initial Volume: 0.5 uL; Final Volume: 0.5 uL — Extract ID:23H0307-02 A 01

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.0006	ND	ug/L	U
beta-BHC	319-85-7	1	0.0006	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.0006	ND	ug/L	U
delta-BHC	319-86-8	1	0.0006	ND	ug/L	U
Heptachlor	76-44-8	1	0.0006	ND	ug/L	U
Aldrin	309-00-2	1	0.0006	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.0006	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.0006	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.0006	ND	ug/L	U
Endosulfan I	959-98-8	1	0.0006	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.0013	ND	ug/L	U
Dieldrin	60-57-1	1	0.0013	ND	ug/L	U
Endrin	72-20-8	1	0.0013	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.0013	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.0013	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.0013	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.0013	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.0013	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.0013	ND	ug/L	U
Methoxychlor	72-43-5	1	0.0063	ND	ug/L	U
Toxaphene	8001-35-2	1	0.0625	ND	ug/L	U
Chlordane (NOS)	57-74-9	1	0.0050	ND	ug/L	U
Surrogate: Decachlorobiphenyl			*30-160 %*	*70.2*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*30-160 %*	*92.9*	*%*	
Surrogate: Tetrachlorometaxylene			*30-160 %*	*69.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*30-160 %*	*70.4*	*%*	

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

SW-99-20230811

23H0307-03 (Water)

Chlorinated Pesticides

Method: EPA 8081B — Sampled: 08/11/2023 09:28

Instrument: ECD6 Analyst: EM — Analyzed: 09/25/2023 14:35

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 23H0307-03 A 01

Preparation Batch: BLH0456 — Sample Size: 1000 mL

Prepared: 08/18/2023 — Final Volume: 0.5 mL

Sample Cleanup: Cleanup Method: Sulfur — Extract ID:23H0307-03 A 01

Cleanup Batch: CLI0108 — Initial Volume: 0.5 uL

Cleaned: 18-Sep-2023 — Final Volume: 0.5 uL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
alpha-BHC	319-84-6	1	0.0006	ND	ug/L	U
beta-BHC	319-85-7	1	0.0006	ND	ug/L	U
gamma-BHC (Lindane)	58-89-9	1	0.0006	ND	ug/L	U
delta-BHC	319-86-8	1	0.0006	ND	ug/L	U
Heptachlor	76-44-8	1	0.0006	ND	ug/L	U
Aldrin	309-00-2	1	0.0006	ND	ug/L	U
Heptachlor Epoxide	1024-57-3	1	0.0006	ND	ug/L	U
trans-Chlordane (beta-Chlordane)	5103-74-2	1	0.0006	ND	ug/L	U
cis-Chlordane (alpha-chlordane)	5103-71-9	1	0.0006	ND	ug/L	U
Endosulfan I	959-98-8	1	0.0006	ND	ug/L	U
4,4'-DDE	72-55-9	1	0.0013	ND	ug/L	U
Dieldrin	60-57-1	1	0.0013	ND	ug/L	U
Endrin	72-20-8	1	0.0013	ND	ug/L	U
Endosulfan II	33213-65-9	1	0.0013	ND	ug/L	U
4,4'-DDD	72-54-8	1	0.0013	ND	ug/L	U
Endrin Aldehyde	7421-93-4	1	0.0013	ND	ug/L	U
4,4'-DDT	50-29-3	1	0.0013	ND	ug/L	U
Endosulfan Sulfate	1031-07-8	1	0.0013	ND	ug/L	U
Endrin Ketone	53494-70-5	1	0.0013	ND	ug/L	U
Methoxychlor	72-43-5	1	0.0063	ND	ug/L	U
Toxaphene	8001-35-2	1	0.0625	ND	ug/L	U
Chlordane (NOS)	57-74-9	1	0.0050	ND	ug/L	U
Surrogate: Decachlorobiphenyl			*30-160 %*	*74.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*30-160 %*	*97.5*	*%*	
Surrogate: Tetrachlorometaxylene			*30-160 %*	*75.8*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*30-160 %*	*74.8*	*%*	

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BLH0456 - EPA 8081B

Instrument: ECD6 Analyst: EM/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLH0456-BLK1)			Prepared: 18-Aug-2023 Analyzed: 25-Sep-2023 11:13							
alpha-BHC	ND	0.0006	ug/L							U
beta-BHC	ND	0.0006	ug/L							U
gamma-BHC (Lindane)	ND	0.0006	ug/L							U
delta-BHC	ND	0.0006	ug/L							U
Heptachlor	ND	0.0006	ug/L							U
Aldrin	ND	0.0006	ug/L							U
Heptachlor Epoxide	ND	0.0006	ug/L							U
trans-Chlordane (beta-Chlordane)	ND	0.0006	ug/L							U
cis-Chlordane (alpha-chlordane)	ND	0.0006	ug/L							U
Endosulfan I	ND	0.0006	ug/L							U
4,4'-DDE	ND	0.0013	ug/L							U
Dieldrin	ND	0.0013	ug/L							U
Endrin	ND	0.0013	ug/L							U
Endosulfan II	ND	0.0013	ug/L							U
4,4'-DDD	ND	0.0013	ug/L							U
Endrin Aldehyde	ND	0.0013	ug/L							U
4,4'-DDT	ND	0.0013	ug/L							U
Endosulfan Sulfate	ND	0.0013	ug/L							U
Endrin Ketone	ND	0.0013	ug/L							U
Methoxychlor	ND	0.0063	ug/L							U
Toxaphene	ND	0.0625	ug/L							U
Chlordane (NOS)	ND	0.0050	ug/L							U
Surrogate: Decachlorobiphenyl	0.0167		ug/L	*0.0200*		*83.6*	*30-160*			
Surrogate: Decachlorobiphenyl [2C]	0.0185		ug/L	*0.0200*		*92.4*	*30-160*			
Surrogate: Tetrachlorometaxylene	0.0146		ug/L	*0.0200*		*72.8*	*30-160*			
Surrogate: Tetrachlorometaxylene [2C]	0.0139		ug/L	*0.0200*		*69.5*	*30-160*			

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BLH0456 - EPA 8081B

Instrument: ECD6 Analyst: EM/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLH0456-BS1)				Prepared: 18-Aug-2023 Analyzed: 25-Sep-2023 12:44						
alpha-BHC	0.0081	0.0006	ug/L	0.0100		80.5	30-160			
beta-BHC	0.0085	0.0006	ug/L	0.0100		85.2	30-160			
gamma-BHC (Lindane)	0.0084	0.0006	ug/L	0.0100		83.6	30-160			
delta-BHC	0.0085	0.0006	ug/L	0.0100		84.5	30-160			
Heptachlor	0.0070	0.0006	ug/L	0.0100		69.7	30-160			
Aldrin [2C]	0.0058	0.0006	ug/L	0.0100		57.8	30-160			
Heptachlor Epoxide [2C]	0.0069	0.0006	ug/L	0.0100		69.4	30-160			
trans-Chlordane (beta-Chlordane)	0.0068	0.0006	ug/L	0.0100		68.3	30-160			
cis-Chlordane (alpha-chlordane)	0.0069	0.0006	ug/L	0.0100		69.3	30-160			
Endosulfan I [2C]	0.0068	0.0006	ug/L	0.0100		68.2	30-160			
4,4'-DDE	0.0146	0.0013	ug/L	0.0200		72.9	30-160			
Dieldrin	0.0169	0.0013	ug/L	0.0200		84.5	30-160			
Endrin [2C]	0.0193	0.0013	ug/L	0.0200		96.3	30-160			
Endosulfan II [2C]	0.0180	0.0013	ug/L	0.0200		89.9	30-160			
4,4'-DDD [2C]	0.0196	0.0013	ug/L	0.0200		97.9	30-160			P1
Endrin Aldehyde [2C]	0.0163	0.0013	ug/L	0.0200		81.7	30-160			P1
4,4'-DDT [2C]	0.0187	0.0013	ug/L	0.0200		93.5	30-160			
Endosulfan Sulfate [2C]	0.0406	0.0013	ug/L	0.0200		203	30-160			*, P1
Endrin Ketone [2C]	0.0224	0.0013	ug/L	0.0200		112	30-160			
Methoxychlor [2C]	0.111	0.0063	ug/L	0.100		111	30-160			
Surrogate: Decachlorobiphenyl	0.0140		ug/L	*0.0200*		*69.8*	*30-160*			
Surrogate: Decachlorobiphenyl [2C]	0.0174		ug/L	*0.0200*		*87.1*	*30-160*			
Surrogate: Tetrachlorometaxylene	0.0142		ug/L	*0.0200*		*71.2*	*30-160*			
Surrogate: Tetrachlorometaxylene [2C]	0.0145		ug/L	*0.0200*		*72.4*	*30-160*			

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BLH0456 - EPA 8081B

Instrument: ECD6 Analyst: EM/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLH0456-BS2)				Prepared: 18-Aug-2023 Analyzed: 25-Sep-2023 13:21						
Toxaphene	ND	0.0625	ug/L	1.00			30-160			U
Surrogate: Decachlorobiphenyl	0.0144		ug/L	*0.0200*		*72.1*	*30-160*			
Surrogate: Decachlorobiphenyl [2C]	0.0250		ug/L	*0.0200*		*125*	*30-160*			
Surrogate: Tetrachlorometaxylene	0.0157		ug/L	*0.0200*		*78.7*	*30-160*			
Surrogate: Tetrachlorometaxylene [2C]	0.0162		ug/L	*0.0200*		*80.9*	*30-160*			

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BLH0456 - EPA 8081B

Instrument: ECD6 Analyst: EM/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLH0456-BS3)				Prepared: 18-Aug-2023 Analyzed: 25-Sep-2023 13:39						
Chlordane (NOS)	ND	0.0050	ug/L	0.400			0-200			U
Surrogate: Decachlorobiphenyl	0.0149		ug/L	*0.0200*		*74.3*	*30-160*			
Surrogate: Decachlorobiphenyl [2C]	0.0223		ug/L	*0.0200*		*112*	*30-160*			
Surrogate: Tetrachlorometaxylene	0.0132		ug/L	*0.0200*		*66.2*	*30-160*			
Surrogate: Tetrachlorometaxylene [2C]	0.0136		ug/L	*0.0200*		*67.8*	*30-160*			

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Analysis by: Analytical Resources, LLC

Chlorinated Pesticides - Quality Control

Batch BLH0456 - EPA 8081B

Instrument: ECD6 Analyst: EM/JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLH0456-BSD1)				Prepared: 18-Aug-2023 Analyzed: 25-Sep-2023 13:02						
alpha-BHC [2C]	0.0136	0.0006	ug/L	0.0100		136	30-160	56.00	30	*
beta-BHC	0.0130	0.0006	ug/L	0.0100		130	30-160	41.60	30	*
gamma-BHC (Lindane) [2C]	0.0141	0.0006	ug/L	0.0100		141	30-160	56.20	30	*
delta-BHC	0.0133	0.0006	ug/L	0.0100		133	30-160	44.70	30	*
Heptachlor	0.0109	0.0006	ug/L	0.0100		109	30-160	44.40	30	*
Aldrin [2C]	0.0107	0.0006	ug/L	0.0100		107	30-160	59.50	30	*
Heptachlor Epoxide [2C]	0.0134	0.0006	ug/L	0.0100		134	30-160	63.30	30	*
trans-Chlordane (beta-Chlordane) [2C]	0.0118	0.0006	ug/L	0.0100		118	30-160	62.80	30	*
cis-Chlordane (alpha-chlordane) [2C]	0.0128	0.0006	ug/L	0.0100		128	30-160	63.30	30	*
Endosulfan I [2C]	0.0130	0.0006	ug/L	0.0100		130	30-160	62.50	30	*
4,4'-DDE [2C]	0.0278	0.0013	ug/L	0.0200		139	30-160	64.20	30	*
Dieldrin [2C]	0.0287	0.0013	ug/L	0.0200		144	30-160	62.10	30	*
Endrin [2C]	0.0448	0.0013	ug/L	0.0200		224	30-160	79.70	30	*, P1
Endosulfan II [2C]	0.0431	0.0013	ug/L	0.0200		216	30-160	82.30	30	*, P1
4,4'-DDD [2C]	0.0474	0.0013	ug/L	0.0200		237	30-160	83.10	30	*, P1
Endrin Aldehyde [2C]	0.0409	0.0013	ug/L	0.0200		204	30-160	85.70	30	*, P1
4,4'-DDT [2C]	0.0398	0.0013	ug/L	0.0200		199	30-160	72.30	30	*, P1
Endosulfan Sulfate [2C]	0.0757	0.0013	ug/L	0.0200		379	30-160	60.40	30	*, P1
Endrin Ketone [2C]	0.0504	0.0013	ug/L	0.0200		252	30-160	77.00	30	*, P1
Methoxychlor [2C]	0.255	0.0063	ug/L	0.100		255	30-160	78.50	30	*, P1
Surrogate: Decachlorobiphenyl	0.0163		ug/L	*0.0200*		*81.7*	*30-160*			*P1*
Surrogate: Decachlorobiphenyl [2C]	0.0337		ug/L	*0.0200*		*168*	*30-160*			**, P1*
Surrogate: Tetrachlorometaxylene	0.0208		ug/L	*0.0200*		*104*	*30-160*			
Surrogate: Tetrachlorometaxylene [2C]	0.0250		ug/L	*0.0200*		*125*	*30-160*			

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Certified Analyses included in this Report

Analyte	Certifications
EPA 8081B in Water	
alpha-BHC	DoD-ELAP,WADOE,NELAP
alpha-BHC [2C]	DoD-ELAP,WADOE,NELAP
beta-BHC	DoD-ELAP,WADOE,NELAP
beta-BHC [2C]	DoD-ELAP,WADOE,NELAP
gamma-BHC (Lindane)	DoD-ELAP,WADOE,NELAP
gamma-BHC (Lindane) [2C]	DoD-ELAP,WADOE,NELAP
delta-BHC	DoD-ELAP,WADOE,NELAP
delta-BHC [2C]	DoD-ELAP,WADOE,NELAP
Heptachlor	DoD-ELAP,WADOE,NELAP
Heptachlor [2C]	DoD-ELAP,WADOE,NELAP
Aldrin	DoD-ELAP,WADOE,NELAP
Aldrin [2C]	DoD-ELAP,WADOE,NELAP
Heptachlor Epoxide	DoD-ELAP,WADOE,NELAP
Heptachlor Epoxide [2C]	DoD-ELAP,WADOE,NELAP
trans-Chlordane (beta-Chlordane	DoD-ELAP,WADOE,NELAP
trans-Chlordane (beta-Chlordane	DoD-ELAP,WADOE,NELAP
cis-Chlordane (alpha-chlordane)	DoD-ELAP,WADOE,NELAP
cis-Chlordane (alpha-chlordane)	DoD-ELAP,WADOE,NELAP
Endosulfan I	DoD-ELAP,WADOE,NELAP
Endosulfan I [2C]	DoD-ELAP,WADOE,NELAP
4,4'-DDE	DoD-ELAP,WADOE,NELAP
4,4'-DDE [2C]	DoD-ELAP,WADOE,NELAP
Dieldrin	DoD-ELAP,WADOE,NELAP
Dieldrin [2C]	DoD-ELAP,WADOE,NELAP
Endrin	DoD-ELAP,WADOE,NELAP
Endrin [2C]	DoD-ELAP,WADOE,NELAP
Endosulfan II	DoD-ELAP,WADOE,NELAP
Endosulfan II [2C]	DoD-ELAP,WADOE,NELAP
4,4'-DDD	DoD-ELAP,WADOE,NELAP
4,4'-DDD [2C]	DoD-ELAP,WADOE,NELAP

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Endrin Aldehyde	DoD-ELAP,WADOE,NELAP
Endrin Aldehyde [2C]	DoD-ELAP,WADOE,NELAP
4,4'-DDT	DoD-ELAP,WADOE,NELAP
4,4'-DDT [2C]	DoD-ELAP,WADOE,NELAP
Endosulfan Sulfate	DoD-ELAP,WADOE,NELAP
Endosulfan Sulfate [2C]	DoD-ELAP,WADOE,NELAP
Endrin Ketone	DoD-ELAP,WADOE,NELAP
Endrin Ketone [2C]	DoD-ELAP,WADOE,NELAP
Methoxychlor	DoD-ELAP,WADOE,NELAP
Methoxychlor [2C]	DoD-ELAP,WADOE,NELAP
Toxaphene	DoD-ELAP
Toxaphene [2C]	DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2025
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2025
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2024

Landau Associates, Inc. - Tacoma	Project: Webster Nursery	
2107 South C Street	Project Number: 0774006.040.048	**Reported:**
Tacoma WA, 98402	Project Manager: Katie Gauglitz	29-Sep-2023 11:16

Notes and Definitions

*	Flagged value is not within established control limits.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
Y1	Raised reporting limit due to interference
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.