



GREEN VALLEY II PROPERTY

Fairfield, California WKA No. 11731.03 February 16, 2018

Prepared for:

Ms. Karen Garrett

The Spanos Corporation

10100 Trinity Parkway, Suite 500

Stockton, CA, 95219



GREEN VALLEY II PROPERTY

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ONAL GEO

BALASEK No. #6162 CERTIFIED HYDROGEOLOGIST

Wallace-Kuhl & Associates, on behalf The Spanos Corporation, has prepared this *Phase II Environmental Site Assessment Report* for activities at the Green Valley II Property located in Fairfield, Solano County, 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

Rachel M. Beck

Staff Geologist

Kurt M. Balasek PG, CHG Senior Hydrogeologist

GREEN VALLEY II PROPERTY

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1.0 INTRODUCTION

Wallace-Kuhl and Associates (WKA) has prepared this report to describe activities, summarize laboratory analytical results, and present conclusions for soil sampling and analysis activities completed at the Green Valley II Property (herein referred to as Site) located in Fairfield, Solano County, California (Figure 1 and 2). WKA utilized the State of California, Department of Toxics Substance Control (DTSC) *Interim Guidance for Sampling Agricultural Properties-Third Revision* (August 7, 2008) to guide the preparation of the soil sampling and analysis activities. This soil sampling and analysis study was implemented in response to recommendations included in WKA's *Phase I Environmental Site Assessment* report for the Site, dated January 26, 2018. The Site is comprised of 13.2 acres of currently vacant land. WKA's *Phase I Environmental Site Assessment* report states on-site concerns were noted from the historical agriculture activities including the cultivation of vineyards and the potential for residues of historically applied persistent pesticides.

2.0 FIELD ACTIVITIES

WKA marked the Site with white paint and notified Underground Service Alert (USA) for the purpose of identifying any underground utility conduits. WKA notified USA and received a Dig Ticket permit number more than 72 hours prior to beginning sample collection activities.

On February 2, 2018, WKA collected 24 soil samples from the Site (Figure 3). At the time of sampling, the central portion of the Site had previously been disced and was covered by low-lying volunteer grasses. Along the east to south-east boundary of the Site, a berm was observed level with the surrounding roadway but higher in elevation relative to the central portion of the Site. This area had not been disced and was covered with low-lying volunteer grass and shrubbery.

Prior to sampling, WKA utilized Global Information System (GIS) mapping software to grid the property and locate the 24 soil samples into approximately equal sections. A global positioning system receiver (GPS) was used to navigate the sample locations in the field. Each soil sample was collected using a trowel from the surface soil interval from zero to six inches below ground



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surface (bgs). Soil at the Site was observed to be brown, moist, silty clay, however, at sample location S5, the soil contained more than fifty percent gravel.

Each soil sample was collected into a laboratory provided four-ounce glass jar that was sealed using a Teflon[™]-lined cap. WKA labeled each container to indicate a unique sample number, sample location, time and date collected and sampler's identification. Samples were preserved in a chilled cooler during transportation with completed chain-of-custody forms to California Laboratory Services (CLS), in Rancho Cordova, California, a State Water Resources Control Board certified laboratory.

3.0 LABORATORY ANALYSIS

Each of the 24 soil samples was submitted to CLS Analytical Laboratory. WKA requested that the laboratory composite the 24 soil samples at a four to one ratio to produce six soil samples for analysis of organochlorine pesticides by EPA Method 8081A. One sample from each composited set was selected to be analyzed discretely for arsenic by EPA method 6010B and copper by EPA method 6020. A copy of the laboratory data sheets and completed chain of custody documentation is presented in Appendix A.

4.0 FINDINGS

A summary of laboratory analytical results for soil samples collected at the Site is reported in Tables 1 and 2.

The organochlorine pesticide DDE was found in composite set S1-S4 at a concentration of 5.9 micrograms per kilogram (μ g/kg) and in composite set S5-S8 at a concentration of 5.6 μ g/kg. These concentrations of DDE are well below the U.S. Environmental Protection Agency's Regional Screening Level (USEPA RSL) of 2,000 μ g/kg for protecting human health under a residential scenario.

Samples S2, S5, S11, S13, S18, and S23 were analyzed discretely for copper. Concentrations of copper were found above the reporting limit in each of these samples. The concentrations ranged from 19 milligrams per kilogram (mg/kg) to 42 mg/kg which are below the USEPA RSL of 3,100 mg/kg for protecting human health under residential scenario.



February 16, 2018

Samples S2, S5, S11, S13, S18, and S23 were analyzed discretely for arsenic. Concentrations of arsenic were found above the reporting limit in each of these samples. The concentrations ranged from 3.3 mg/kg to 7.5 mg/kg which are above the Department of Toxic Substance Control'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, the United States Geological Survey's (USGS) Geochemical and Mineralogical Maps for the Conterminous United States, shows that arsenic concentrations in the area around the city of Fairfield, CA range from 8.3 mg/kg to 10.4 mg/kg. This map and WKA's repeated experience show that naturally occurring arsenic in California soils often exceeds the residential DTSC-SL, and the concentrations of arsenic reported within soils remaining at the Site are consistent with naturally occurring arsenic levels.

5.0 CONCLUSIONS

WKA collected 24 surface soil samples at the Site to evaluate the potential for impacts due to historical activities. Laboratory analysis of the surface soil samples indicates that there are no detections of the target compounds present that would pose a threat to human health under a residential scenario. As stated previously, naturally occurring arsenic in California soils often exceeds the residential DTSC-SL, and the concentrations of arsenic reported within the soils at the Site are below naturally occurring arsenic levels.

6.0 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.



7.0 REFERENCES

Smith, D.B., Cannon, W.F., Woodruff, L.G., Solano, Federico, Kilburn, J.E., and Fey, D.L., 2013, Geochemical and Mineralogical Data for Soils of the Conterminous United States: U.S. Geological Survey Data Series 801, 19 p., https://pubs.usgs.gov/ds/801/

United States Environmental Protection Agency, 2017, Regional Screening level (RSL) Summary Table (TR=1E-06, HQ=1), https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2017

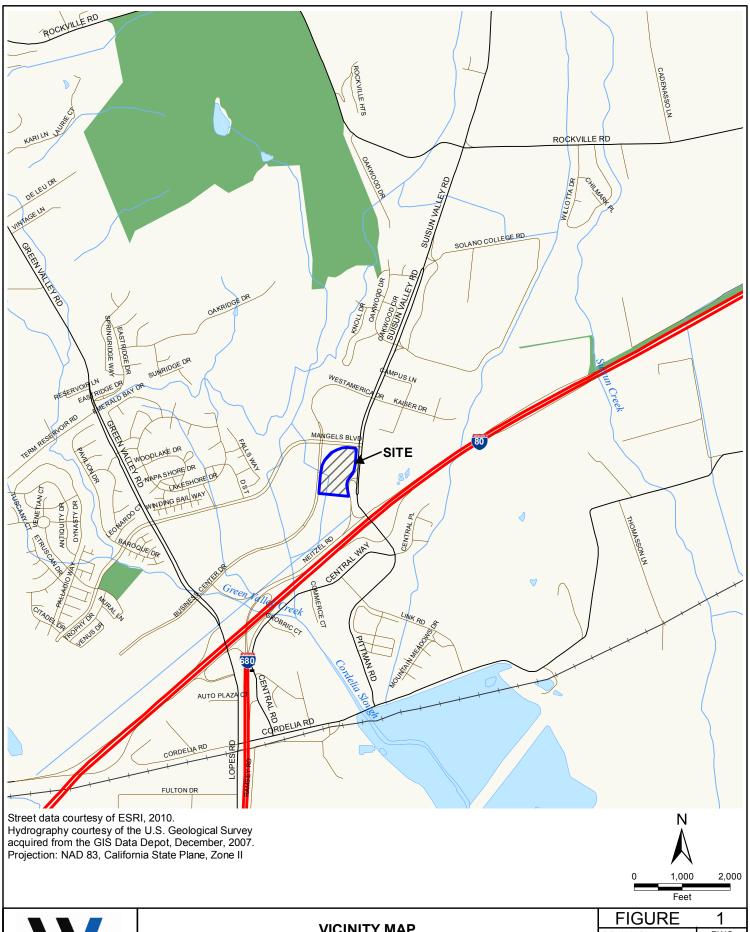
The State of California, Department of Toxic Substance Control (DTSC), 2018, Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels (DTSC-SLs), Table 1 Screening Levels for Soil, https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-January-2018.pdf

The State of California, Department of Toxics Substance Control (DTSC), 2008, *Interim Guidance for Sampling Agricultural Properties-Third Revision*, http://www.dtsc.ca.gov/Schools/upload/Ag-Guidance-Rev-3-August-7-2008-2.pdf



FIGURES







VICINITY MAP

GREEN VALLEY II PROPERTY Fairfield, California

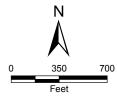
FIGURE	1
DRAWN BY	RWO
CHECKED BY	MAT
PROJECT MGR	KMB
DATE	02/18
WKA NO. 117	731.03



Parcel Map provided by the county of Solano Assessor's Map Book 148, Page 54. Projection: NAD 83, California State Plane, Zone II

Legend

Approximate Site Boundary





PARCEL MAP

GREEN VALLEY II PROPERTY Fairfield, California

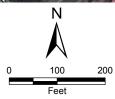
FIGURE	2
DRAWN BY	RWO
CHECKED BY	MAT
PROJECT MGR	KMB
DATE	02/18
WKA NO. 11	731.03



Aerial provided by ESRI. Projection: NAD 83, California State Plane, Zone II

<u>Legend</u>

Approximate Site Boundary

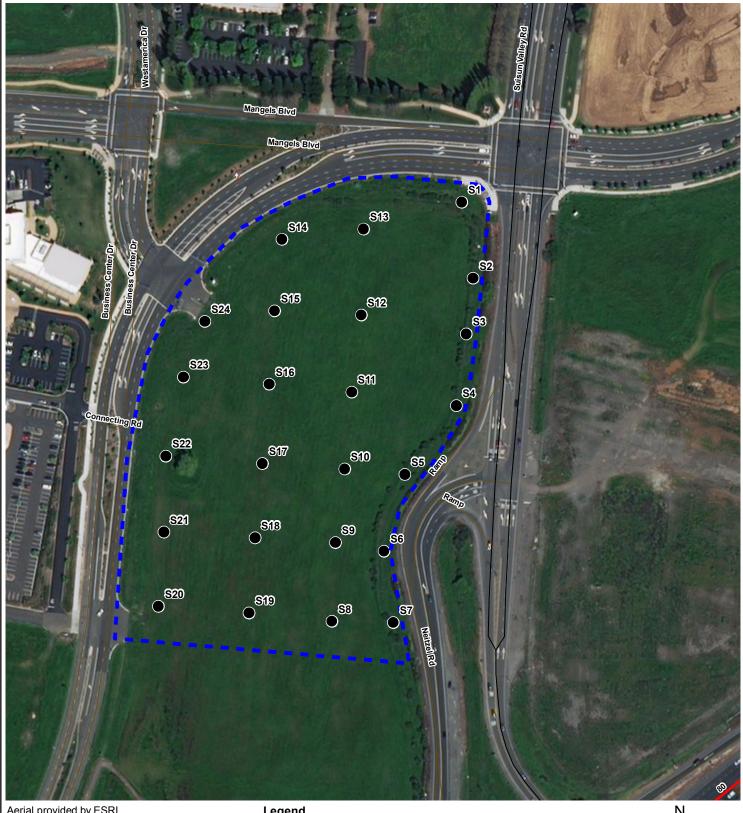




AERIAL SITE MAP

GREEN VALLEY II PROPERTY
Fairfield, California

FIGURE	3
DRAWN BY	RWO
CHECKED BY	MAT
PROJECT MGR	KMB
DATE	02/18
WKA NO. 11	731.03

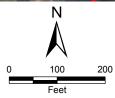


Aerial provided by ESRI.
Projection: NAD 83, California State Plane, Zone II

Legend

Approximate Site Boundary

Approximate Soil Sample Location





SOIL SAMPLE LOCATION MAP

GREEN VALLEY II PROPERTY Fairfield, California

FIGURE	4
DRAWN BY	RWO
CHECKED BY	MAT
PROJECT MGR	KMB
DATE	02/18
WKA NO. 11	731.03

TABLES



Table 1 Summary of Soil Analytical Results Metals GREEN VALLEY II PROPERTY WKA No. 11731.03

Sample ID	Cample Date	Sample	EPA Methods 6020	EPA Methods 6010B
Sample 1D	Sample Date	Depth (ft bgs)	Arsenic	Copper
Cond	centrations repor	ted in miligram	s per kilogram (mg/kg)
S2	2/2/2018	0.5	3.6	19
S5	2/2/2018	0.5	3.3	19
S11	2/2/2018	0.5	5.2	23
S13	2/2/2018	0.5	6.9	34
S18	2/2/2018	0.5	7.5	39
S23	2/2/2018	0.5	7.5	42
		DTSC-SL	0.11	N.E.
		USEPA RSL	0.68	3,100

Notes:

U.S. Environmental Protection Agency's Regional Screening Level (USEPA RSL) (November 2017)

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

< less than laboratory reporting limit(s) Below ground surface (bgs) Not established (N.E.)

Refer to Figure 4 for sample locations

Table 2 Summary of Soil Analytical Results for Organochlorine Pesticides GREEN VALLEY II PROPERTY WKA No. 11731.03

												EPA Met	hod 8081A	١								
Sample ID	Sample Date	Sample Depth (Feet bgs)	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
							Concen	trations re	ported in m	nicrograms	per kilogr	am (μg/kg)										
S1-S4	2/2/2018	0.5	<3.3	5.9	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
S5-S8	2/2/2018	0.5	<3.3	5.6	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
S9-S12	2/2/2018	0.5	<3.3	<3.3	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
S13-S16	2/2/2018	0.5	<3.3	<3.3	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
S17-S20	2/2/2018	0.5	<3.3	<3.3	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
S21-S24	2/2/2018	0.5	<3.3	<3.3	<3.3	<1.0	<1.7	<1.7	<3.3	<1.7	<1.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<1.7	<17	<3.3	<20
		USEPA RSL	1,900	2,000	1,900	39	N.E.	N.E.	1,700	N.E.	34	470,000	470,000	N.E.	19,000	N.E.	N.E.	130	70	320,000	36	490

Notes:

U.S. Environmental Protection Agency's Regional Screening Level (USEPA RSL) (November 2017)

< Less than laboratory reporting limit(s)
Below ground surface (bgs)
Not established (N.E.)

Refer to Figure 4 for sample locations

APPENDIX A

Laboratory Analytical Reports and Chain-of-Custody Documentation



CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

February 09, 2018

CLS Work Order #: 18B0122

COC #:

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

Project Name: Green Valley II Property

Enclosed are the results of analyses for samples received by the laboratory on 02/02/18 12:38. 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

16B0122

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## 222018	S2	2/3/2018	1008	×		×	×	>	X				
SECK Time Received by Laboratory:	S3	2/2/2018	(27.5)	×		×	×	<					
### No. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	S4	2/2/2018	(0,587)	×		×	×	/					
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SECK Time Received by Laboratory:	86	2/2/2018	1032	×		×	×	>					
SECK Time Received by Laboratory:	22	2/2/2018	1(34)	×		×	×	<					
BECK Time Received by: Date Time Received by: 2.7 (\$\mathcal{C}\$ 11.38	88	27272018	10%	×		×	×	/					
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8 ECK 2222018 X X X X X X X X X X X X X X X X X X X	S10	2/2/2018	1040	×		×	×	>					
BECK Time Received by: Date Time Received by: Date Time Received by Laboratory:	S11	2/2/2018	3487	×		×	×	Δ<	X				
BECK 1-18 1 % Beceived by: Date Time Received by Laboratory: 2 7 (20.12.38	S12	2)2/2018	1,050.	×		×	×	<					
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222038	\$15	81,02/2/2	0401	×	×	×	~				
222036	S16	7/2/2018	5401	×	×	×	<				
222018	\$17	2/2/2018	1030	×	×	×					
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BECK 2-2-18 7 16 Date Time Received by: Date Time Received by Laboratory:	S24	2/2/2018	5760	×	×	×	<				
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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Metals by EPA 6000/7000 Series Methods

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S2 (18B0122-02) Soil	Sampled: 02/02/18 10:03	Received: 02/0	02/18 12:38							
Arsenic		3.6	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		19	0.50	"	**	**	n	**	EPA 6010B	ICP/MS
S5 (18B0122-06) Soil	Sampled: 02/02/18 10:30	Received: 02/0	02/18 12:38							
Arsenic		3.3	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		19	0.50	"	11	17	n	11	EPA 6010B	ICP/MS
S11 (18B0122-13) Soil	Sampled: 02/02/18 10:42	Received: 02	/02/18 12:38							
Arsenic		5.2	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		23	0.50	"	**	**	11	**	EPA 6010B	ICP/MS
S13 (18B0122-16) Soil	Sampled: 02/02/18 10:32	Received: 02	/02/18 12:38							
Arsenic		6.9	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		34	0.50	"	**	"	"	"	EPA 6010B	ICP/MS
S18 (18B0122-22) Soil	Sampled: 02/02/18 10:25	Received: 02	/02/18 12:38							
Arsenic		7.5	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		39	0.50	"	11	11	m .	11	EPA 6010B	ICP/MS
S23 (18B0122-28) Soil	Sampled: 02/02/18 09:59	Received: 02	/02/18 12:38							
Arsenic		7.5	1.0	mg/kg	10	1801103	02/07/18	02/08/18	EPA 6020	
Copper		42	0.50	"	**	**	n	**	EPA 6010B	ICP/MS

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S1-S4 (COMPOSITE) (18B0122-05) Soil	Sampled: 02/02/18 10:00	Receive	d: 02/02/	18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
4,4´-DDE	5.9	3.3	**	**	"	11	"	**	
4,4´-DDT	ND	3.3	"	**	**	"	"	**	
Aldrin	ND	1.0	"	**	**	11	"	**	
alpha-BHC	ND	1.7	"	**	**	"	"	**	
oeta-BHC	ND	1.7	**	11	**	"	"	**	
Chlordane-technical	ND	3.3	**	**	**	"	"	**	
delta-BHC	ND	1.7	"	**	**	**	n	**	
Dieldrin	ND	1.0	"	11	11	"	n	n	
Endosulfan I	ND	1.7	"	**	11	11	n	Ħ	
Endosulfan II	ND	3.3	**	**	n	**	n	Ħ	
Endosulfan sulfate	ND	3.3	**	**	**	**	n	**	
Endrin	ND	3.3	17	11	11	W	ij	n	
Endrin aldehyde	ND	3.3	17	**	**	W	n	Ħ	
gamma-BHC (Lindane)	ND	1.7	17	n	n	H	n	#	
Heptachlor	ND	1.7	17	**	**	**	n	"	
Heptachlor epoxide	ND	1.7	17	11	**	W	n	n	
Methoxychlor	ND	17	17	**	**	W	n	Ħ	
Mirex	ND	3.3	17	n	**	H	n	**	
Toxaphene	ND	20	"	"	"	н	11	п	
Surrogate: Decachlorobiphenyl		57 %	52	-141	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		61 %	46	-139	"	н	"	"	
S5-S8 (COMPOSITE) (18B0122-10) Soil	Sampled: 02/02/18 10:30	Receive	d: 02/02/	18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
1,4′-DDE	5.6	3.3	"	11	n	**	17	n	
1,4′-DDT	ND	3.3	"	**	**	n	n	Ħ	
Aldrin	ND	1.0	**	Ħ	**	W	n	**	
alpha-BHC	ND	1.7	**	n	**	H	n	"	
oeta-BHC	ND	1.7	**	**	**	**	"	"	

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Analyte	Result	eporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S5-S8 (COMPOSITE) (18B0122-10) Soil	Sampled: 02/02/18 10:30	Receive	d: 02/02/	18 12:38					
Chlordane-technical	ND	3.3	μg/kg	1	1801041	"	02/07/18	EPA 8081A	
delta-BHC	ND	1.7	**	"	**	11	"	**	
Dieldrin	ND	1.0	"	"	**	II	**	**	
Endosulfan I	ND	1.7	"	"	**	11	**	"	
Endosulfan II	ND	3.3	"	"	**	"	**	**	
Endosulfan sulfate	ND	3.3	"	"	**	II	"	11	
Endrin	ND	3.3	**	"	**	"	**	**	
Endrin aldehyde	ND	3.3	**	"	**	"	**	**	
gamma-BHC (Lindane)	ND	1.7	**	17	11	"	***	11	
Heptachlor	ND	1.7	**	11	**	"	**	11	
Heptachlor epoxide	ND	1.7	**	**	n	"	n	11	
Methoxychlor	ND	17	**	**	**	"	Ħ	**	
Mirex	ND	3.3	17	17	11	n	11	11	
Toxaphene	ND	20	"	"	17	н	n	11	
Surrogate: Decachlorobiphenyl		59 %	52	-141	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		62 %	46	-139	"		"	"	
S9-S12 (COMPOSITE) (18B0122-15) Soil	Sampled: 02/02/18 10:38	Receiv	ed: 02/02	2/18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
4,4′-DDE	ND	3.3	17	**	**	ıı	"	n	
4,4′-DDT	ND	3.3	**	"	**	ıı	**	**	
Aldrin	ND	1.0	"	"	"	II	"	11	
alpha-BHC	ND	1.7	"	"	"	II	"	11	
beta-BHC	ND	1.7	17	"	**	n.	**	n	
Chlordane-technical	ND	3.3	**	"	**	11	**	**	
delta-BHC	ND	1.7	**	"	**	11	**	11	
Dieldrin	ND	1.0	"	"	**	II	**	"	
Endosulfan I	ND	1.7	**	"	**	11	**	"	
Endosulfan II	ND	3.3	**	"	**	11	**	"	
Endosulfan sulfate	ND	3.3	**	17	11	"	**	**	

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Analyte	Re Result	porting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S9-S12 (COMPOSITE) (18B0122-15) Soil	Sampled: 02/02/18 10:38	Receiv	ed: 02/02	2/18 12:38					
Endrin	ND	3.3	μg/kg	1	1801041	n	02/07/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	11	"	11	"	
gamma-BHC (Lindane)	ND	1.7	"	n	**	"	Ħ	11	
Heptachlor	ND	1.7	**	n	**	"	Ħ	11	
Heptachlor epoxide	ND	1.7	"	n	**	"	**	11	
Methoxychlor	ND	17	"	"	11	"	"	11	
Mirex	ND	3.3	"	n	**	"	Ħ	11	
Toxaphene	ND	20	**	"	"	н	"	"	
Surrogate: Decachlorobiphenyl		52 %	52	-141	"	н	"	"	
Surrogate: Tetrachloro-meta-xylene		56 %	46	-139	"	n	"	"	
S13-S16 (COMPOSITE) (18B0122-20) Soil	l Sampled: 02/02/18 10:3	2 Recei	ived: 02/0	02/18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
4,4′-DDE	ND	3.3	"	n	**	"	**	11	
4,4′-DDT	ND	3.3	"	"	11	"	11	"	
Aldrin	ND	1.0	"	'n	**	"	n	11	
alpha-BHC	ND	1.7	"	n	**	"	**	**	
beta-BHC	ND	1.7	"	"	**	"	"	n	
Chlordane-technical	ND	3.3	"	"	11	"	"	11	
delta-BHC	ND	1.7	"	n	**	"	Ħ	11	
Dieldrin	ND	1.0	**	"	**	"	Ħ	11	
Endosulfan I	ND	1.7	"	17	11	n .	11	11	
Endosulfan II	ND	3.3	"	"	**	"	Ħ	11	
Endosulfan sulfate	ND	3.3	**	n	**	"	Ħ	11	
Endrin	ND	3.3	**	"	**	"	Ħ	11	
Endrin aldehyde	ND	3.3	11	"	11	"	Ħ	n	
gamma-BHC (Lindane)	ND	1.7	**	n	**	n	Ħ	n	
Heptachlor	ND	1.7	**	**	**	H .	**	"	
Heptachlor Heptachlor epoxide	ND ND	1.7 1.7	"	"	"	H H	"	"	

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S13-S16 (COMPOSITE) (18B0122-20) Soil	Sampled: 02/02/18	10:32 Recei	ved: 02/0	2/18 12:38					
Mirex	ND	3.3	μg/kg	1	1801041	"	02/07/18	EPA 8081A	
Toxaphene	ND	20	"	n	11	н	n	11	
Surrogate: Decachlorobiphenyl		51 %	52	-141	"	"	"	"	QS-4
Surrogate: Tetrachloro-meta-xylene		54 %	46	-139	"	н	n	"	
S17-S20 (COMPOSITE) (18B0122-25) Soil	Sampled: 02/02/18	10:30 Recei	ved: 02/0	2/18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
4,4′-DDE	ND	3.3	"	***	***	н	"	n	
4,4′-DDT	ND	3.3	"	"	**	11	"	n	
Aldrin	ND	1.0	**	**	**	"	**	"	
alpha-BHC	ND	1.7	17	***	11	"	11	11	
beta-BHC	ND	1.7	17	**	11	n	n	11	
Chlordane-technical	ND	3.3	17	**	Ħ	n.	n	11	
delta-BHC	ND	1.7	17	**	11	n .	n	11	
Dieldrin	ND	1.0	17	**	11	ıı	11	11	
Endosulfan I	ND	1.7	17	**	**	ıı	"	11	
Endosulfan II	ND	3.3	**	"	**	II .	**	"	
Endosulfan sulfate	ND	3.3	17	**	**	H .	"	"	
Endrin	ND	3.3	17	**	11	ıı	11	11	
Endrin aldehyde	ND	3.3	17	**	**	ıı	11	"	
gamma-BHC (Lindane)	ND	1.7	**	"	**	H.	**	"	
Heptachlor	ND	1.7	17	"	"	ıı	n	11	
Heptachlor epoxide	ND	1.7	**	11	**	n	11	11	
Methoxychlor	ND	17	**	**	**	n .	**	"	
Mirex	ND	3.3	**	**	**	ıı	"	"	
Toxaphene	ND	20	"	"	ıı	н	17	Ħ	
Surrogate: Decachlorobiphenyl		59 %	52	-141	"	н	"	"	
Surrogate: Tetrachloro-meta-xylene		62 %	46	-139	"	II .	"	"	

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Analyte	Rep Result	oorting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S21-S24 (COMPOSITE) (18B0122-30) Soil	Sampled: 02/02/18 09:55	5 Recei	ived: 02/0)2/18 12:38					
4,4′-DDD	ND	3.3	μg/kg	1	1801041	02/05/18	02/07/18	EPA 8081A	
4,4′-DDE	ND	3.3	17	**	11	"	17	11	
4,4′-DDT	ND	3.3	**	"	**	II.	"	**	
Aldrin	ND	1.0	**	**	**	"	**	**	
alpha-BHC	ND	1.7	"	**	**	"	11	**	
beta-BHC	ND	1.7	"	11	11	n	11	11	
Chlordane-technical	ND	3.3	**	**	11	n	Ħ	11	
delta-BHC	ND	1.7	**	**	**	"	Ħ	**	
Dieldrin	ND	1.0	"	11	11	n	17	11	
Endosulfan I	ND	1.7	17	**	11	n	11	11	
Endosulfan II	ND	3.3	"	**	n	n	Ħ	11	
Endosulfan sulfate	ND	3.3	"	**	11	n .	Ħ	n	
Endrin	ND	3.3	ıı	11	17	ıı	Ħ	n	
Endrin aldehyde	ND	3.3	**	**	11	n	11	11	
gamma-BHC (Lindane)	ND	1.7	"	**	Ħ	n	Ħ	n	
Heptachlor	ND	1.7	"	**	11	n .	Ħ	n	
Heptachlor epoxide	ND	1.7	17	**	11	"	17	11	
Methoxychlor	ND	17	"	**	11	n .	n	11	
Mirex	ND	3.3	"	Ħ	**	n	Ħ	n	
Toxaphene	ND	20	"	"	"	н	· ·	11	
Surrogate: Decachlorobiphenyl		67 %	52	-141	"	н	"	"	
Surrogate: Tetrachloro-meta-xylene		69 %	46	-139	"	"	"	"	

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Project:

Green Valley II Property

Wallace Kuhl & Associates- West Sacramento

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Metals by EPA 6000/7000 Series Methods - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1801103 - EPA 3050B										
Blank (1801103-BLK1)				Prepared: (02/07/18 A	nalyzed: 02	/08/18			
Arsenic	ND	0.10	mg/kg							
Copper	ND	0.50	"							
LCS (1801103-BS1)				Prepared: (02/07/18 A	nalyzed: 02	/08/18			
Arsenic	7.95	0.10	mg/kg	10.0		80	75-125			
Copper	8.22	0.50	"	10.0		82	75-125			
Matrix Spike (1801103-MS1)	Sou	rce: 18B0122-	02	Prepared: (02/07/18 A	nalyzed: 02	/08/18			
Copper	39.8	0.50	mg/kg	10.0	19.1	207	75-125			QM-5
Arsenic	13.2	1.0	"	10.0	3.62	96	75-125			
Matrix Spike Dup (1801103-MSD1)	Sou	rce: 18B0122-	02	Prepared: (02/07/18 A	nalyzed: 02	/08/18			
Copper	35.9	0.50	mg/kg	10.0	19.1	168	75-125	10	30	QM-5
Arsenic	12.1	1.0	"	10.0	3.62	85	75-125	9	30	

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Reporting

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Spike

Source

%REC

RPD

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1801041 - LUFT-DHS GCNV										
Blank (1801041-BLK1)				Prepared: (02/05/18 A	nalyzed: 02	/07/18			
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	8.06		"	8.33		97	46-139			
Surrogate: Decachlorobiphenyl	8.20		"	8.33		98	52-141			
LCS (1801041-BS1)				Prepared: (02/05/18 A	nalyzed: 02	/07/18			
Aldrin	15.0	1.0	μg/kg	16.7		90	47-132			
gamma-BHC (Lindane)	14.8	1.7		16.7		89	56-133			
4,4′-DDT	15.9	3.3	11	16.7		96	46-137			
Dieldrin	15.6	1.0	"	16.7		94	44-143			
Endrin	17.7	3.3	III	16.7		106	30-147			
Heptachlor	15.3	1.7	"	16.7		92	33-148			
Surrogate: Tetrachloro-meta-xylene	7.23		"	8.33		87	46-139			

3050 Industrial Boulevard

California Laboratory Services

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Wallace Kuhl & Associates- West Sacramento

Project: Green Valley II Property
Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

	Reporting			•	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1801041 - LUFT-DHS GCNV										
LCS (1801041-BS1)				Prepared: 02/05/18 Analyzed: 02/07/18						
Surrogate: Decachlorobiphenyl	8.00		μg/kg	8.33		96	52-141			
LCS Dup (1801041-BSD1)				Prepared: (02/05/18 A	nalyzed: 02	/07/18			
Aldrin	15.9	1.0	μg/kg	16.7		95	47-132	6	30	
gamma-BHC (Lindane)	15.6	1.7	"	16.7		94	56-133	6	30	
4,4′-DDT	16.1	3.3	"	16.7		97	46-137	1	30	
Dieldrin	16.3	1.0	"	16.7		98	44-143	4	30	
Endrin	18.2	3.3	"	16.7		109	30-147	3	30	
Heptachlor	16.0	1.7	"	16.7		96	33-148	5	30	
Surrogate: Tetrachloro-meta-xylene	7.30		"	8.33		88	46-139			
Surrogate: Decachlorobiphenyl	8.19		"	8.33		98	52-141			
Matrix Spike (1801041-MS1)	Sou	Prepared: 02/05/18 Analyzed: 02/07/18								
Aldrin	14.2	1.0	μg/kg	16.7	ND	85	47-138			
gamma-BHC (Lindane)	15.0	1.7	"	16.7	ND	90	38-144			
4,4′-DDT	14.8	3.3	"	16.7	ND	89	41-157			
Dieldrin	14.4	1.0	11	16.7	ND	87	46-155			
Endrin	16.7	3.3	"	16.7	ND	100	34-149			
Heptachlor	14.4	1.7	"	16.7	ND	87	36-155			
Surrogate: Tetrachloro-meta-xylene	13.3		"	20.8		64	46-139			
Surrogate: Decachlorobiphenyl	12.7		"	20.8		61	52-141			
Matrix Spike Dup (1801041-MSD1)	Sou	rce: 18B0122-	05	Prepared: (02/05/18 A	nalyzed: 02	/07/18			
Aldrin	13.8	1.0	μg/kg	16.7	ND	83	47-138	3	35	
gamma-BHC (Lindane)	14.6	1.7	"	16.7	ND	87	38-144	3	35	
4,4′-DDT	12.2	3.3	"	16.7	ND	73	41-157	20	35	
Dieldrin	14.0	1.0	"	16.7	ND	84	46-155	3	35	
Endrin	16.2	3.3	"	16.7	ND	97	34-149	3	35	
Heptachlor	14.0	1.7	"	16.7	ND	84	36-155	3	35	
Surrogate: Tetrachloro-meta-xylene	12.9		"	20.8		62	46-139			
Surrogate: Decachlorobiphenyl	12.4		"	20.8		60	52-141			

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Wallace Kuhl & Associates- West Sacramento Project: Green Valley II Property

3050 Industrial Boulevard Project Number: 11731.03 CLS Work Order #: 18B0122

West Sacramento, CA 95691 Project Manager: Matthew Taylor COC #:

Notes and Definitions

QS-4 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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.

ICP/MS It was run by ICP/MS (EPA method 200.8/6020).

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