## **APPENDIX E-2**

## **Soil Sampling and Pesticide Analysis**

Prepared by

**Moore Twining Associates** 

May 2019



May 30, 2019

C64406.01

Mr. Bert Verrips, AICP Environmental Consulting Services 11942 Red Hill Avenue Santa Ana, California 92705

RE: Soil Sampling and Pesticide Analysis Chestnut Solar Project Kings County, California

Dear Mr. Verrips:

This letter presents the results and findings of limited Phase II to investigate soils at a property located at the intersection of 25<sup>th</sup> Avenue and South Laurel Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). It is Moore Twining Associates, Inc. (Moore Twining) understanding that this investigation was requested by you as part of your due diligence for the subject property related to development of the Site.

The purpose of the soil sampling and analysis was to assess if persistent pesticides are present in on-Site soil that exceed human health or waste disposal screening levels.

### SOIL SAMPLING METHODS

Three soil borings (A1 through A3) were hand-augured on April 29, 2019 for collection of shallow soil samples to characterize organochlorinated pesticides (OCPs) and arsenic in soil. Soil boring locations are shown on the attached drawing. At each boring location, soil samples were collected from 0.5-1 foot below surface grade (bsg) and 1.5-2 feet bsg.

Soil samples were collected from the specified depths by driving a pre-cleaned stainless-steel sleeve into the undisturbed soil using a slide-hammer soil sampler. The sleeve was subsequently capped with Teflon sheets and plastic caps, labeled with the sample date/time and a unique soil sample number, placed in a chilled ice chest, and delivered under chain of custody (COC) documentation to Moore Twining's Laboratory. The soil samples were analyzed for OCPs by EPA Method 8081A and for arsenic by EPA Method 6010B. The number and location of the samples was specified by the client.

PH: 559.268.7021 1x: 559.268.7126 2527 Fresno Sheet Fresno, CA 93721

## Solar Blue Solar Project, 25th Avenue and South Laurel Avenue, Kings County, CAC64406.01Soil Sampling and Pesticide AnalysisPage 2

### **RESULTS AND RECOMMENDATIONS**

The pesticide 4,4' DDE was detected in samples A1 through A3 ranging in concentration from 0.0025 mg/kg to 0.0032 mg/kg. These concentrations are below the residential and commercial Federal EPA screening levels.

The pesticide Trifluralin was reported in A3 with a concentration of 0.0045 mg/kg, below the EPA Regional screening level of 90 mg/kg for residential properties and 420 mg/kg for commercial properties.

Arsenic was reported in A1 through A3 ranging from 12 to 13 mg/kg. These concentrations exceed the Department of Toxic Substances Control (DTSC) screening levels (0.11 mg/kg residential and 0.42 mg/kg commercial) however the DTSC has acknowledged that background concentrations of arsenic in California soils can average 12 mg/kg in some areas. As such, the elevated concentrations on the Site would not generally require cleanup to screening levels.

A copy of the laboratory report and Moore Twining's chain of custody is included with this letter.

Moore Twining does not recommend any further action.

## LIMITATIONS

The scope of the investigation undertaken to conduct this soil characterization screening was intended to be an interactive process. The purpose of an environmental assessment is to reasonably characterize existing Site conditions based on field observations and laboratory analytical data. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the Site conditions and an exhaustive analysis of each conceivable environmental characteristic.

Conditions of interest may exist at the Site that cannot be identified by visual observations and the scope of the work performed as part of this analysis. Where subsurface exploratory work was performed, our professional opinions were based in part on interpretation of data from discrete sampling locations that may not represent actual conditions or un-sampled locations. If conditions of interest were not identified during performance of the work, such a finding should not be construed as a guarantee that such conditions do not exist at the Site.

This work was conducted in accordance with generally accepted engineering principles and practices in at the time the work was performed. This warranty is in lieu of all other warranties, either expressed or implied. This report was prepared for the sole use of the client and appropriate regulatory agencies. Any reliance on this report by a third party is at such party's sole risk.

Solar Blue Solar Project, 25<sup>th</sup> Avenue and South Laurel Avenue, Kings County, CA Soil Sampling and Pesticide Analysis C64406.01 Page 3

## CLOSING

We appreciate the opportunity to be of service to you on this project. Please contact our office at (800) 268-7021 if you have any questions regarding this report.

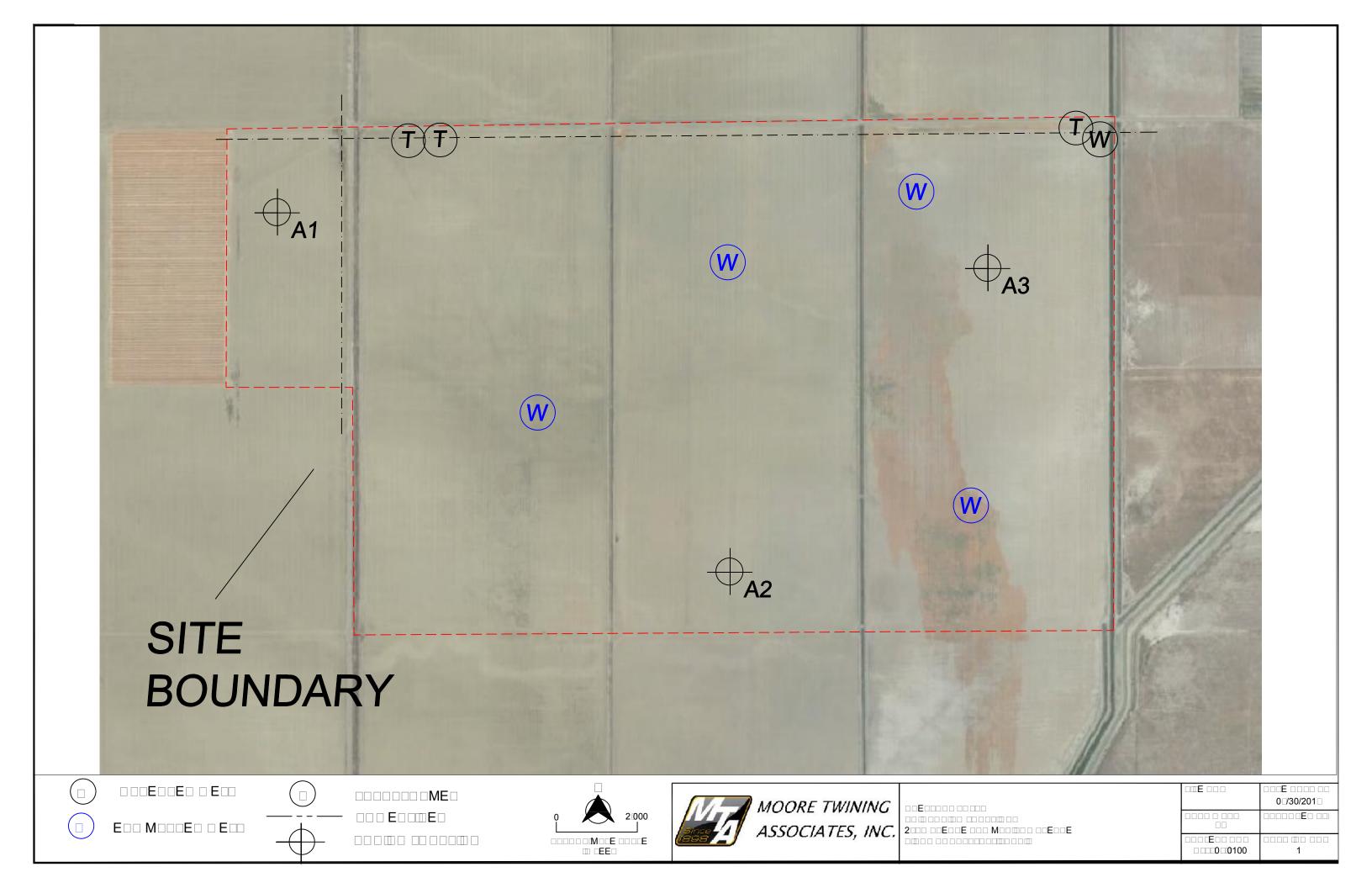
## Sincerely, **MOORE TWINING ASSOCIATES, INC.**

Environmental Services Division

Katie Lister PG, QSD Environmental Division Manager



Exp 12/30/20





May 17, 2019

Work Order #: FD29027

Katie Lister MTA Environmental Division 2527 Fresno Street Fresno, CA 93721

**RE: Chestnut Solar** 

Enclosed are the analytical results for samples received by our laboratory on **04/29/19**. For your reference, these analyses have been assigned laboratory work order number **FD29027**.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, Moore Twining Associates, Inc. (MTA) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

Moore Twining Associates, Inc.

Susan Federico Client Services Representative



MTA Environmental Division	Project:	Chestnut Solar	Devented
2527 Fresno Street	Project Number:	MTP 19-0278	<b>Reported:</b> 05/17/2019
Fresno CA, 93721	Project Manager:	Katie Lister	03/17/2019

## Analytical Report for the Following Samples

Sample ID	Notes	Laboratory ID	Matrix	Date Sampled	Date Received
A1-0.5		FD29027-01	Soil	04/29/19 09:28	04/29/19 14:00
A2-0.5		FD29027-03	Soil	04/29/19 09:45	04/29/19 14:00
A3-0.5		FD29027-05	Soil	04/29/19 10:03	04/29/19 14:00



MTA Environmental Division 2527 Fresno Street Fresno CA, 93721			Projec Project Numbe Project Manage		9-0278				<b>Reported:</b> 05/17/2019
			A	1-0.5					
		FD2902	7-01 (Soil)	Sai	mpled: 04/2	29/19 09:28			
Analyte	Flag	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals (Total)									
Arsenic		12	2.0	mg/kg	1	B9D2527	05/06/19	05/06/19	EPA 6010B
Semi-Volatile Organics									
3081A Twining									
4,4´-DDD		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4´-DDE	J	0.0027	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4´-DDT		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Aldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-Chlordane		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
beta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Chlordane (tech)		ND	0.036	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
delta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Dieldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan I		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan II		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan sulfate		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin aldehyde		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin ketone		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
gamma-BHC (Lindane)		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
gamma-Chlordane		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor epoxide		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Methoxychlor		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Toxaphene		ND	0.020	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Trifluralin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Decachlorobiphenyl (DCB)		91.8%	Recovery I	imits: 11.4%	6 - 122%	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Tetrachloro-meta-xylene (TMX)		89.8%	Recovery	Limits: 8.5%	- 170%	B9E0712	05/07/19	05/15/19	EPA 8081A

A2-0.5

FD29027-03 (Soil)

Sampled: 04/29/19 09:45

Analyte	Flag	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals (Total)									
Arsenic		13	2.0	mg/kg	1	B9D2527	05/06/19	05/06/19	EPA 6010B
Semi-Volatile Organics									
8081A Twining									
4,4´-DDD		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4´-DDE	J	0.0025	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4´-DDT		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Aldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-Chlordane		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
beta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A

Moore Twining Associates, Inc. Juliane Adams, Director of Analytical Chemistry



MTA Environmental Division 2527 Fresno Street Fresno CA, 93721			Proje Project Numb Project Manage		-0278				<b>Reported:</b> 05/17/2019
			А	2-0.5					
		FD2902	7-03 (Soil)	Sar	npled: 04/2	29/19 09:45			
Analyte	Flag	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics									
8081A Twining									
Chlordane (tech)		ND	0.036	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
delta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Dieldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan I		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan II		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan sulfate		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin aldehyde		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin ketone		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
gamma-BHC (Lindane)		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
gamma-Chlordane		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor epoxide		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Methoxychlor		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Toxaphene		ND	0.020	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Trifluralin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Decachlorobiphenyl (DCB)		93.2%	Recovery	Limits: 11.4%	5 - 122%	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Tetrachloro-meta-xylene (TMX)		93.4%	Recovery	Limits: 8.5%	- 170%	B9E0712	05/07/19	05/15/19	EPA 8081A

#### A3-0.5

FD29027-05 (Soil)

## Sampled: 04/29/19 10:03

Analyte	Flag	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals (Total)									
Arsenic		13	2.0	mg/kg	1	B9D2527	05/06/19	05/06/19	EPA 6010B
Semi-Volatile Organics									
8081A Twining									
4,4'-DDD		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4'-DDE	J	0.0032	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
4,4´-DDT		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Aldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
alpha-Chlordane		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
beta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Chlordane (tech)		ND	0.036	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
delta-BHC		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Dieldrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan I		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan II		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endosulfan sulfate		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin aldehyde		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Endrin ketone		ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A

Moore Twining Associates, Inc. Juliane Adams, Director of Analytical Chemistry



MTA Environmental Division 2527 Fresno Street Fresno CA, 93721	Project: Project Number: Project Manager:		<b>Reported:</b> 05/17/2019
	A3-	0.5	
	FD29027-05 (Soil)	Sampled: 04/29/19 10:03	

Analyte Fi	ag Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
081A Twining								
gamma-BHC (Lindane)	ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
gamma-Chlordane	ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor	ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Heptachlor epoxide	ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Methoxychlor	ND	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Toxaphene	ND	0.020	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Trifluralin	J 0.0045	0.010	mg/kg	1	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Decachlorobiphenyl (DCB)	96.4%	Recovery	Limits: 11.4%	5 - 122%	B9E0712	05/07/19	05/15/19	EPA 8081A
Surr: Tetrachloro-meta-xylene (TMX)	89.0%	Recovery	y Limits: 8.5%	- 170%	B9E0712	05/07/19	05/15/19	EPA 8081A

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MTA Environmental Division	Project:	Chestnut Solar	Demontedu
2527 Fresno Street	Project Number:	MTP 19-0278	Reported: 05/17/2019
Fresno CA, 93721	Project Manager:	Katie Lister	03/1//2019

## **Quality Control Sample Results - Metals (Total)**

		-	-			-	-			
Analyte	Flag	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limits
Batch - B9D2527										
Blank (B9D2527-BLK1)		Prepared &	Analyzed: 0	5/06/19						
EPA 6010B										
Arsenic		ND	2.0	mg/kg						
LCS (B9D2527-BS1)		Prepared &	Analyzed: 0	5/06/19						
EPA 6010B										
Arsenic		40.9	2.0	mg/kg	40.0		102	75-125		
LCS Dup (B9D2527-BSD1)		Prepared &	Analyzed: 0	5/06/19						
EPA 6010B										
Arsenic		41.3	2.0	mg/kg	40.0		103	75-125	0.855	20
Matrix Spike (B9D2527-MS1)		Prepared &	Analyzed: 0	5/06/19		Source: FD	29027-01			
EPA 6010B										
Arsenic		48.5	2.0	mg/kg	40.2	11.9	91.0	75-125		
Matrix Spike Dup (B9D2527-MSD1)		Prepared &	Analyzed: 0	5/06/19		Source: FD	29027-01			
EPA 6010B										
Arsenic		47.9	2.0	mg/kg	40.3	11.9	89.4	75-125	1.15	20
Matrix Spike (B9D2527-MS2)		Prepared &	Analyzed: 0	5/06/19		Source: FD	30032-01			
EPA 6010B										
Arsenic		49.3	2.0	mg/kg	40.3	9.73	98.2	75-125		
Matrix Spike Dup (B9D2527-MSD2)		Prepared &	Analyzed: 0	5/06/19		Source: FD	30032-01			
EPA 6010B										
Arsenic		47.9	2.0	mg/kg	39.9	9.73	95.6	75-125	2.93	20



MTA Environmental Division	Project:	Chestnut Solar	Demonte de
2527 Fresno Street	Project Number:	MTP 19-0278	Reported: 05/17/2019
Fresno CA, 93721	Project Manager:	Katie Lister	05/17/2019

## **Quality Control Sample Results - Semi-Volatile Organics**

Analyte	Flag	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limits
Batch - B9E0712										
Blank (B9E0712-BLK1)	F	Prepared:	05/07/19 Ana	lyzed: 05/1	15/19					
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0250		mg/kg	0.0250		100	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0213		mg/kg	0.0250		85.1	8.5-170		
4,4´-DDD		ND	0.010	mg/kg						
4,4´-DDE		ND	0.010	mg/kg						
4,4´-DDT		ND	0.010	mg/kg						
Aldrin		ND	0.010	mg/kg						
alpha-BHC		ND	0.010	mg/kg						
alpha-Chlordane		ND	0.010	mg/kg						
beta-BHC		ND	0.010	mg/kg						
Chlordane (tech)		ND	0.036	mg/kg						
delta-BHC		ND	0.010	mg/kg						
Dieldrin		ND	0.010	mg/kg						
Endosulfan I		ND	0.010	mg/kg						
Endosulfan II		ND	0.010	mg/kg						
Endosulfan sulfate		ND	0.010	mg/kg						
Endrin		ND	0.010	mg/kg						
Endrin aldehyde		ND	0.010	mg/kg						
Endrin ketone		ND	0.010	mg/kg						
gamma-BHC (Lindane)		ND	0.010	mg/kg						
gamma-Chlordane		ND	0.010	mg/kg						
Heptachlor		ND	0.010	mg/kg						
Heptachlor epoxide		ND	0.010	mg/kg						
Methoxychlor		ND	0.010	mg/kg						
Toxaphene		ND	0.020	mg/kg						
Trifluralin		ND	0.010	mg/kg						
.CS (B9E0712-BS1)	F	Prepared:	05/07/19 Ana	lyzed: 05/1	15/19					
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0302		mg/kg	0.0250		121	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0197		mg/kg	0.0250		78.8	8.5-170		
4,4´-DDT		0.0449	0.010	mg/kg	0.0500		89.8	25-160		
Aldrin		0.0361	0.010	mg/kg	0.0500		72.3	42-122		
Dieldrin		0.0396	0.010	mg/kg	0.0500		79.2	36-146		
Endrin		0.0485	0.010	mg/kg	0.0500		97.0	30-147		
gamma-BHC (Lindane)		0.0367	0.010	mg/kg	0.0500		73.5	19-140		
Heptachlor		0.0392	0.010	mg/kg	0.0500		78.3	34-111		
.CS Dup (B9E0712-BSD1)	F	Prepared:	05/07/19 Ana	lyzed: 05/1	15/19					
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0223		mg/kg	0.0250		89.1	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0188		mg/kg	0.0250		75.1	8.5-170		
4,4'-DDT		0.0422	0.010	mg/kg	0.0500		84.3	25-160	6.31	20

Moore Twining Associates, Inc. Juliane Adams, Director of Analytical Chemistry



I	MTA Environmental Division	Project:	Chestnut Solar	Devented
I	2527 Fresno Street	Project Number:	MTP 19-0278	Reported: 05/17/2019
	Fresno CA, 93721	Project Manager:	Katie Lister	05/17/2019

## **Quality Control Sample Results - Semi-Volatile Organics**

Analyte	Flag	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limits
Batch - B9E0712										
LCS Dup (B9E0712-BSD1)		Prepared:	)5/07/19 Ana	lyzed: 05/2	15/19					
EPA 8081A										
Aldrin		0.0353	0.010	mg/kg	0.0500		70.6	42-122	2.40	20
Dieldrin		0.0373	0.010	mg/kg	0.0500		74.7	36-146	5.85	20
Endrin		0.0452	0.010	mg/kg	0.0500		90.4	30-147	6.98	20
gamma-BHC (Lindane)		0.0359	0.010	mg/kg	0.0500		71.9	19-140	2.23	20
Heptachlor		0.0384	0.010	mg/kg	0.0500		76.9	34-111	1.90	20
Duplicate (B9E0712-DUP1)		Prepared:	)5/07/19 Ana	lyzed: 05/	15/19	Source: FD	29027-01			
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0232		mg/kg	0.0250		92.9	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0218		mg/kg	0.0250		87.3	8.5-170		
4,4´-DDD		ND	0.010	mg/kg		ND				
4,4´-DDE	J	0.00273	0.010	mg/kg		0.00274			0.285	200
4,4´-DDT		ND	0.010	mg/kg		ND				
Aldrin		ND	0.010	mg/kg		ND				
alpha-BHC		ND	0.010	mg/kg		ND				
alpha-Chlordane		ND	0.010	mg/kg		ND				
beta-BHC		ND	0.010	mg/kg		ND				
Chlordane (tech)		ND	0.036	mg/kg		ND				
delta-BHC		ND	0.010	mg/kg		ND				
Dieldrin		ND	0.010	mg/kg		ND				
Endosulfan I		ND	0.010	mg/kg		ND				
Endosulfan II		ND	0.010	mg/kg		ND				
Endosulfan sulfate		ND	0.010	mg/kg		ND				
Endrin		ND	0.010	mg/kg		ND				
Endrin aldehyde		ND	0.010	mg/kg		ND				
Endrin ketone		ND	0.010	mg/kg		ND				
gamma-BHC (Lindane)		ND	0.010	mg/kg		ND				
gamma-Chlordane		ND	0.010	mg/kg		ND				
Heptachlor		ND	0.010	mg/kg		ND				
Heptachlor epoxide		ND	0.010	mg/kg		ND				
Methoxychlor		ND	0.010	mg/kg		ND				
Toxaphene		ND	0.020	mg/kg		ND				
Trifluralin		ND	0.010	mg/kg		ND				
Matrix Spike (B9E0712-MS1)		Prepared:	)5/07/19 Ana	lyzed: 05/2	15/19	Source: FD	29027-01			
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0214		mg/kg	0.0250		85.6	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0196		mg/kg	0.0250		78.3	8.5-170		
4,4´-DDT		0.0432	0.010	mg/kg	0.0500	ND	86.4	25-160		
Aldrin		0.0364	0.010	mg/kg	0.0500	ND	72.8	42-122		
Dieldrin		0.0380	0.010	mg/kg	0.0500	ND	76.1	36-146		
Endrin		0.0497	0.010	mg/kg	0.0500	ND	99.4	30-147		

Moore Twining Associates, Inc. Juliane Adams, Director of Analytical Chemistry



MTA Environmental Division	Project:	Chestnut Solar	Demented
2527 Fresno Street	Project Number:	MTP 19-0278	Reported: 05/17/2019
Fresno CA, 93721	Project Manager:	Katie Lister	03/17/2019

## **Quality Control Sample Results - Semi-Volatile Organics**

Analyte	Flag	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limits
Batch - B9E0712										
Matrix Spike (B9E0712-MS1)		Prepared:	05/07/19 Ana	lyzed: 05/1	5/19	Source: FD	29027-01			
EPA 8081A										
gamma-BHC (Lindane)		0.0381	0.010	mg/kg	0.0500	ND	76.2	19-140		
Heptachlor		0.0391	0.010	mg/kg	0.0500	ND	78.1	34-111		
Matrix Spike Dup (B9E0712-MSD1)		Prepared:	05/07/19 Ana	lyzed: 05/1	5/19	Source: FD	29027-01			
EPA 8081A										
Surr: Decachlorobiphenyl (DCB)		0.0200		mg/kg	0.0250		80.1	11.4-122		
Surr: Tetrachloro-meta-xylene (TMX)		0.0172		mg/kg	0.0250		68.9	8.5-170		
4,4´-DDT		0.0411	0.010	mg/kg	0.0500	ND	82.3	25-160	4.93	20
Aldrin		0.0326	0.010	mg/kg	0.0500	ND	65.3	42-122	10.9	20
Dieldrin		0.0343	0.010	mg/kg	0.0500	ND	68.6	36-146	10.4	20
Endrin		0.0458	0.010	mg/kg	0.0500	ND	91.6	30-147	8.17	20
gamma-BHC (Lindane)		0.0339	0.010	mg/kg	0.0500	ND	67.8	19-140	11.8	20
Heptachlor		0.0353	0.010	mg/kg	0.0500	ND	70.5	34-111	10.2	20

### **Notes and Definitions**

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). Same as DNQ Detected, but Not Quantified.
- μg/L micrograms per liter (parts per billion concentration units)
- mg/L milligrams per liter (parts per million concentration units)
- mg/kg milligrams per kilogram (parts per million concentration units)
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
  - Analysis of pH, filtration, and residual chlorine is to take place immediately after sampling in the field. If the test was performed in the laboratory, the hold time was exceeded. (for aqueous matrices only)



# CHAIN OF CUSTODY/ANALYSIS REQUEST 2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

	ANALYTICAL CHEMISTRY DIVISIO CALIFORNIA ELAP CERTIFICATION #		WOR PAGE_		DER f	#:	FI	729	025	7									
	<b>REPORT TO:</b>		х	NVOICE T	0:	X REF	ORT CO		REPORTING:										
ATT	ENTION: Katie Lister	ATTEN		ie Lister															
ΝΑΛ		NAME				EDT (STATE FORM)     GEOTRACKER/COELT (LUFT)													
ADD	DRESS:		Moore Twining Associates Address: 2527 Fresno St																
	2527 Fresno St		252	7 Fresno	) St	County DHS :													
рнс	Fresno, CA 93721	PHON		sno, CA	9372	□ Environmental Health Agency :													
	559-268-7021			-268-70	X OTHER:														
FAX	559-268-7126	FAX:	559	-268-712	26			t/Standard Excel											
SAM	SAMPLE INFORMATION	SOLID	SAMPL	E TYPES:		CON	TRACT/P.O		PROJE	T INFO	RMATION								
	Joe Clark	BS	BIOSOLI				-												
	NATURE AND A		SOIL/SO			PROJECT: Chestnut Solar													
	PUBLIC SYSTEM D'ROUTINE	DW	- DRINKI	NG WATE		M	і <b>ест nume</b> [TP 19-(	0278											
~	RIVATE WELL 🗆 REPEAT OTHER 🗆 REPLACEMEN	OL -				CRW	A MEMBER	?	YES 🗆	1	NOD	1							
	N AROUND TIME: I RUSH, DUE ON	J. ST -	STORM V - WASTE	VATER		L													
			- WASTE	WATER		. 1	1	I		ISIS RE	1 1								
L						ic)													
A B	CUSTODY SEAL(S) BROKEN	SAMPLE	(5) DAMA	GED	OCPs	Arsen						Number Code							
U	🛱 ON ICE 🗆 AMBIENT TEMP. 🗆	INCORRECT	PRESERV	ATION	81A (	6010B (Arsenic)													
S E	5.1.				EPA 8081A (OCPs)	EPA 60						System Numb Station Code							
	CLIENT SAMPLE ID	DATE	TIME	ТҮРЕ					_			<u>بې بې</u>							
1	A1-0.5	4/29/19	0928	SL	X	Х													
2	A1-1.5	4/29/19	0932	SL								HOLD							
3	A2-0.5	4/29/19	0945	SL	X	X													
4	A2-1.5	4/29/19	0949	SL								HOLD							
5	A3-0.5	4/29/19	1003	SL	X	X													
0	A3-1.5	4/29/19	1008 SL									HOLD							
<u>.</u>																			
1																			
					Noncommunications or concern														
LOW	MENTS/ADDITIONAL INSTRUCTIONS:		<u></u>			··· .					*****								
	RELINQUISHED BY	COMPANY	1	DATE	TIN	\E	RE	CEIVED	BY	1	1	COMPANY							
/	VIIII I	E MT.	44%	2919	141	N	ΙŰ	1 AA	71	JAL MAAT									
	1 - Harrison			~	· (V	$\smile$	p#t.	that	)	~~~	-900 fer-								

dr No	Yes No N/A	Yes No N/A																												Date/Time/Initials						FL-SC-0003-06
( )	Were there bubbles in VOA vials? ( <b>Volatiles Only</b> )	Was PM notified of discrepancies? PM:	ne:																											Preservative Date,						
	No N/A	Yes No N/A Was P discret	By/Time:																											Container Pre						0(4)0 (1)
Moore Twining <u>Associates</u> WO# <u>F                                   </u>	Did all bottle labels agree with COC? Was a sufficient amount of sample	received? Were correct containers and preservatives received for the tests																												3	ilq S Р F	Or S P F		S P	SPF	Labels checked by:
of Moore Tv	No N/A	<b>4 4</b>	Yes No N/A  requested?	0																						 									<u> </u>	v://@
Page $\mathcal A$	? Yes Temp °C Yes	UCe State		- (C) 40ml VOA (V) /- (		e Ruffer																		ag		tic										Labeled by:
Sample Integrity	Was temperature within range? Chemistrv ≤6°C Micro <10°C	if samples were taken today, is there evidence that chilling has begun? Recvd C° Did all bottles arrive unbroken and intact?	<u> </u>	125ml (A) 250ml (B) 1Liter (C)	Bacti Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None (P) Cré Buffer (P) Borate Carbonate Buffer	HNO3 (P)	H <sub>2</sub> SO <sub>4</sub> (P)	NaOH (P)	NaOH+ZnAc (P)	Dissolved Oxygen 300ml (P)	None (AG)	None (CG) 500ml	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 250ml (Brown P) 549	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (AG)	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (AG)	Thio/K Citrate	NH₄CI (AG) 552	HCI (AG)	None (CG) 500ml	H₃PO₄ (AG)	Other:	Plastic Bag	Low Level Hg/Metals Double Bag	Client Own	Soil Tube: Brass/ Steel/ Plastic	5 g Encore									
	-	이프 ㅋ[미			<u></u>	<u>&lt;1</u>	기프	<u>                                     </u>				<u> </u>	<u>~ </u>	- '		2    226	·				<u> </u>		<u> </u>			 <u></u>	-1	I	_1		st	u	Pa	age	e 11	of 11