

*Report of Findings of
Soil Sampling and Laboratory Analyses*

WESTON ELEMENTARY SCHOOL

Ripon, California

WKA No. 12064.02P

April 3, 2019

Prepared for:

Mr. Andy Strickland

Ripon Unified School District

304 N. Acacia Avenue

Rippon, California 95366

Report of Findings of Soil Sampling and Laboratory Analyses

WESTON ELEMENTARY SCHOOL

Ripon, California
WKA No. 12064.02P
April 3, 2019

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Wallace-Kuhl & Associates, on behalf of KB Home – Central California Division, has prepared this Report of Findings of Soil Sampling and Laboratory Analyses performed at Weston Elementary School located at 1660 Stanley Drive in Ripon, California. This report was prepared in a manner consistent with the level of care and skill ordinarily exercised by professional geologists and environmental scientists. This report was prepared under the supervision of a California Professional Geologist.

WALLACE-KUHL & ASSOCIATES



Matthew A. Taylor
Project Manager



Kurt Balasek PG, CHG
Senior Hydrogeologist



Report of Findings of Soil Sampling and Laboratory Analyses
WESTON ELEMENTARY SCHOOL
Ripon, California
WKA No. 12064.02P

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Report of Findings of Soil Sampling and Laboratory Analyses

WESTON ELEMENTARY SCHOOL

Ripon, California

WKA No. 12064.02P

April 3, 2019

1.0 INTRODUCTION

Wallace-Kuhl and Associates (WKA) has prepared this report to describe field activities, summarize laboratory analytical results, and present conclusions of the Phase II Environmental Site Assessment completed at the Weston Elementary School (herein referred to as Site). The Site is located at 1660 Stanley Drive in Ripon, California. (Figure 1)

2.0 BACKGROUND

WKA reviewed publicly available NETR online historical aerial and Google Earth photo imagery of the School Site and areas in the vicinity of the Site.

Historical aerial photographs dating back to the mid-1960s revealed that the Site has been developed with an orchard since at least 1967. On-site concerns were noted based on the historical orchard at the Site for the potential for residues of historically applied persistent pesticides remaining in surface soil.

WKA identified chlorinated herbicides, organochlorine pesticides (OCPs), arsenic, and lead as chemicals of potential concern (COPCs) that have the potential to impact near surface soils in the lawn areas in the vicinity of the playground areas at the Site.

3.0 OBJECTIVE

The purpose of this Phase II ESA was to evaluate near surface soils in the lawn areas in the vicinity of the playground areas at the Site for COPCs potentially introduced during historical agriculture activities.

4.0 FIELD ACTIVITIES

WKA utilized the State of California, Department of Toxic Substances Control's (DTSC) *Interim Guidance for Sampling Agricultural Properties (Third Revision)* dated August 7, 2008, to guide



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selection of the number of sample locations and potential contaminants appropriate for evaluating surface soil at the Site.

4.1 Soil Sampling Method

WKA collected each soil sample using a clean hand auger. The collected soil was transferred into cleanglass jars sealed using Teflon™-lined caps. WKA labeled each container to indicate a unique sample identification and the time and date collected. The soil samples were preserved in a chilled, thermally insulated container during transport to the analytical laboratory with completed chain-of-custody forms.

4.2 Soil Sampling Activities

On March 18, 2019, WKA collected seven soil samples (S1 through S7) from the Site. Prior to collecting the samples, a small section of grass from the lawn was removed to expose the underlying soil at sample locations S1, S2, S3, and S4 through S7. Soil sample S4 was collected from exposed soil located in the immediate vicinity of the onsite irrigation well. The samples were collected from near surface soil at a depth from zero to six inches below ground surface (bgs). The soil was observed to be brown to dark brown, moist, sandy silt. The location of each sample was loaded into a high precision global positioning system receiver (GPSr). The soil sample locations are shown in Figure 2.

5.0 LABORATORY ANALYSES

The soil samples were submitted with a completed chain-of-custody form to California Laboratory Services (a State Water Resources Control Board-certified laboratory) for chemical analyses listed below.

-) Chlorinated herbicides using EPA Method 8151A;
-) OCPs using EPA Method 8081A;
-) Total arsenic using EPA Method 6010B; and,
-) Total lead using EPA Method 6010B;

Laboratory reports and chain-of-custody documentation are included in Appendix A.



WESTON ELEMENTARY SCHOOL

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6.0 FINDINGS

A summary of analytical results of soil samples are presented in Tables 1 through 3. The Department of Toxic Substance Control's Screening Levels (DTSC-SL) and the United States Environmental Protection Agency's Regional Screening Levels (USEPA RSLs) for protecting human health under a residential land use scenario are summarized in Tables 1 through 3. Complete laboratory analytical reports and chain-of-custody documentation are included in Appendix A.

Chlorinated herbicides were not reported at concentrations exceeding their respective reporting limits in the soil samples collected from the Site. The organochlorine pesticide 4,4'-DDE was reported in soil sample S7 at concentrations of 0.0033 milligrams per kilogram (mg/kg). The remaining organochlorine pesticides were not reported at concentrations exceeding their respective reported limits in the soil samples collected from the Site.

Arsenic was reported in the soil samples at concentrations ranging from 1.0 milligrams per kilogram (mg/kg) to 4.0 mg/kg. Lead was reported in soil samples S1 through S7 at concentrations ranging from 2.9 mg/kg to 5.4 mg/kg.

7.0 CONCLUSIONS

WKA collected samples at the Site to evaluate surface soil for potential impacts of chlorinated herbicides, organochlorine pesticides, arsenic, and lead at several locations at the Site.

Chlorinated herbicides and organochlorine pesticides were not reported in soil samples at concentrations at concentrations exceeding their respective DTSC screening levels (SLs) for protecting human health under a residential land use scenario.

Arsenic was reported in the soil samples collected from the Site at concentrations ranging from 1.0 mg/kg to 4.0 mg/kg. These values exceed the DTSC's Human and Ecological Risk Office Human Health Risk Assessment Note 3 Screening Level (DTSC-SL) of 0.11 mg/kg for protecting human health under residential scenario. However, naturally occurring arsenic in California soils often exceeds the residential DTSC-SL. The United States Geological Survey's (USGS) *Geochemical and Mineralogical Maps for the Conterminous United States*, shows that arsenic concentrations in the area of the Site in Ripon range from 4.3 mg/kg to 5.2 mg/kg. The arsenic concentrations reported in Site soil are consistent with typical naturally occurring background arsenic levels in Ripon.



WESTON ELEMENTARY SCHOOL

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April 3, 2019

Lead was not reported in the soil samples at concentrations exceeding the DTSC-SL of 80 mg/kg for protecting human health under a residential land use scenario.

Based on results of laboratory analyses of the chemicals of potential concern associated with historical orchard development, WKA has determined that near surface soil at the Site does not pose a significant risk to human health and the environment.

8.0 LIMITATIONS

The statements and results presented in this report are based upon the scope of work described above and on observations made on the dates of WKA's applicable fieldwork. The summary report was prepared in a manner consistent with the level of care and skill ordinarily exercised by Professional Geologists. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. No recommendation is made as to the suitability of the property for any purpose. The result of the investigation does not preclude the possibility that materials currently, or in the future, defined as hazardous are present on the site. This report is applicable only to the investigated site and should not be used for any other site. No warranty is expressed or implied.

9.0 REFERENCES

The State of California, Department of Toxics Substance Control (DTSC), 2008, *Interim Guidance for Sampling Agricultural Properties (Third Revision)*

<https://www.dtsc.ca.gov/Schools/upload/Ag-Guidance-Rev-3-August-7-2008-2.pdf>

United States Environmental Protection Agency, 2018, Regional Screening Levels (RSL)

<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>

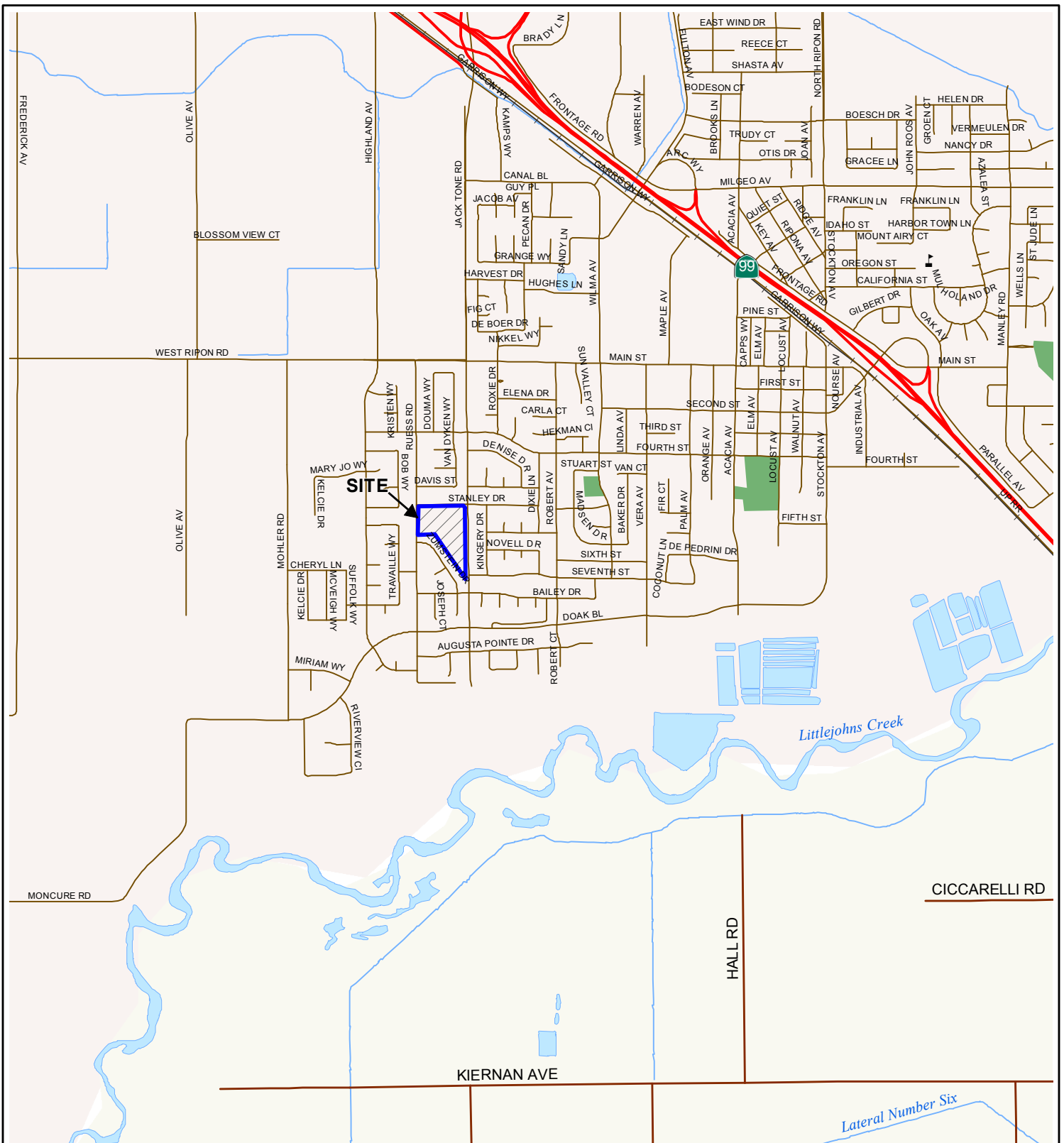
The State of California, Department of Toxic Substance Control (DTSC), 2018, Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels (DTSC-SLs), Table 1 Screening Levels for Soil

<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-January-2018.pdf>

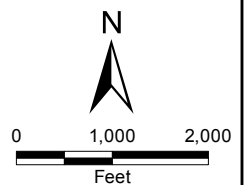


FIGURES





Street data courtesy of San Joaquin County.
 Hydrography courtesy of the U.S. Geological Survey
 acquired from the GIS Data Depot, December, 2007.
 Projection: NAD 83, California State Plane, Zone III



VICINITY MAP

WESTON ELEMENTARY SCHOOL

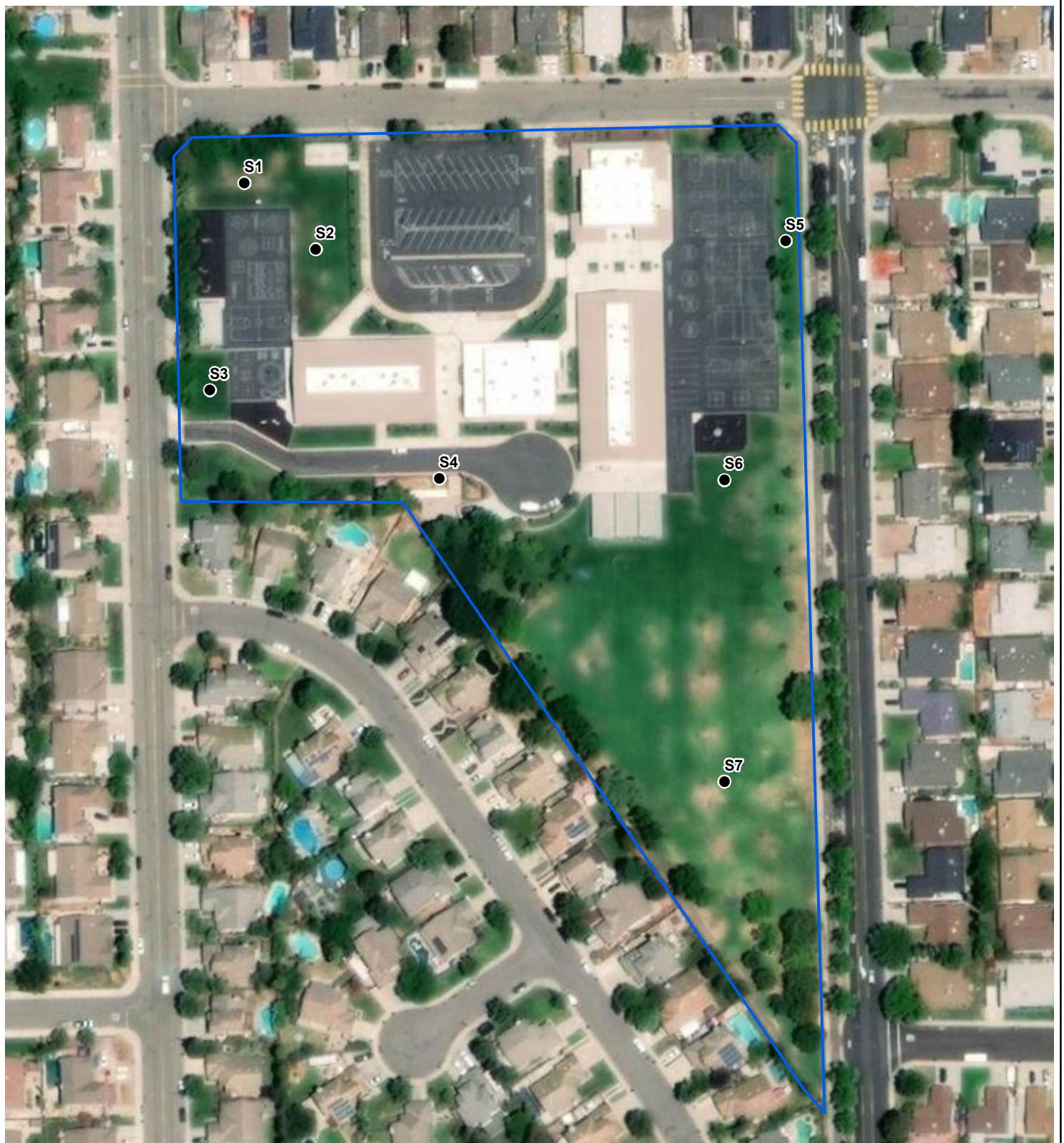
Rippon, California

FIGURE 1

DRAWN BY	RWO
CHECKED BY	KMB
PROJECT MGR	MAT
DATE	03/19

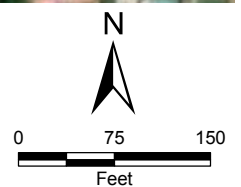
WKA NO. 12064.02P





Aerial Imagery Provided by Esri
 Site Boundary adapted from Jan Joaquin County
 Assessors Parcel Data
 Point locations Provided by WKA GPSr Records
 Projection: NAD 83, California State Plane, Zone II

● Soil Sample Location
 □ Site Boundary



SOIL SAMPLE LOCATION MAP
WESTON ELEMENTARY SCHOOL
 Ripon, California

FIGURE 2

DRAWN BY	JWR
CHECKED BY	KMB
PROJECT MGR	MAT
DATE	3/19
WKA NO. 12064.02P	

TABLES



Table 1
Summary of Soil Analytical Results of Arsenic and Lead
WESTON ELEMENTARY SCHOOL
WKA No. 12064.02P

Sample ID	Sample Date	Sample Depth (ft bgs)	EPA Methods 6010B	
			Arsenic	Lead
Concentrations reported in milligrams per kilogram (mg/kg)				
S1	3/18/2019	0 - 0.5	4.0	4.0
S2	3/18/2019	0 - 0.5	3.0	5.2
S3	3/18/2019	0 - 0.5	2.5	2.9
S4	3/18/2019	0 - 0.5	1.6	3.3
S5	3/18/2019	0 - 0.5	1.4	4.9
S6	3/18/2019	0 - 0.5	1.0	3.6
S7	3/18/2019	0 - 0.5	1.5	5.4
DTSC-SL (Residential)			0.11	80
DTSC-SL (Commercial)			0.36	320
USEPA RSL (Residential)			0.68	N.E.
USEPA RSL (Commercial)			3.0	N.E.

Notes:

U.S. Environmental Protection Agency's Regional Screening Level (USEPA RSL) (May 2018)

Department of Toxic Substance Control's Human and Ecological Risk Office's
Human Health Risk Assessment Note 3 (DTSC-SL) (June 2018)

(<) less than laboratory reporting limit(s)

(bgs) Below ground surface

(N.E.) Not established

Refer to Figure 2 for sample locations

Table 2
Summary of Soil Analytical Results for Organochlorine Pesticides
WESTON ELEMENTARY SCHOOL
WKA No. 12064.02P

Sample ID	Sample Date	Sample Depth (feet bgs)	EPA Method 8081A																			
			4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane- technical	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	gamma-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Mirex	Toxaphene
Concentrations reported in micrograms per kilogram (µg/kg)																						
S1	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S2	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S3	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S4	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S5	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S6	3/18/2019	0 - 0.5	<17	<17	<17	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
S7	3/18/2019	0 - 0.5	<17	3.3	<5.0	<5.0	<8.5	<8.5	<17	<8.5	<5.0	<8.5	<17	<17	<17	<17	<8.5	<8.5	<8.5	<8.5	<17	<100
DTSC-SL		Residential	NE	NE	NE	NE	NE	NE	NE	440	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Commercial	NE	NE	NE	NE	NE	NE	NE	NE	1500	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA-RSL		Residential	1900	1900	2000	1900	86	300	1700	300	34	470000	NE	NE	19000	NE	570	130	70	320000	36	490
		Commercial	9600	9600	9300	8500	360	1300	7700	1300	140	7000000	NE	NE	250000	NE	2500	630	330	4100000	170	2100

Notes:

(USEPA RSL) U.S. Environmental Protection Agency's Regional Screening Level (May 2018)

(DTSC-SL) Department of Toxic Substance Control's Human and Ecological Risk Office's Human Health Risk Assessment Note 3 (June 2018)

(<) less than laboratory reporting limit(s)

(bgs) Below ground surface

(NE) Not established

Refer to Figure 2 for sample locations

Table 3
Summary of Soil Analytical Results Chlorinated Herbicides
WESTON ELEMENTARY SCHOOL
WKA No. 12064.02P

Sample ID	Sample Date	Sample Depth (Units)	EPA Method 8151A										
			2,4,5-T	2,4,5-TP (Silvex)	2,4-D (2,4-Dichlorophenoxyacetic acid)	2,4-DB	Dalapon	Dicamba	Dichloroprop	Dinoseb	MCPA	MCPP	Pentachlorophenol
Concentrations reported in milligrams per kilograms (mg/kg)													
S1	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S2	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S3	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S4	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S5	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S6	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
S7	3/18/2019	0 - 0.5	<0.010	<0.010	<0.050	<0.10	<1.0	<0.010	<0.10	<0.010	<2.0	<2.0	<0.010
DTSC-SL		Residential	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
		Commerical	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA-RSL		Residential	630	510	700	NE	1,900	1,900	NE	63	32	63	1.0
		Commerical	8,200	6,600	9,600	NE	25,000	25,000	NE	820	410	820	4.0

Notes:

(USEPA RSL) U.S. Environmental Protection Agency's Regional Screening Levels for Constituents in Soil (May 2018)

(DTSC-SL) Department of Toxic Substance Control's Human and Ecological Risk Office's Human Health Risk Assessment (HHRA) Note 3 Recommended Screening Levels for Constituents in Soil (June 2018)

APPENDIX A

Laboratory Analytical Reports and Chain-of-Custody Documentation





CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

April 01, 2019

CLS Work Order #: 19C0953

COC #:

Matthew Taylor

Wallace Kuhl & Associates- West Sacramento

3050 Industrial Boulevard

West Sacramento, CA 95691

Project Name: Weston Elementary School

Enclosed are the results of analyses for samples received by the laboratory on 03/18/19 14:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.

Laboratory Director

CA SWRCB ELAP Accreditation/Registration number 1233

1900953



3050 Industrial Blvd.
West Sacramento, CA 95691
Tel: 916.372.1434

Fax: 916.372.2565

Lab No. _____

Page 1 of 2

WKA Carbon Copy addresses

kbalasek@wallace-kuhl.com
dnakamoto@wallace-kuhl.com

California EDF Report?

☐ Yes ☒ No

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Matthew Taylor

WKA Email Address: mtaylor@wallace-kuhl.com

Company / Address:

see above

Phone No.:

see above

Fax No.:

see above

Project Number:
12064 02P

P.O. No.:

Recommended but not mandatory to complete this section:
Sampling Company Log Code:

Global ID:

EDF Deliverable To (Email Address):

Sampler Signature:

[Signature]

Weston Elementary School

Project Address:

Analysis Request

TAT

12Hr
☐
24 Hr
☐
48Hr
☐
72 Hr
☐
1 WK
☒
2WK
☐

For Lab Use Only

Project Address:	Sampling		Container				Preservative				Matrix			
	Date	Time	500-mL Poly	250-mL Poly*	9 oz glass jar	500ml POLY	AMBER	HNO3	H2SO4	ICE			WATER	SOIL
Sample Designation														
S1	3/18/2019	9:47			X					X				X
S2	3/18/2019	9:53			X					X				X
S3	3/18/2019	9:57			X					X				X
S4	3/18/2019	8:30			X					X				X
S5	3/18/2019	9:21			X					X				X
S6	3/18/2019	9:08			X					X				X
S7	3/18/2019	8:42			X					X				X
S8	3/18/2019	9:41			X					X				X
S9	3/18/2019	9:27			X					X				X
S10	3/18/2019	9:15			X					X				X
S11	3/18/2019	10:03			X					X				X
S12	3/18/2019	9:00			X					X				X

Relinquished by:

[Signature]

Date

3/18/19

Time

14:20

Received by:

[Signature]

Remarks:

Relinquished by:

Date

Time

Received by:

Relinquished by:

Date

3/15/18

Time

14:10

Received by Laboratory:

[Signature]

Bill to: Wallace-Kuhl & Associates c/o

WKA Contact and swilliams@wallace-kuhl.com

34



3050 Industrial Blvd.
West Sacramento, CA 95691
Tel: 916.372.1434

Fax: 916.372.2565

Lab No. _____

Page 2 of 2

190953

WKA Carbon Copy addresses

kbalasek@wallace-kuhl.com
dnakamoto@wallace-kuhl.com

California EDF Report?

☐ Yes ☒ No

Company / Address:

see above

Phone No.:

see above

Fax No.:

see above

Project Number:

12064.02P

P.O. No.:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

EDF Deliverable To (Email Address):

Sampler

Signature: *[Signature]*

Weston Elementary School

Project Address:

Sample Designation

S13

S14

S15

S16

Sampling

Date

Time

Container

500-mL Poly

250-mL Poly*

9 oz glass jar

500ml POLY

AMBER

HNO₃

H₂SO₄

ICE

Preservative

Matrix

WATER

SOIL

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Matthew Taylor

WKA Email Address: mtaylor@wallace-kuhl.com

Analysis Request

TAT

12Hr

☐

24 Hr

☐

48Hr

☐

72 Hr

☐

1 WK

☒

2WK

☐

For Lab Use Only

Relinquished by:

[Signature]

Date

3/18/19

Time

14:20

Received by:

[Signature]

Relinquished by:

Date

Time

Received by:

Relinquished by:

Date

3/18/19

Time

14:30

Received by Laboratory:

[Signature]

Remarks:

Bill to: Wallace-Kuhl & Associates c/o

WKA Contact and swilliams@wallace-kuhl.com



CALIFORNIA LABORATORY SERVICES

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Page 2 of 18

04/01/19 13:13

Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

S1 (19C0953-01) Soil Sampled: 03/18/19 09:47 Received: 03/18/19 14:30

2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	

Surrogate: 2,4-DCAA 55 % 50-150 " " " "

S2 (19C0953-02) Soil Sampled: 03/18/19 09:53 Received: 03/18/19 14:30

2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	

Surrogate: 2,4-DCAA 111 % 50-150 " " " "



CALIFORNIA LABORATORY SERVICES

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04/01/19 13:13

Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S3 (19C0953-03) Soil Sampled: 03/18/19 09:57 Received: 03/18/19 14:30									
2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCPP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	
<i>Surrogate: 2,4-DCAA</i>									
		53 %	50-150		"	"	"	"	
S4 (19C0953-04) Soil Sampled: 03/18/19 08:30 Received: 03/18/19 14:30									
2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCPP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	
<i>Surrogate: 2,4-DCAA</i>									
		75 %	50-150		"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S5 (19C0953-05) Soil Sampled: 03/18/19 09:21 Received: 03/18/19 14:30									
2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCPP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	
<i>Surrogate: 2,4-DCAA</i>									
		57 %	50-150		"	"	"	"	
S6 (19C0953-06) Soil Sampled: 03/18/19 09:08 Received: 03/18/19 14:30									
2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCPP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	
<i>Surrogate: 2,4-DCAA</i>									
		56 %	50-150		"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S7 (19C0953-07) Soil Sampled: 03/18/19 08:42 Received: 03/18/19 14:30									
2,4,5-T	ND	0.010	mg/kg	1	1902389	03/25/19	03/28/19	EPA 8151A	
2,4,5-TP (Silvex)	ND	0.010	"	"	"	"	"	"	
2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	"	"	"	"	"	"	
2,4-DB	ND	0.10	"	"	"	"	"	"	
Dalapon	ND	1.0	"	"	"	"	"	"	
Dicamba	ND	0.010	"	"	"	"	"	"	
Dichloroprop	ND	0.10	"	"	"	"	"	"	
Dinoseb	ND	0.010	"	"	"	"	"	"	
MCPA	ND	2.0	"	"	"	"	"	"	
MCPP	ND	2.0	"	"	"	"	"	"	
Pentachlorophenol	ND	0.010	"	"	"	"	"	"	
<i>Surrogate: 2,4-DCAA</i>									
		60 %		50-150	"	"	"	"	



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3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S1 (19C0953-01) Soil Sampled: 03/18/19 09:47 Received: 03/18/19 14:30									
Arsenic	4.0	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	4.0	2.5	"	"	"	"	"	"	
S2 (19C0953-02) Soil Sampled: 03/18/19 09:53 Received: 03/18/19 14:30									
Arsenic	3.0	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	5.2	2.5	"	"	"	"	"	"	
S3 (19C0953-03) Soil Sampled: 03/18/19 09:57 Received: 03/18/19 14:30									
Arsenic	2.5	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	2.9	2.5	"	"	"	"	"	"	
S4 (19C0953-04) Soil Sampled: 03/18/19 08:30 Received: 03/18/19 14:30									
Arsenic	1.6	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	3.3	2.5	"	"	"	"	"	"	
S5 (19C0953-05) Soil Sampled: 03/18/19 09:21 Received: 03/18/19 14:30									
Arsenic	1.4	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	4.9	2.5	"	"	"	"	"	"	
S6 (19C0953-06) Soil Sampled: 03/18/19 09:08 Received: 03/18/19 14:30									
Arsenic	1.0	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	3.6	2.5	"	"	"	"	"	"	
S7 (19C0953-07) Soil Sampled: 03/18/19 08:42 Received: 03/18/19 14:30									
Arsenic	1.5	1.0	mg/kg	1	1902328	03/22/19	03/22/19	EPA 6010B	
Lead	5.4	2.5	"	"	"	"	"	"	



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3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S1 (19C0953-01) Soil Sampled: 03/18/19 09:47 Received: 03/18/19 14:30									
QRL-8									
4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	
Chlordane-technical	ND	17	"	"	"	"	"	"	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	
Endrin	ND	17	"	"	"	"	"	"	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	
Mirex	ND	17	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 75 % 52-141 " " " "

Surrogate: Tetrachloro-meta-xylene 82 % 46-139 " " " "

S2 (19C0953-02) Soil Sampled: 03/18/19 09:53 Received: 03/18/19 14:30									
QRL-8									
4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S2 (19C0953-02) Soil Sampled: 03/18/19 09:53 Received: 03/18/19 14:30									
QRL-8									
Chlordane-technical	ND	17	µg/kg	5	1902253	"	03/21/19	EPA 8081A	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	
Endrin	ND	17	"	"	"	"	"	"	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	
Mirex	ND	17	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl

98 %

52-141

"

"

"

"

Surrogate: Tetrachloro-meta-xylene

106 %

46-139

"

"

"

"

S3 (19C0953-03) Soil Sampled: 03/18/19 09:57 Received: 03/18/19 14:30

QRL-8

4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	
Chlordane-technical	ND	17	"	"	"	"	"	"	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S3 (19C0953-03) Soil Sampled: 03/18/19 09:57 Received: 03/18/19 14:30									
QRL-8									
Endrin	ND	17	µg/kg	5	1902253	"	03/21/19	EPA 8081A	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	
Mirex	ND	17	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 59 % 52-141 " " " "

Surrogate: Tetrachloro-meta-xylene 65 % 46-139 " " " "

S4 (19C0953-04) Soil Sampled: 03/18/19 08:30 Received: 03/18/19 14:30									
QRL-8									
4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	
Chlordane-technical	ND	17	"	"	"	"	"	"	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	
Endrin	ND	17	"	"	"	"	"	"	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S4 (19C0953-04) Soil Sampled: 03/18/19 08:30 Received: 03/18/19 14:30									
QRL-8									
Mirex	ND	17	µg/kg	5	1902253	"	03/21/19	EPA 8081A	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		159 %	52-141		"	"	"	"	QS-4
Surrogate: Tetrachloro-meta-xylene		150 %	46-139		"	"	"	"	QS-4
S5 (19C0953-05) Soil Sampled: 03/18/19 09:21 Received: 03/18/19 14:30									
QRL-8									
4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	
Chlordane-technical	ND	17	"	"	"	"	"	"	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	
Endrin	ND	17	"	"	"	"	"	"	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	
Mirex	ND	17	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		100 %	52-141		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		100 %	46-139		"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S6 (19C0953-06) Soil Sampled: 03/18/19 09:08 Received: 03/18/19 14:30									
QRL-8									
4,4'-DDD	ND	17	µg/kg	5	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	ND	17	"	"	"	"	"	"	
4,4'-DDT	ND	17	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
alpha-BHC	ND	8.5	"	"	"	"	"	"	
beta-BHC	ND	8.5	"	"	"	"	"	"	
Chlordane-technical	ND	17	"	"	"	"	"	"	
delta-BHC	ND	8.5	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	8.5	"	"	"	"	"	"	
Endosulfan II	ND	17	"	"	"	"	"	"	
Endosulfan sulfate	ND	17	"	"	"	"	"	"	
Endrin	ND	17	"	"	"	"	"	"	
Endrin aldehyde	ND	17	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	8.5	"	"	"	"	"	"	
Heptachlor	ND	8.5	"	"	"	"	"	"	
Heptachlor epoxide	ND	8.5	"	"	"	"	"	"	
Methoxychlor	ND	85	"	"	"	"	"	"	
Mirex	ND	17	"	"	"	"	"	"	
Toxaphene	ND	100	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl 86 % 52-141 " " " "

Surrogate: Tetrachloro-meta-xylene 84 % 46-139 " " " "

S7 (19C0953-07) Soil Sampled: 03/18/19 08:42 Received: 03/18/19 14:30

4,4'-DDD	ND	3.3	µg/kg	1	1902253	03/20/19	03/21/19	EPA 8081A	
4,4'-DDE	3.3	3.3	"	"	"	"	"	"	
4,4'-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S7 (19C0953-07) Soil Sampled: 03/18/19 08:42 Received: 03/18/19 14:30									
Chlordane-technical	ND	3.3	µg/kg	1	1902253	"	03/21/19	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	

Surrogate: Decachlorobiphenyl

90 %

52-141

"

"

"

"

Surrogate: Tetrachloro-meta-xylene

89 %

46-139

"

"

"

"



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1902389 - EPA 8151A

Blank (1902389-BLK1)

Prepared: 03/25/19 Analyzed: 03/28/19

2,4-D (2,4-Dichlorophenoxyacetic acid)	ND	0.050	mg/kg
Dalapon	ND	1.0	"
2,4-DB	ND	0.10	"
Dicamba	ND	0.010	"
Dichloroprop	ND	0.10	"
Dinoseb	ND	0.010	"
MCPA	ND	2.0	"
MCPP	ND	2.0	"
Pentachlorophenol	ND	0.010	"
2,4,5-T	ND	0.010	"
2,4,5-TP (Silvex)	ND	0.010	"

Surrogate: 2,4-DCAA 0.0503 " 0.0500 101 50-150

LCS (1902389-BS1)

Prepared: 03/25/19 Analyzed: 03/28/19

Dicamba	0.0291	0.010	mg/kg	0.0250	116	50-150
Dichloroprop	0.0290	0.10	"	0.0250	116	50-150
Surrogate: 2,4-DCAA	0.0558		"	0.0500	112	50-150

LCS Dup (1902389-BSD1)

Prepared: 03/25/19 Analyzed: 03/28/19

Dicamba	0.0300	0.010	mg/kg	0.0250	120	50-150	3	30
Dichloroprop	0.0302	0.10	"	0.0250	121	50-150	4	30
Surrogate: 2,4-DCAA	0.0624		"	0.0500	125	50-150		

Matrix Spike (1902389-MS1)

Source: 19C0953-04

Prepared: 03/25/19 Analyzed: 03/28/19

Dicamba	0.0181	0.010	mg/kg	0.0250	ND	72	50-150
Dichloroprop	0.0250	0.10	"	0.0250	ND	100	50-150
Surrogate: 2,4-DCAA	0.0362		"	0.0500		72	50-150



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Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Chlorinated Herbicides by EPA Method 8151A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1902389 - EPA 8151A

Matrix Spike Dup (1902389-MSD1)

Source: 19C0953-04

Prepared: 03/25/19 Analyzed: 03/28/19

Dicamba	0.0173	0.010	mg/kg	0.0250	ND	69	50-150	4	30	
Dichloroprop	0.0260	0.10	"	0.0250	ND	104	50-150	4	30	
Surrogate: 2,4-DCAA	0.0254		"	0.0500		51	50-150			



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3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1902328 - EPA 3050B										
Blank (1902328-BLK1)										
Prepared & Analyzed: 03/22/19										
Arsenic	ND	1.0	mg/kg							
Lead	ND	2.5	"							
LCS (1902328-BS1)										
Prepared & Analyzed: 03/22/19										
Arsenic	102	1.0	mg/kg	100		102	75-125			
Lead	107	2.5	"	100		107	75-125			
Matrix Spike (1902328-MS1)										
Source: 19C0953-01 Prepared & Analyzed: 03/22/19										
Arsenic	76.1	1.0	mg/kg	100	4.03	72	75-125			QM-5
Lead	70.1	2.5	"	100	4.01	66	75-125			QM-4X
Matrix Spike Dup (1902328-MSD1)										
Source: 19C0953-01 Prepared & Analyzed: 03/22/19										
Arsenic	88.9	1.0	mg/kg	100	4.03	85	75-125	15	30	
Lead	81.6	2.5	"	100	4.01	78	75-125	15	30	



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3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1902253 - LUFT-DHS GCNV

Blank (1902253-BLK1)

Prepared: 03/20/19 Analyzed: 03/21/19

Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	1.7	"							
beta-BHC	ND	1.7	"							
gamma-BHC (Lindane)	ND	1.7	"							
delta-BHC	ND	1.7	"							
Chlordane-technical	ND	3.3	"							
4,4'-DDD	ND	3.3	"							
4,4'-DDE	ND	3.3	"							
4,4'-DDT	ND	3.3	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	1.7	"							
Endosulfan II	ND	3.3	"							
Endosulfan sulfate	ND	3.3	"							
Endrin	ND	3.3	"							
Endrin aldehyde	ND	3.3	"							
Heptachlor	ND	1.7	"							
Heptachlor epoxide	ND	1.7	"							
Methoxychlor	ND	17	"							
Mirex	ND	3.3	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	7.91		"	8.33		95	46-139			
Surrogate: Decachlorobiphenyl	8.99		"	8.33		108	52-141			

LCS (1902253-BS1)

Prepared: 03/20/19 Analyzed: 03/21/19

Aldrin	11.5	1.0	µg/kg	16.7	69	47-132
gamma-BHC (Lindane)	12.8	1.7	"	16.7	77	56-133
4,4'-DDT	12.2	3.3	"	16.7	73	46-137
Dieldrin	13.2	1.0	"	16.7	79	44-143
Endrin	12.7	3.3	"	16.7	76	30-147
Heptachlor	11.2	1.7	"	16.7	67	33-148
Surrogate: Tetrachloro-meta-xylene	7.08		"	8.33	85	46-139



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3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1902253 - LUFT-DHS GCNV

LCS (1902253-BS1)

Prepared: 03/20/19 Analyzed: 03/21/19

Surrogate: Decachlorobiphenyl 8.17 µg/kg 8.33 98 52-141

LCS Dup (1902253-BSD1)

Prepared: 03/20/19 Analyzed: 03/21/19

Aldrin	11.7	1.0	µg/kg	16.7	70	47-132	2	30
gamma-BHC (Lindane)	13.2	1.7	"	16.7	79	56-133	3	30
4,4'-DDT	12.0	3.3	"	16.7	72	46-137	2	30
Dieldrin	12.7	1.0	"	16.7	76	44-143	4	30
Endrin	12.1	3.3	"	16.7	73	30-147	5	30
Heptachlor	11.4	1.7	"	16.7	68	33-148	2	30

Surrogate: Tetrachloro-meta-xylene 7.71 " 8.33 92 46-139

Surrogate: Decachlorobiphenyl 8.76 " 8.33 105 52-141

Matrix Spike (1902253-MS1)

Source: 19C0953-04

Prepared: 03/20/19 Analyzed: 03/21/19

Aldrin	15.2	5.0	µg/kg	16.7	ND	91	47-138
gamma-BHC (Lindane)	14.2	8.5	"	16.7	ND	85	38-144
4,4'-DDT	14.4	17	"	16.7	ND	86	41-157
Dieldrin	15.7	5.0	"	16.7	ND	94	46-155
Endrin	14.2	17	"	16.7	ND	85	34-149
Heptachlor	16.0	8.5	"	16.7	ND	96	36-155

Surrogate: Tetrachloro-meta-xylene 20.2 " 20.8 97 46-139

Surrogate: Decachlorobiphenyl 21.9 " 20.8 105 52-141

Matrix Spike Dup (1902253-MSD1)

Source: 19C0953-04

Prepared: 03/20/19 Analyzed: 03/21/19

Aldrin	16.0	5.0	µg/kg	16.7	ND	96	47-138	5	35
gamma-BHC (Lindane)	15.5	8.5	"	16.7	ND	93	38-144	9	35
4,4'-DDT	16.5	17	"	16.7	ND	99	41-157	14	35
Dieldrin	16.4	5.0	"	16.7	ND	99	46-155	5	35
Endrin	20.9	17	"	16.7	ND	126	34-149	38	35
Heptachlor	17.2	8.5	"	16.7	ND	103	36-155	7	35

Surrogate: Tetrachloro-meta-xylene 23.0 " 20.8 111 46-139

Surrogate: Decachlorobiphenyl 24.0 " 20.8 115 52-141

QM-7



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Wallace Kuhl & Associates- West Sacramento
3050 Industrial Boulevard
West Sacramento, CA 95691

Project: Weston Elementary School
Project Number: 12064.02P
Project Manager: Matthew Taylor

CLS Work Order #: 19C0953
COC #:

Notes and Definitions

QS-4	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QRL-8	The extract of this sample was dark and/or oily. Therefore, the sample was analyzed with a dilution and the reporting limit was raised for all target compounds.
QM-7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS and/or LCSD recovery.
QM-5	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference