Technical Memorandum

WASHINGTON STATE DEPARTMENT OF Natural Resources

Date: November 26, 2013

To: Steve Teel, Dept. of Ecology, Toxics Cleanup Program/SW Region

From: John Felder, Dept. of Natural Resources/Engineering Division

Ref: September 3 – 4, 2013 DNR Webster Nursery Groundwater Sampling Event
Former pesticide storage warehouse UST site, Thurston Co.
Agreed Order #DEOOTCPSR295

This memorandum summarizes all pertinent information related to the reference sampling event. If questions arise, please contact me at 360-902-1158, john.felder@dnr.wa.gov.

Summary

Five wells were sampled for pesticides method 8081A. The only pesticide detections above MTCA cleanup standards were at wells SW-10 (0.50 ug/l) and SW-11 (1.4 ug/l) for Heptachlor Epoxide. The MTCA cleanup standard for Heptachlor Epoxide is 0.00962 ug/L. These values are typical of Heptachlor Epoxide concentrations detected in the past. SW-10 and SW-11 are located about 10' to 15' from the release area.

Methodology

All monitoring and sampling methods used, were in accordance with the Agreed Order. Groundwater elevations were measured with an electronic liquid level sensing meter. During groundwater purging, water quality parameters were measured using a Horiba water quality meter. Low flow sampling (varied from 300 to 400 ml/minute for this event) was achieved using a Geotech peristaltic pump, as per EPA low flow sampling procedures (EPA/540/S-95/504, April 1996). Following stabilization of water quality parameters, samples were collected and refrigerated. All samples were hand-delivered to Test America Laboratories under proper chain-of-custody. All samples were accepted by the lab without comment.

Groundwater sampling results

Summary sampling results for this and past sampling events are presented in graph and table form as attached. A monitoring well location plan/groundwater elevation map is also included. Appendix B presents the laboratory analytical report including pesticide, natural attenuation parameter, and field collected water quality parameter results.

For this event, detected pesticides were Heptachlor Epoxide @ SW-10 & -11 with concentrations of 0.50 & 1.4 ug/L respectively (MTCA = 0.00962 ug/L), Chlordane @ SW-11 with a concentration of 0.12 ug/L (MTCA = 0.25 ug/L) and Heptachlor @ SW-10 & SW-11 with concentrations of 0.0058 & 0.0073 ug/L respectively (MTCA = 0.0194 ug/L).

For the above detections, only the SW-10 & -11 Heptachlor Epoxide concentrations were greater than the associated MTCA groundwater cleanup standard.

Note that the analytical laboratory and method has changed as of this event, from Edge Laboratories (formerly analyzing with 525.2 & 508.1) to Test America Laboratories (now using method 8081A). Attached is your email approving this change in method. Also note that typically 6 wells are sampled, however, a miscommunication with the new analytical laboratory resulted in too few sample bottles available to sample all 6 locations and collect a field quality control sample. The well location not sampled was SW-16. SW-16 is furthest away from the release site and has not shown any pesticide detections in over 14 years of continuous groundwater monitoring.

Conclusions

- For this event, Heptachlor Epoxide is the only pesticide found above MTCA groundwater cleanup standards. Concentrations of Heptachlor Epoxide have ranged between approximately 2.5 to 0.2 ug/L, over time (see appendices). The lowest observed Heptachlor Epoxide concentrations are still well above the MTCA cleanup standard of 0.00962 ug/L. If pesticide remediation is occurring naturally, the rate of reduction appears very slow and variable.

- Chlordane and Heptachlor concentrations remain consistently below MTCA cleanup standards from February 2007 to the present (see appendices).

- Beginning in 2000, after 14 years of groundwater monitoring, there is no evidence of offsite pesticide migration from the release area. As the pesticide release likely occurred in the late 1970's to early 1980's, it is DNR's contention that this site does not represent a concern to offsite public water supply users or the environment.

Semi-annual groundwater monitoring will continue as now required under the amended Agreed Order. No ground disturbing activity is allowed at the release site as per the Agreed Order.

FELDER, JOHN (DNR)

From: Teel, Steve (ECY)
Sent: Tuesday, August 27, 2013 3:09 PM
To: FELDER, JOHN (DNR)
Subject: RE: DNR Webster Nursery groundwater sampling - summer 2013, lab change

John –
Our lab (Manchester) does pesticides in water by EPA SW-846 Methods 8081 (Gas Chromatography Electron Capture Detection - GC/ECD) or
8270 (Gas Chromatography Mass Spectrometer - GC/MS). So my preference would be that you analyze using either 8081 or 8270 as long as you get adequate reporting limits and the appropriate constituent lists for the Site constituents. I believe 8081 is less expensive compared to 8270.
Thanks,
Steve

Steve Teel, LHG
Site Manager/Hydrogeologist
Washington State Department of Ecology
Toxics Cleanup Program, Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775
Phone (360) 407-6247
steve.teel@ecy.wa.gov
Street Address: 300 Desmond Drive, Lacey, WA 98503
Fax (360) 407-6305

From: FELDER, JOHN (DNR)
Sent: Tuesday, August 27, 2013 2:33 PM
To: Teel, Steve (ECY)
Subject: DNR Webster Nursery groundwater sampling - summer 2013, lab change

Steve, just to wrap up our conversation today…. we agreed by phone a week or so ago, if I could find a lab that could achieve the needed low detection limits (under the Agreed Order) for chlordane, heptachlor, and heptachlor epoxide I could make the switch to analyzing for just chlorinated pesticides, method "508". We have analyzed for chlorinated pesticides and synthetic organics (method 525.2) since the beginning of this project, but have had no detections of synthetic organic analytes at the former pesticide UST site.

I mentioned today that I had found a lab, DOE certified in WA state and able to meet the reporting requirements. The lab is Test America (formerly Severn Trent and before that Sound Analytical). There are benefits for DNR to switch labs as follows:

- Test America is within driving distance of Olympia and shipping samples can be problematic,
- They are on a state DES competitively negotiated & approved master contract, therefore, the cost per analysis is less than the existing lab,
- They also run the MNA parameters we need, a one-stop lab, that's a bonus,
- They say they are well versed with DOE EIM's system. To this day I have not received a data package from the existing lab that will validate, when submitted to EIM's. I've tried multiple times. I give up.

Note: Test America does not run the current method used (508.1) which I'm told is a drinking water method. They do run method 508 which is a water method, not exactly the same analyte list as 508.1, but does include chlordane, heptachlor and hep epoxide at the same lab reporting limits as the existing lab.

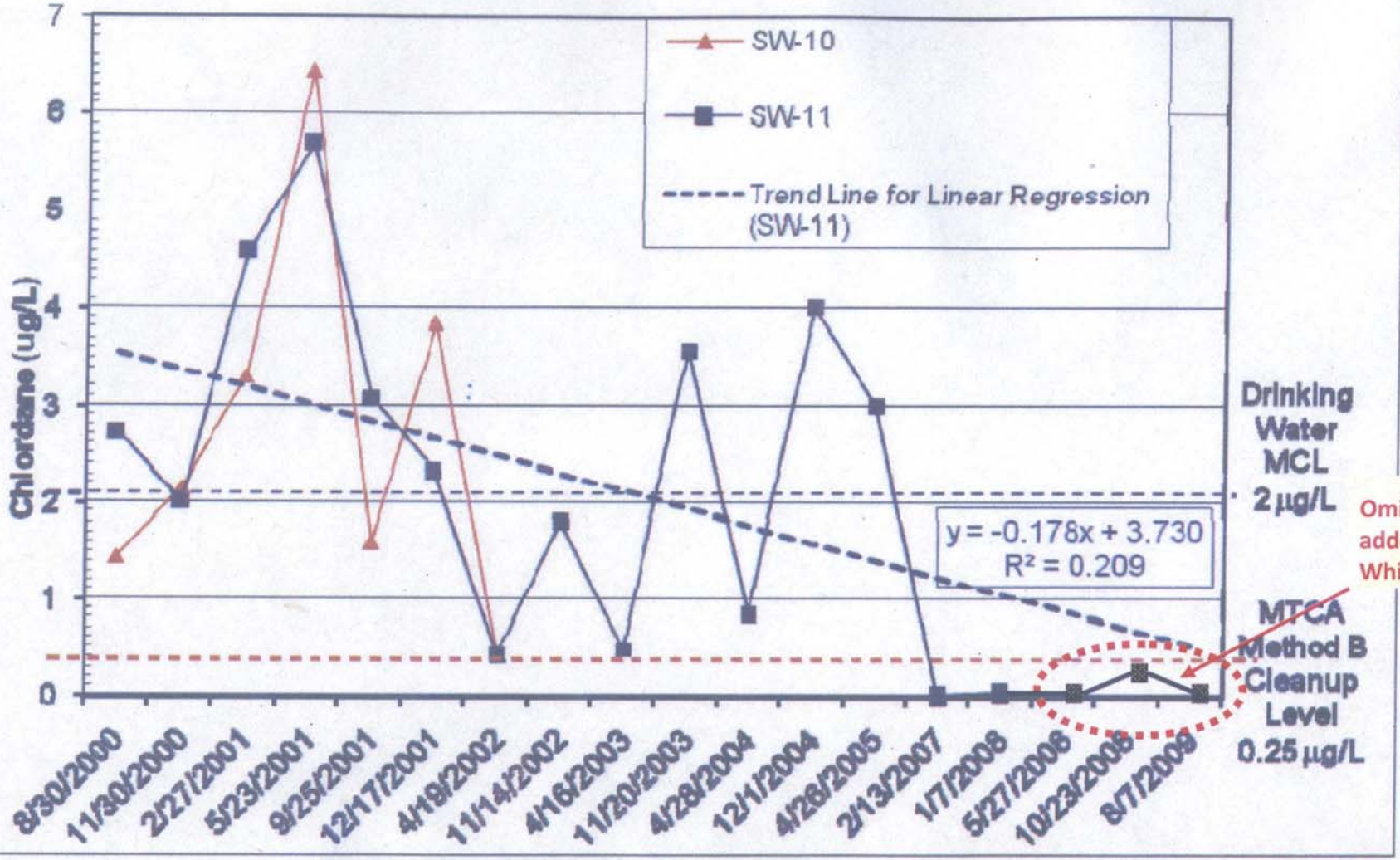
Everything else remains the same as detailed in the formerly approved work plan (low flow sampling, water level measurements, field parameters, etc.).

Putting this down in writing as documentation for our respective files. Let me know if there are questions.

John Felder
Engineering Division - Environmental Services
Washington State Dept. of Natural Resources (DNR)
(360) 902-1158

Nursery Pesticide Trend Curves

2000 to 2009



Omitted data points added by DNR, from White Shield reports

WHITE SHIELD, INC.
SURVEYING ENVIRONMENTAL SERVICES
23412 68TH AVE S.
KENT, WA.
98032
Phone: 253-867-6070
Fax:253-867-6075

Figure 8

Chlordane vs. Time
August 2009

Washington State Department of Natural Resources
Webster Nursery
Tumwater, Washington

JOB No. 207-005-01
DATE 9/28/09

DNR additions 2-9-11

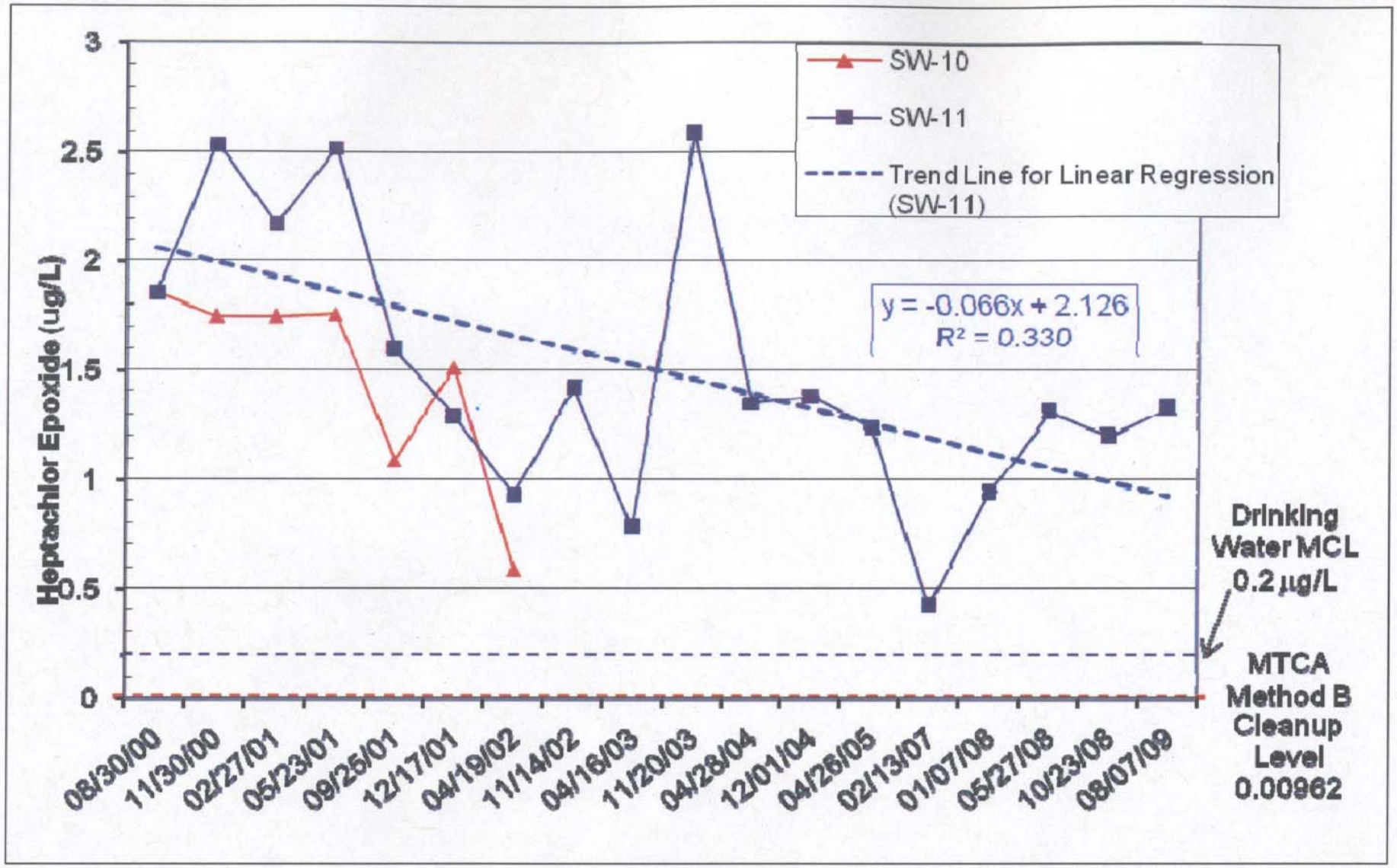


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Figure 6

Heptachlor Epoxide vs. Time
August 2009

Washington State Department of Natural Resources
Webster Nursery
Tumwater, Washington

JOB No.
207-005-01
DATE
9/28/09

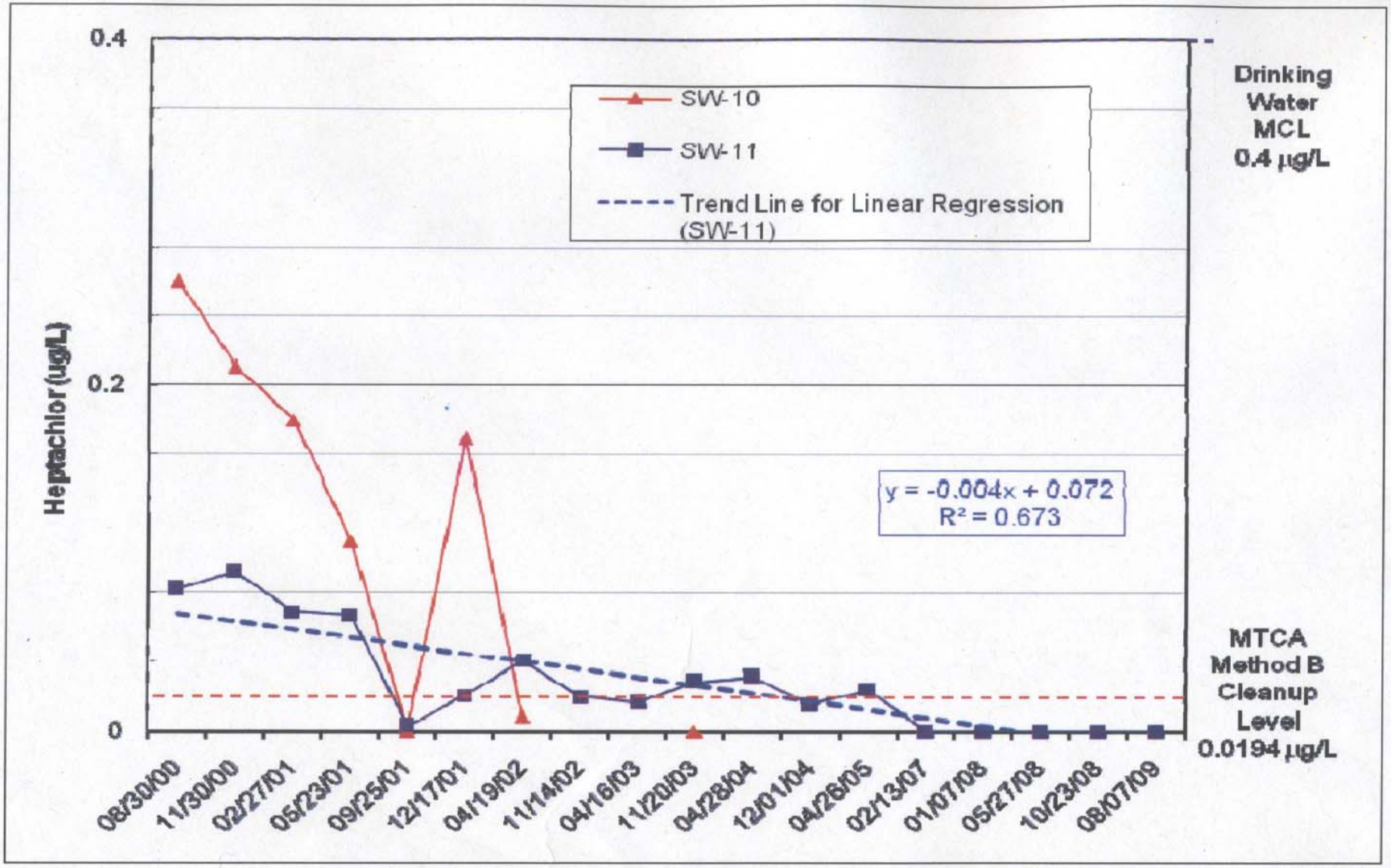

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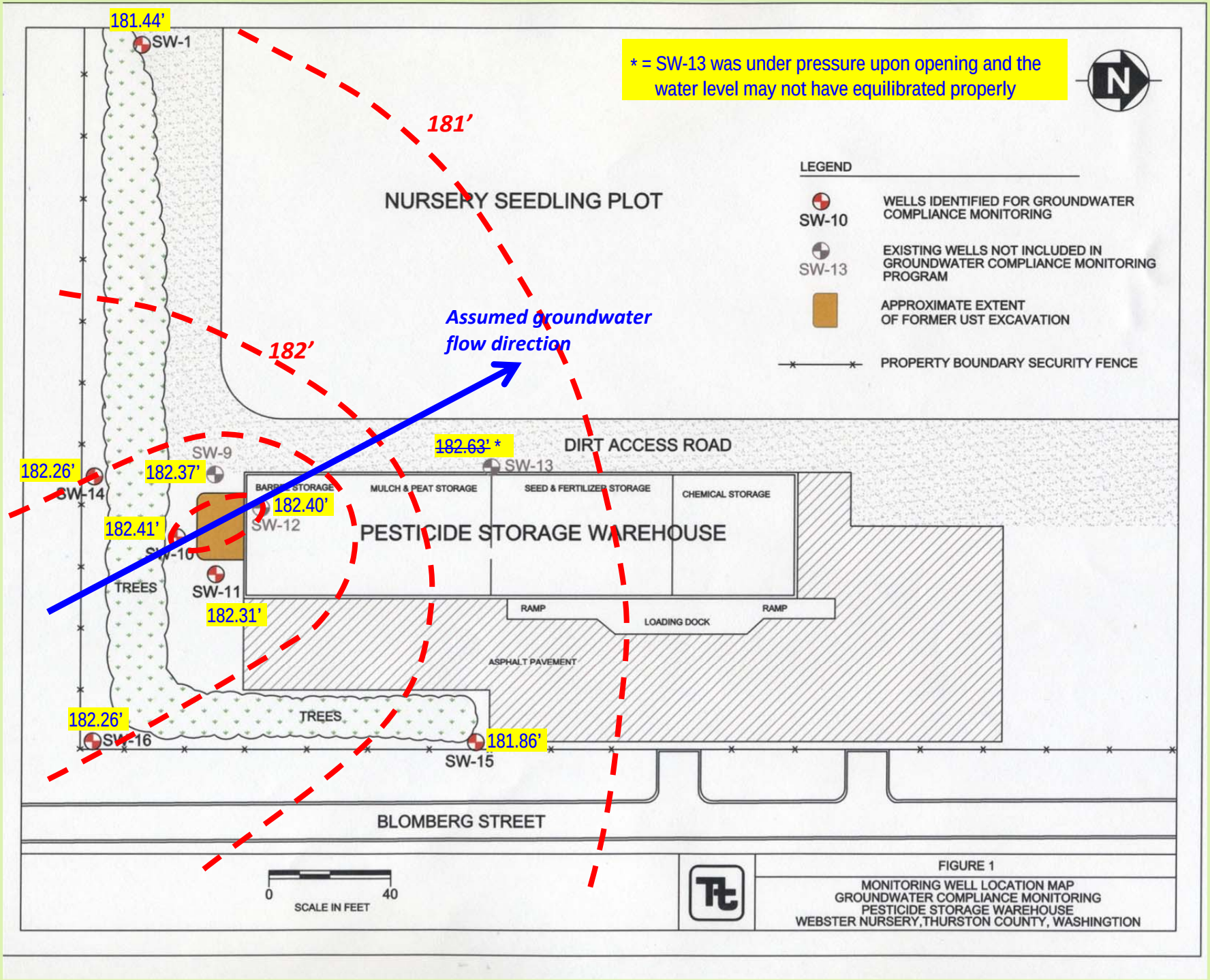
Figure 9

Heptachlor vs. Time
August 2009

Washington State Department of Natural Resources
Webster Nursery
Tumwater, Washington

JOB No.
207-005-01
DATE
9/28/09

Appendix A – Tables and Figures



September 3, 2013 Webster Nursery Groundwater Elevations & Flow Direction

Webster Nursery Groundwater Chlordane and Heptachlor Summary Results

Alpha/Gamma Chlordane (ug/L) MTCA = 0.25

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/2010	ND	nr	0.02/0.05	ND	ND	ND
7/20/2010	ND	nr	0.03/0.17	ND	ND	ND
1/24/2011	ND	nr	ND	ND	ND	ND
8/8/2011	ND	nr	ND	ND	ND	ND
2/28/2012	ND	0.08/0.04	ND	ND	ND	ND
8/13/2012	ND	0.06	ND/0.05	ND	ND	ND
2/25/2013	ND	ND	0.11/0.06	ND	ND	ND
9/3/2013	ND	0.048/0.036P	0.12/ND	ND	ND	*

Heptachlor (ug/L) MTCA = 0.0194

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/2010	ND	nr	ND	ND	ND	ND
7/20/2010	ND	nr	ND	ND	ND	ND
1/24/2011	ND	nr	ND	ND	ND	ND
8/8/2011	ND	nr	ND	ND	ND	ND
2/28/2012	ND	ND	ND	ND	ND	ND
8/13/2012	ND	ND	ND	ND	ND	ND
2/25/2013	ND	ND	ND	ND	ND	ND
9/3/2013	ND	0.0058 JP	0.0073 JP	ND	ND	*

Heptachlor Epoxide (ug/L) MTCA = 0.00962

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/2010	ND	nr	**1.14**	ND	ND	ND
7/20/2010	ND	nr	**1.76**	ND	ND	ND
1/24/2011	ND	nr	**0.70**	ND	ND	ND
8/8/2011	ND	nr	**1.27**	ND	ND	ND
2/28/2012	ND	**0.34/0.33**	**0.45**	ND	ND	ND
8/13/2012	ND	**0.41**	**1.43/1.39**	ND	ND	ND
2/25/2013	ND	**0.22**	**1.21/1.18**	ND	ND	ND
9/3/2013	ND	**0.5**	**1.4**	ND	ND	*

nr = not required
ND = non-detect
** = Not sampled*
Bold values are above MTCA standards
J = estimated quantity
P = higher value reported

Webster Nursery field-measured water quality parameters

Temperature (degrees F)

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/10	47.8	*nm*	50.4	52.0	48.2	51.8
7/20/10	52.0	*nm*	53.1	61.3	56.8	59.0
1/24/11	48.2	*nm*	49.5	49.3	49.6	50.9
8/8/11	52.9	*nm*	53.4	56.5	53.6	56.3
2/28/12	45.2	47.6	47.5	45.8	45.0	46.6
8/13/12	53.1	53.1	54.1	53.8	52.7	54.9
2/25/13	46.9	49.1	47.6	47.1	44.0	47.7

Conductivity (uS/cm)

SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
nm	*nm*	*nm*	*nm*	*nm*	*nm*
nm	*nm*	*nm*	*nm*	*nm*	*nm*
nm	*nm*	*nm*	*nm*	*nm*	*nm*
0.096	*nm*	0.249	0.062	0.069	0.052
0.075	0.152	0.149	0.033	0.045	0.040
0.085	0.159	0.166	0.048	0.064	0.048
0.077	0.104	0.126	0.031	0.126	0.036

pH (SU)

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/10	5.65	*nm*	5.42	5.76	5.84	5.85
7/20/10	5.25	*nm*	6.79	6.48	6.42	6.39
1/24/11	6.24	*nm*	6.11	5.82	7.27	5.95
8/8/11	5.95	*nm*	6.96	6.12	5.98	6.52
2/28/12	5.35	5.29	5.31	5.56	5.59	5.55
8/13/12	5.23	4.93	4.64	5.46	4.97	5.04
2/25/13	4.81	4.67	4.69	5.05	6.77	4.94

ORP (mV)

SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
455	*nm*	407	444	449	429
374	*nm*	778	482	466	427
252	*nm*	221	275	231	230
316	*nm*	393	327	325	250
235	90	32 (-)	235	241	252
212	35	144	251	261	226
284	280	214	301	201	286

DO (mg/l)

Date	SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
1/13/10	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*
7/20/10	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*
1/24/11	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*
8/8/11	*nm*	*nm*	*nm*	*nm*	*nm*	*nm*
2/28/12	4.60	0.00	0.00	4.54	9.74	3.60
8/13/12	4.03	0.00	0.00	7.64	7.56	1.28
2/25/13	2.84	1.88	0.00	3.02	19.22	0.60

Turbidity (NTU)

SW-9	SW-10	SW-11	SW-14	SW-15	SW-16
nm	*nm*	*nm*	*nm*	*nm*	*nm*
nm	*nm*	*nm*	*nm*	*nm*	*nm*
nm	*nm*	*nm*	*nm*	*nm*	*nm*
nm	*nm*	*nm*	*nm*	*nm*	*nm*
10.6	14.3	12.7	*nm*	19.1	11.3
6.5	3.7	2.2	13.0	4.5	9.6
2.9	2.7	2.8	2.9	3.8	1.9

Notes:

All above measurments by Horiba water quality meter

nm = not measured

(-) = negative ORP value

Webster Nursery Groundwater Natural Attenuation Monitoring Parameters Summary

Nitrate (mg/l)

Date	SW-9	SW-10	SW-11	SW-16
2/28/12	0.5	<0.2	<0.2	<0.2
8/13/12	0.7	<0.2	0.3	0.4
2/25/13	0.8	<0.2	0.2	0.6
9/3/13	nd	nd	nd	nm

TOC (mg/l)

	SW-9	SW-10	SW-11	SW-16
	0.5	4.0	2.3	0.6
	0.5	3.8	0.7	0.40
	0.7	0.6	0.8	0.3
	0.33J	2.3	1.3	nm

Sulfate (mg/l)

	SW-9	SW-10	SW-11	SW-16
	7	5	<1	1
	10	3	1	<1
	9	7	<1	1
	8.9	5.2	2.7	nm

Sulfide (mg/l)

Date	SW-9	SW-10	SW-11	SW-16
2/28/12	*<0.1*	*<0.1*	*<0.1*	*<0.1*
8/13/12	<0.1	<0.1	<0.1	<0.1
2/25/13	<0.1	<0.1	<0.1	<0.1
9/3/13	nd	18	nd	nm

Ferrous Iron (mg/l)

	SW-9	SW-10	SW-11	SW-16
	<0.03	*0.42*	*1.2*	*<0.03*
	0	2.8	1.8	0
	0	0	0	0
	nm	nm	nm	nm

Notes:

The 2/28/12 sulfide and ferrous iron samples (in italics) were flagged for exceeding fixed analytical lab holding times.

All sulfide sample results following the 2/28/12 sample event are preserved in the field.

All ferrous iron samples, following the 2/28/12 sample event, are performed onsite via Hach field test kit.

nd = non detect

nm = not measured

Appendix B – Laboratory Analytical Sheets

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-40130-1
Client Project/Site: Webster Nursery, WA

For:
Washington State Dept of Natual Resource
PO BOX 47030
Olympia, Washington 98504

Attn: John Felder

Vanessa Berry

Authorized for release by:
9/20/2013 3:33:24 PM
Vanessa Berry, Project Manager I
vanessa.frahs@testamericainc.com

Designee for

Kristine Allen, Project Manager I
kristine.allen@testamericainc.com

Table of Contents

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Job ID: 580-40130-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative
580-40130-1

Comments
8082 PCB analysis requested but not enough volume was received, analysis not run.

Receipt
The samples were received on 9/5/2013 3:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 2 coolers at receipt time were 5.7º C and 6.0º C.

GC Semi VOA
No analytical or quality issues were noted.

General Chemistry
Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 144498 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Definitions/Glossary

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
P	The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS/MSD Recovery and/or RPD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F	MS/MSD Recovery and/or RPD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-9 Webster Nursery
Date Collected: 09/05/13 07:45
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-1
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0099	0.0026	ug/L		09/11/13 13:31	09/16/13 12:56	1
gamma-BHC (Lindane)	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
beta-BHC	ND		0.020	0.0015	ug/L		09/11/13 13:31	09/16/13 12:56	1
delta-BHC	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Heptachlor	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Aldrin	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Heptachlor epoxide	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
gamma-Chlordane	ND		0.0099	0.0011	ug/L		09/11/13 13:31	09/16/13 12:56	1
alpha-Chlordane	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endosulfan I	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
4,4'-DDE	ND		0.020	0.0011	ug/L		09/11/13 13:31	09/16/13 12:56	1
Dieldrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
4,4'-DDD	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endosulfan II	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
4,4'-DDT	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endrin aldehyde	ND		0.050	0.00099	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endosulfan sulfate	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Methoxychlor	ND		0.099	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Endrin ketone	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Hexachlorobutadiene	ND		0.050	0.0030	ug/L		09/11/13 13:31	09/16/13 12:56	1
Hexachlorobenzene	ND		0.050	0.0014	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical)	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical) Peak 1	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical) Peak 2	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical) Peak 3	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical) Peak 4	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Chlordane (technical) Peak 5	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene Peak 1	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene Peak 2	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene Peak 3	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene Peak 4	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1
Toxaphene Peak 5	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*18 - 181*	*09/11/13 13:31*	*09/16/13 12:56*	*1*
DCB Decachlorobiphenyl	*75*		*53 - 122*	*09/11/13 13:31*	*09/16/13 12:56*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10		mg/L			09/06/13 12:43	1
Nitrite as N	ND		0.60		mg/L			09/06/13 12:43	1
Chloride	**3.6**		0.90		mg/L			09/06/13 12:43	1
Nitrate as N	ND		0.90		mg/L			09/06/13 12:43	1
Bromide	**3.6**		0.60		mg/L			09/06/13 12:43	1
Sulfate	**8.9**		1.2		mg/L			09/06/13 12:43	1
Total Organic Carbon	**0.33**	**J**	1.0	0.33	mg/L			09/18/13 21:48	1

Client Sample Results

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-9 Webster Nursery
Date Collected: 09/05/13 07:45
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-1
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		16	16	mg/L		09/09/13 08:19	09/10/13 11:19	1

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-10 Webster Nursery
Date Collected: 09/05/13 11:05
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-2
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.010	0.0027	ug/L		09/11/13 13:31	09/16/13 13:12	1
gamma-BHC (Lindane)	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
beta-BHC	ND		0.021	0.0016	ug/L		09/11/13 13:31	09/16/13 13:12	1
delta-BHC	**0.0043**	**J P**	0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Heptachlor	**0.0058**	**J P**	0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Aldrin	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Heptachlor epoxide	**0.50**		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
gamma-Chlordane	**0.048**		0.010	0.0011	ug/L		09/11/13 13:31	09/16/13 13:12	1
alpha-Chlordane	**0.036**	**P**	0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endosulfan I	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
4,4'-DDE	ND		0.021	0.0011	ug/L		09/11/13 13:31	09/16/13 13:12	1
Dieldrin	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endrin	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
4,4'-DDD	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endosulfan II	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
4,4'-DDT	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endrin aldehyde	ND		0.052	0.0010	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endosulfan sulfate	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Methoxychlor	ND		0.10	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Endrin ketone	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Hexachlorobutadiene	ND		0.052	0.0031	ug/L		09/11/13 13:31	09/16/13 13:12	1
Hexachlorobenzene	ND		0.052	0.0015	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical)	**4.1**	**P**	0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical) Peak 1	**0.19**		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical) Peak 2	**20**	**E**	0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical) Peak 3	**0.31**		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical) Peak 4	**0.17**		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Chlordane (technical) Peak 5	**0.20**		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene Peak 1	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene Peak 2	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene Peak 3	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene Peak 4	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1
Toxaphene Peak 5	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*18 - 181*	*09/11/13 13:31*	*09/16/13 13:12*	*1*
DCB Decachlorobiphenyl	*70*		*53 - 122*	*09/11/13 13:31*	*09/16/13 13:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**0.15**		0.10		mg/L			09/06/13 12:57	1
Nitrite as N	ND		0.60		mg/L			09/06/13 12:57	1
Chloride	**22**		0.90		mg/L			09/06/13 12:57	1
Nitrate as N	ND		0.90		mg/L			09/06/13 12:57	1
Bromide	ND		0.60		mg/L			09/06/13 12:57	1
Sulfate	**5.2**		1.2		mg/L			09/06/13 12:57	1
Total Organic Carbon	**2.3**		1.0	0.33	mg/L			09/18/13 21:48	1

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-10 Webster Nursery
Date Collected: 09/05/13 11:05
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-2
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	18		17	17	mg/L		09/09/13 08:19	09/10/13 11:19	1

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-11 Webster Nursery
Date Collected: 09/05/13 09:35
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-3
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0096	0.0025	ug/L		09/11/13 13:31	09/16/13 13:59	1
gamma-BHC (Lindane)	ND		0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
beta-BHC	ND		0.019	0.0014	ug/L		09/11/13 13:31	09/16/13 13:59	1
delta-BHC	ND		0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Heptachlor	**0.0073**	**J P**	0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Aldrin	ND		0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Heptachlor epoxide	**1.4**		0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
gamma-Chlordane	**0.12**		0.0096	0.0011	ug/L		09/11/13 13:31	09/16/13 13:59	1
alpha-Chlordane	ND		0.0096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endosulfan I	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
4,4'-DDE	ND		0.019	0.0011	ug/L		09/11/13 13:31	09/16/13 13:59	1
Dieldrin	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endrin	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
4,4'-DDD	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endosulfan II	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
4,4'-DDT	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endrin aldehyde	ND		0.048	0.00096	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endosulfan sulfate	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Methoxychlor	ND		0.096	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Endrin ketone	ND		0.019	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Hexachlorobutadiene	ND		0.048	0.0029	ug/L		09/11/13 13:31	09/16/13 13:59	1
Hexachlorobenzene	ND		0.048	0.0013	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical)	**0.97**		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical) Peak 1	**0.45**		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical) Peak 2	ND		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical) Peak 3	**0.75**		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical) Peak 4	**0.77**		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Chlordane (technical) Peak 5	**1.9**		0.096	0.022	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene Peak 1	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene Peak 2	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene Peak 3	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene Peak 4	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1
Toxaphene Peak 5	ND		0.96	0.26	ug/L		09/11/13 13:31	09/16/13 13:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*18 - 181*	*09/11/13 13:31*	*09/16/13 13:59*	*1*
DCB Decachlorobiphenyl	*66*		*53 - 122*	*09/11/13 13:31*	*09/16/13 13:59*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10		mg/L			09/06/13 13:55	1
Nitrite as N	ND		0.60		mg/L			09/06/13 13:55	1
Chloride	**24**		0.90		mg/L			09/06/13 13:55	1
Nitrate as N	ND		0.90		mg/L			09/06/13 13:55	1
Bromide	ND		0.60		mg/L			09/06/13 13:55	1
Sulfate	**2.7**		1.2		mg/L			09/06/13 13:55	1
Total Organic Carbon	**1.3**		1.0	0.33	mg/L			09/18/13 21:48	1

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-11 Webster Nursery
Date Collected: 09/05/13 09:35
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-3
Matrix: Water

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		17	17	mg/L		09/09/13 08:20	09/10/13 11:19	1

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-14 Webster Nursery
Date Collected: 09/04/13 16:20
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-4
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0099	0.0026	ug/L		09/11/13 13:31	09/16/13 14:15	1
gamma-BHC (Lindane)	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
beta-BHC	ND		0.020	0.0015	ug/L		09/11/13 13:31	09/16/13 14:15	1
delta-BHC	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Heptachlor	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Aldrin	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Heptachlor epoxide	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
gamma-Chlordane	ND		0.0099	0.0011	ug/L		09/11/13 13:31	09/16/13 14:15	1
alpha-Chlordane	ND		0.0099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endosulfan I	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
4,4'-DDE	ND		0.020	0.0011	ug/L		09/11/13 13:31	09/16/13 14:15	1
Dieldrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
4,4'-DDD	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endosulfan II	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
4,4'-DDT	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endrin aldehyde	ND		0.050	0.00099	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endosulfan sulfate	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Methoxychlor	ND		0.099	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Endrin ketone	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Hexachlorobutadiene	ND		0.050	0.0030	ug/L		09/11/13 13:31	09/16/13 14:15	1
Hexachlorobenzene	ND		0.050	0.0014	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical)	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical) Peak 1	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical) Peak 2	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical) Peak 3	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical) Peak 4	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Chlordane (technical) Peak 5	ND		0.099	0.023	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene Peak 1	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene Peak 2	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene Peak 3	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene Peak 4	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1
Toxaphene Peak 5	ND		0.99	0.27	ug/L		09/11/13 13:31	09/16/13 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*18 - 181*	*09/11/13 13:31*	*09/16/13 14:15*	*1*
DCB Decachlorobiphenyl	*60*		*53 - 122*	*09/11/13 13:31*	*09/16/13 14:15*	*1*

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-15 Webster Nursery
Date Collected: 09/04/13 14:55
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-5
Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.010	0.0027	ug/L		09/11/13 13:31	09/16/13 14:30	1
gamma-BHC (Lindane)	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
beta-BHC	ND		0.021	0.0016	ug/L		09/11/13 13:31	09/16/13 14:30	1
delta-BHC	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Heptachlor	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Aldrin	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Heptachlor epoxide	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
gamma-Chlordane	ND		0.010	0.0011	ug/L		09/11/13 13:31	09/16/13 14:30	1
alpha-Chlordane	ND		0.010	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endosulfan I	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
4,4'-DDE	ND		0.021	0.0011	ug/L		09/11/13 13:31	09/16/13 14:30	1
Dieldrin	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endrin	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
4,4'-DDD	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endosulfan II	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
4,4'-DDT	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endrin aldehyde	ND		0.052	0.0010	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endosulfan sulfate	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Methoxychlor	ND		0.10	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Endrin ketone	ND		0.021	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Hexachlorobutadiene	ND		0.052	0.0031	ug/L		09/11/13 13:31	09/16/13 14:30	1
Hexachlorobenzene	ND		0.052	0.0015	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical)	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical) Peak 1	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical) Peak 2	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical) Peak 3	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical) Peak 4	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Chlordane (technical) Peak 5	ND		0.10	0.024	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene Peak 1	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene Peak 2	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene Peak 3	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene Peak 4	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1
Toxaphene Peak 5	ND		1.0	0.28	ug/L		09/11/13 13:31	09/16/13 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*18 - 181*	*09/11/13 13:31*	*09/16/13 14:30*	*1*
DCB Decachlorobiphenyl	*69*		*53 - 122*	*09/11/13 13:31*	*09/16/13 14:30*	*1*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-144698/1-A
Matrix: Water
Analysis Batch: 144991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 144698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.010	0.0026	ug/L		09/11/13 13:31	09/16/13 10:51	1
gamma-BHC (Lindane)	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
beta-BHC	ND		0.020	0.0015	ug/L		09/11/13 13:31	09/16/13 10:51	1
delta-BHC	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Heptachlor	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Aldrin	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Heptachlor epoxide	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
gamma-Chlordane	ND		0.010	0.0011	ug/L		09/11/13 13:31	09/16/13 10:51	1
alpha-Chlordane	ND		0.010	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endosulfan I	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
4,4'-DDE	ND		0.020	0.0011	ug/L		09/11/13 13:31	09/16/13 10:51	1
Dieldrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endrin	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
4,4'-DDD	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endosulfan II	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
4,4'-DDT	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endrin aldehyde	ND		0.050	0.0010	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endosulfan sulfate	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Methoxychlor	ND		0.10	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Endrin ketone	ND		0.020	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Hexachlorobutadiene	ND		0.050	0.0030	ug/L		09/11/13 13:31	09/16/13 10:51	1
Hexachlorobenzene	ND		0.050	0.0014	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical)	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical) Peak 1	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical) Peak 2	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical) Peak 3	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical) Peak 4	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Chlordane (technical) Peak 5	ND		0.10	0.023	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene Peak 1	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene Peak 2	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene Peak 3	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene Peak 4	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1
Toxaphene Peak 5	ND		1.0	0.27	ug/L		09/11/13 13:31	09/16/13 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*18 - 181*	*09/11/13 13:31*	*09/16/13 10:51*	*1*
DCB Decachlorobiphenyl	*71*		*53 - 122*	*09/11/13 13:31*	*09/16/13 10:51*	*1*

Lab Sample ID: LCS 580-144698/4-A
Matrix: Water
Analysis Batch: 144991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	0.200	0.152		ug/L		76	57 - 125
gamma-BHC (Lindane)	0.200	0.150		ug/L		75	59 - 125
beta-BHC	0.200	0.141		ug/L		71	54 - 125
delta-BHC	0.200	0.127		ug/L		64	39 - 124

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-144698/4-A
Matrix: Water
Analysis Batch: 144991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 144698

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Heptachlor			0.200	0.160		ug/L		80	34 - 128		
Aldrin			0.200	0.151		ug/L		75	60 - 125		
Heptachlor epoxide			0.200	0.158		ug/L		79	69 - 125		
gamma-Chlordane			0.200	0.154		ug/L		77	65 - 125		
alpha-Chlordane			0.200	0.152		ug/L		76	66 - 125		
Endosulfan I			0.200	0.156		ug/L		78	70 - 125		
4,4'-DDE			0.200	0.147		ug/L		73	66 - 125		
Dieldrin			0.200	0.158		ug/L		79	71 - 124		
Endrin			0.200	0.148		ug/L		74	72 - 130		
4,4'-DDD			0.200	0.143		ug/L		71	71 - 125		
Endosulfan II			0.200	0.149		ug/L		75	70 - 128		
4,4'-DDT			0.200	0.142		ug/L		71	54 - 136		
Endrin aldehyde			0.200	0.146		ug/L		73	73 - 125		
Endosulfan sulfate			0.200	0.143		ug/L		71	63 - 125		
Methoxychlor			0.200	0.147		ug/L		73	62 - 149		
Endrin ketone			0.200	0.146		ug/L		73	70 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*18 - 181*
DCB Decachlorobiphenyl	*76*		*53 - 122*

Lab Sample ID: LCSD 580-144698/5-A
Matrix: Water
Analysis Batch: 144991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 144698

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC			0.200	0.160		ug/L		80	57 - 125	5	41
gamma-BHC (Lindane)			0.200	0.160		ug/L		80	59 - 125	6	42
beta-BHC			0.200	0.143		ug/L		71	54 - 125	1	34
delta-BHC			0.200	0.138		ug/L		69	39 - 124	8	49
Heptachlor			0.200	0.173		ug/L		86	34 - 128	8	39
Aldrin			0.200	0.163		ug/L		82	60 - 125	8	38
Heptachlor epoxide			0.200	0.171		ug/L		86	69 - 125	8	35
gamma-Chlordane			0.200	0.168		ug/L		84	65 - 125	9	40
alpha-Chlordane			0.200	0.166		ug/L		83	66 - 125	9	43
Endosulfan I			0.200	0.171		ug/L		85	70 - 125	9	40
4,4'-DDE			0.200	0.162		ug/L		81	66 - 125	10	43
Dieldrin			0.200	0.173		ug/L		86	71 - 124	9	39
Endrin			0.200	0.169		ug/L		84	72 - 130	13	41
4,4'-DDD			0.200	0.158		ug/L		79	71 - 125	10	47
Endosulfan II			0.200	0.164		ug/L		82	70 - 128	9	37
4,4'-DDT			0.200	0.161		ug/L		80	54 - 136	12	49
Endrin aldehyde			0.200	0.149		ug/L		74	73 - 125	2	43
Endosulfan sulfate			0.200	0.159		ug/L		80	63 - 125	11	34
Methoxychlor			0.200	0.163		ug/L		81	62 - 149	10	37
Endrin ketone			0.200	0.160		ug/L		80	70 - 133	9	37

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-144698/5-A
Matrix: Water
Analysis Batch: 144991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 144698

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	76		18 - 181
DCB Decachlorobiphenyl	70		53 - 122

Lab Sample ID: 580-40130-2 MS
Matrix: Water
Analysis Batch: 144991

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA
Prep Batch: 144698

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
alpha-BHC	ND		0.191	0.139		ug/L		73	57 - 125
gamma-BHC (Lindane)	ND		0.191	0.140		ug/L		73	59 - 125
beta-BHC	ND		0.191	0.125		ug/L		65	54 - 125
delta-BHC	0.0043	J P	0.191	0.120		ug/L		61	39 - 124
Heptachlor	0.0058	J P	0.191	0.154		ug/L		77	34 - 128
Aldrin	ND		0.191	0.139		ug/L		73	60 - 125
Heptachlor epoxide	0.50		0.191	0.643		ug/L		74	69 - 125
gamma-Chlordane	0.048		0.191	0.188		ug/L		73	65 - 125
alpha-Chlordane	0.036	P	0.191	0.184		ug/L		78	66 - 125
Endosulfan I	ND		0.191	0.145		ug/L		76	70 - 125
4,4'-DDE	ND		0.191	0.138		ug/L		72	66 - 125
Dieldrin	ND		0.191	0.145		ug/L		76	71 - 124
Endrin	ND		0.191	0.142		ug/L		74	72 - 130
4,4'-DDD	ND		0.191	0.136		ug/L		71	71 - 125
Endosulfan II	ND		0.191	0.138		ug/L		72	70 - 128
4,4'-DDT	ND		0.191	0.134		ug/L		70	54 - 136
Endrin aldehyde	ND		0.191	0.127	F	ug/L		67	73 - 125
Endosulfan sulfate	ND		0.191	0.140		ug/L		73	63 - 125
Methoxychlor	ND		0.191	0.137		ug/L		72	62 - 149
Endrin ketone	ND		0.191	0.138		ug/L		72	70 - 133

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	71		18 - 181
DCB Decachlorobiphenyl	65		53 - 122

Lab Sample ID: 580-40130-2 MSD
Matrix: Water
Analysis Batch: 144991

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA
Prep Batch: 144698

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	ND		0.199	0.165		ug/L		83	57 - 125	17	30
gamma-BHC (Lindane)	ND		0.199	0.163		ug/L		82	59 - 125	16	30
beta-BHC	ND		0.199	0.144		ug/L		72	54 - 125	15	30
delta-BHC	0.0043	J P	0.199	0.139		ug/L		68	39 - 124	15	30
Heptachlor	0.0058	J P	0.199	0.175		ug/L		85	34 - 128	13	30
Aldrin	ND		0.199	0.160		ug/L		80	60 - 125	14	30
Heptachlor epoxide	0.50		0.199	0.725		ug/L		112	69 - 125	12	30
gamma-Chlordane	0.048		0.199	0.215		ug/L		84	65 - 125	13	30
alpha-Chlordane	0.036	P	0.199	0.207		ug/L		86	66 - 125	12	30
Endosulfan I	ND		0.199	0.167		ug/L		84	70 - 125	14	30

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 580-40130-2 MSD
Matrix: Water
Analysis Batch: 144991

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA
Prep Batch: 144698

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDE	ND		0.199	0.157		ug/L		79	66 - 125	13	30
Dieldrin	ND		0.199	0.167		ug/L		84	71 - 124	14	30
Endrin	ND		0.199	0.164		ug/L		83	72 - 130	15	30
4,4'-DDD	ND		0.199	0.155		ug/L		78	71 - 125	13	30
Endosulfan II	ND		0.199	0.160		ug/L		81	70 - 128	15	30
4,4'-DDT	ND		0.199	0.157		ug/L		79	54 - 136	15	30
Endrin aldehyde	ND		0.199	0.147		ug/L		74	73 - 125	15	30
Endosulfan sulfate	ND		0.199	0.165		ug/L		83	63 - 125	17	30
Methoxychlor	ND		0.199	0.159		ug/L		80	62 - 149	15	30
Endrin ketone	ND		0.199	0.161		ug/L		81	70 - 133	16	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*18 - 181*
DCB Decachlorobiphenyl	*74*		*53 - 122*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-144498/3
Matrix: Water
Analysis Batch: 144498

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.60		mg/L			09/06/13 10:38	1
Nitrate as N	ND		0.90		mg/L			09/06/13 10:38	1

Lab Sample ID: LCS 580-144498/4
Matrix: Water
Analysis Batch: 144498

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	1.20	1.21		mg/L		101	90 - 110
Nitrate as N	1.80	1.84		mg/L		102	90 - 110

Lab Sample ID: LCSD 580-144498/5
Matrix: Water
Analysis Batch: 144498

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	1.20	1.20		mg/L		100	90 - 110	1	15
Nitrate as N	1.80	1.82		mg/L		101	90 - 110	1	15

Lab Sample ID: 580-40130-2 MS
Matrix: Water
Analysis Batch: 144498

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	ND		1.20	2.11	F	mg/L		176	90 - 110
Nitrate as N	ND		1.80	1.86		mg/L		103	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-40130-2 MSD
Matrix: Water
Analysis Batch: 144498

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	ND		1.20	2.08	F	mg/L		173	90 - 110	1	15
Nitrate as N	ND		1.80	1.86		mg/L		103	90 - 110	0	15

Lab Sample ID: 580-40130-2 DU
Matrix: Water
Analysis Batch: 144498

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	ND		ND		mg/L		NC	10
Nitrate as N	ND		ND		mg/L		NC	10

Lab Sample ID: MB 580-144500/2
Matrix: Water
Analysis Batch: 144500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.10		mg/L			09/06/13 10:38	1
Chloride	ND		0.90		mg/L			09/06/13 10:38	1
Bromide	ND		0.60		mg/L			09/06/13 10:38	1
Sulfate	ND		1.2		mg/L			09/06/13 10:38	1

Lab Sample ID: LCS 580-144500/3
Matrix: Water
Analysis Batch: 144500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.00	0.990		mg/L		99	90 - 110
Chloride	9.00	9.13		mg/L		101	90 - 110
Bromide	1.20	1.18		mg/L		98	90 - 110
Sulfate	12.0	12.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 580-144500/4
Matrix: Water
Analysis Batch: 144500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	1.00	0.980		mg/L		98	90 - 110	1	15
Chloride	9.00	9.06		mg/L		101	90 - 110	1	15
Bromide	1.20	1.17		mg/L		98	90 - 110	1	15
Sulfate	12.0	12.2		mg/L		102	90 - 110	1	15

Lab Sample ID: 580-40130-2 MS
Matrix: Water
Analysis Batch: 144500

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.15		1.00	1.14		mg/L		99	90 - 110
Chloride	22		9.00	30.8		mg/L		100	90 - 110
Bromide	ND		1.20	1.20		mg/L		100	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-40130-2 MS
Matrix: Water
Analysis Batch: 144500

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.2		12.0	17.5		mg/L		103	90 - 110

Lab Sample ID: 580-40130-2 MSD
Matrix: Water
Analysis Batch: 144500

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.15		1.00	1.14		mg/L		99	90 - 110	0	15
Chloride	22		9.00	30.9		mg/L		101	90 - 110	0	15
Bromide	ND		1.20	1.21		mg/L		101	90 - 110	1	15
Sulfate	5.2		12.0	17.6		mg/L		104	90 - 110	1	15

Lab Sample ID: 580-40130-2 DU
Matrix: Water
Analysis Batch: 144500

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Fluoride	0.15		0.150		mg/L		0	10
Chloride	22		21.9		mg/L		0.3	10
Bromide	ND		ND		mg/L		NC	10
Sulfate	5.2		5.17		mg/L		0.2	10

Method: 415.1 - TOC

Lab Sample ID: MB 580-145413/1
Matrix: Water
Analysis Batch: 145413

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.33	mg/L			09/18/13 21:48	1

Lab Sample ID: LCS 580-145413/2
Matrix: Water
Analysis Batch: 145413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	13.6		mg/L		91	85 - 115

Lab Sample ID: 580-40130-2 MS
Matrix: Water
Analysis Batch: 145413

Client Sample ID: SW-10 Webster Nursery
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.3		10.0	11.7		mg/L		94	85 - 115

Method: 415.1 - TOC (Continued)

Lab Sample ID: 580-40130-2 MSD — **Client Sample ID: SW-10 Webster Nursery**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 145413

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	2.3		10.0	11.7		mg/L		93	85 - 115	0	20

Lab Sample ID: 580-40130-2 DU — **Client Sample ID: SW-10 Webster Nursery**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 145413

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.3		2.36		mg/L		2	20

Method: 9034 - Reactive Sulfide

Lab Sample ID: MB 580-144455/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144595 — **Prep Batch: 144455**

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Reactive	ND		20	20	mg/L		09/09/13 08:19	09/10/13 11:19	1

Lab Sample ID: LCS 580-144455/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144595 — **Prep Batch: 144455**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide, Reactive	401	358		mg/L		89	30 - 114

Lab Sample ID: 580-40130-2 MS — **Client Sample ID: SW-10 Webster Nursery**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144595 — **Prep Batch: 144455**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide, Reactive	18		288	270		mg/L		88	30 - 114

Lab Sample ID: 580-40130-2 MSD — **Client Sample ID: SW-10 Webster Nursery**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144595 — **Prep Batch: 144455**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide, Reactive	18		291	254		mg/L		81	30 - 114	6	

Lab Sample ID: 580-40130-2 DU — **Client Sample ID: SW-10 Webster Nursery**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 144595 — **Prep Batch: 144455**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide, Reactive	18		ND		mg/L		NC	20

Lab Chronicle

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-9 Webster Nursery

Lab Sample ID: 580-40130-1

Date Collected: 09/05/13 07:45

Matrix: Water

Date Received: 09/05/13 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			144698	09/11/13 13:31	ALC	TAL SEA
Total/NA	Analysis	8081A		1	144991	09/16/13 12:56	SGH	TAL SEA
Total/NA	Analysis	300.0		1	144498	09/06/13 12:43	RSB	TAL SEA
Total/NA	Analysis	300.0		1	144500	09/06/13 12:43	RSB	TAL SEA
Total/NA	Prep	7.3.4			144455	09/09/13 08:19	SPP	TAL SEA
Total/NA	Analysis	9034		1	144595	09/10/13 11:19	SPP	TAL SEA
Total/NA	Analysis	415.1		1	145413	09/18/13 21:48	AJM	TAL SEA

Client Sample ID: SW-10 Webster Nursery

Lab Sample ID: 580-40130-2

Date Collected: 09/05/13 11:05

Matrix: Water

Date Received: 09/05/13 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081A		1	144991	09/16/13 13:12	SGH	TAL SEA
Total/NA	Prep	3510C			144698	09/11/13 13:31	ALC	TAL SEA
Total/NA	Analysis	300.0		1	144498	09/06/13 12:57	RSB	TAL SEA
Total/NA	Analysis	300.0		1	144500	09/06/13 12:57	RSB	TAL SEA
Total/NA	Prep	7.3.4			144455	09/09/13 08:19	SPP	TAL SEA
Total/NA	Analysis	9034		1	144595	09/10/13 11:19	SPP	TAL SEA
Total/NA	Analysis	415.1		1	145413	09/18/13 21:48	AJM	TAL SEA

Client Sample ID: SW-11 Webster Nursery

Lab Sample ID: 580-40130-3

Date Collected: 09/05/13 09:35

Matrix: Water

Date Received: 09/05/13 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			144698	09/11/13 13:31	ALC	TAL SEA
Total/NA	Analysis	8081A		1	144991	09/16/13 13:59	SGH	TAL SEA
Total/NA	Analysis	300.0		1	144498	09/06/13 13:55	RSB	TAL SEA
Total/NA	Analysis	300.0		1	144500	09/06/13 13:55	RSB	TAL SEA
Total/NA	Prep	7.3.4			144455	09/09/13 08:20	SPP	TAL SEA
Total/NA	Analysis	9034		1	144595	09/10/13 11:19	SPP	TAL SEA
Total/NA	Analysis	415.1		1	145413	09/18/13 21:48	AJM	TAL SEA

Client Sample ID: SW-14 Webster Nursery

Lab Sample ID: 580-40130-4

Date Collected: 09/04/13 16:20

Matrix: Water

Date Received: 09/05/13 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			144698	09/11/13 13:31	ALC	TAL SEA
Total/NA	Analysis	8081A		1	144991	09/16/13 14:15	SGH	TAL SEA

Lab Chronicle

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Client Sample ID: SW-15 Webster Nursery
Date Collected: 09/04/13 14:55
Date Received: 09/05/13 15:05

Lab Sample ID: 580-40130-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			144698	09/11/13 13:31	ALC	TAL SEA
Total/NA	Analysis	8081A		1	144991	09/16/13 14:30	SGH	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-04-14
California	NELAP	9	01115CA	01-31-14
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-13
USDA	Federal		P330-11-00222	05-20-14
Washington	State Program	10	C553	02-17-14

Sample Summary

Client: Washington State Dept of Natual Resource
Project/Site: Webster Nursery, WA

TestAmerica Job ID: 580-40130-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-40130-1	SW-9 Webster Nursery	Water	09/05/13 07:45	09/05/13 15:05
580-40130-2	SW-10 Webster Nursery	Water	09/05/13 11:05	09/05/13 15:05
580-40130-3	SW-11 Webster Nursery	Water	09/05/13 09:35	09/05/13 15:05
580-40130-4	SW-14 Webster Nursery	Water	09/04/13 16:20	09/05/13 15:05
580-40130-5	SW-15 Webster Nursery	Water	09/04/13 14:55	09/05/13 15:05

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

☐ Rush
☐ Short Hold

Chain of Custody Record

9/20/2013

Client	Client Contact	Date	Chain of Custody Number
WA State Dept. Natural Resources	John Felder	9-5-13	20258
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page**
1111 Washington St, S.E.	360-902-1158	40130	Page 1 of 1
City / State / Zip Code	**Sampler**	**Lab Contact**	
Olympia / WA / 98504	J. Felder		
Project Name and Location (State)	**Billing Contact**		
Webster Nursery, WA.	J. Felder		
Contract/Purchase Order/Quote No.			
→ DES Master Contract			

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Cl2 Test/PCB 8082 ?	Sulfide 9034	Anions 300/300.0	TOC 415.1	Special Instructions/ Conditions of Receipt
1- SW-9 Webster Nursery	9-5-13	0745		X									X	X	X	X	
2- SW-10 Webster Nursery	9-5-13	1105		X									X	X	X	X	MS/MSD
3- SW-11 Webster Nursery	9-5-13	0935		X									X	X	X	X	~~MS/MSD~~
4- SW-14 " "	9-4-13	1620		X									X				
5- SW-15	9-4-13	1455		X									X				

580-40130 Chain of Custody

Cooler	Possible Hazard Identification	Sample Disposal	
☐ Yes ☐ No Cooler Temp: ____	☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown	☐ Return To Client	☐ Disposal By Lab ☐ Archive For ____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days)	QC Requirements (Specify)
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☒ Other Standard	MS/MSD

	Relinquished By Sign/Print	Date	Time	Received By Sign/Print	Date	Time
1.	John Felder / John Felder	9-5-13	1505	Tom Blankinship / Blankinship	9/5/13	1505
2.						
3.						

Comments

client drop ~~Lgbl~~ Lg Blue/wh gel/bub
A1TB = 6.0/6.0 w/o

Lg Blu/wh gel/bub
A1TB = 5.7/5.7 w/o

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

TAL-8274-580 (0210)

Login Sample Receipt Checklist

Client: Washington State Dept of Natual Resource

Job Number: 580-40130-1

Login Number: 40130

List Source: TestAmerica Seattle

List Number: 1

Creator: Balles, Racheal M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	