



October 4, 2017

**DRAFT**

Mr. Max Reinhardt  
Artis Senior Living, LLC  
1651 Old Meadow Road, Suite 100  
McLean, Virginia 22102

**RE: Summary of Findings  
Stockpiled Soil Sampling  
Northeast Corner Santa Fe Road and San Elijo Road  
San Marcos, CA**

Dear Mr. Reinhardt:

Apex Companies, LLC (Apex) has prepared this report summarizing the findings of the Phase II Environmental Site Assessment (ESA) conducted at the undeveloped property located at the Northeast Corner Santa Fe Road and San Elijo Road in San Marcos, California (Subject Property). The Phase II ESA was performed based on the findings from a Phase I Environmental Site Assessment (Phase I ESA) completed by Apex. The Phase I ESA identified soil stockpiles and discarded demolition debris on the site during the Phase I ESA. Apex estimates the volume of the soil stockpiles to be approximately 400 cubic yards. Based on the results of the Phase I ESA, Apex recommended collecting samples of the soils from the stockpiles for evaluation of potential impact. The scope of work completed was performed in accordance with the Apex Proposal No. 028062 dated September 6, 2017.

### **FIELD ACTIVITIES**

On September 12, 2017, Apex mobilized to the Subject Property to complete the soil sampling to assess the environmental conditions of the subsurface soil at the Subject Property. A site map depicting the locations of the soil samples is included in **Attachment A**. In accordance with the scope of work for this project, Apex collected twelve shallow soil samples from the stockpiled soil using hand tools. Apex did not observe evidence of contamination during the soil sampling activities on the subject property.

Each soil sample was placed in laboratory-provided containers, labeled, and immediately placed on ice. The samples were delivered under appropriate chain-of-custody (COC) to Advanced Technology Laboratories (ATL) for analysis.

ATL was instructed to create 4 composite samples (COMPOSITE#1 through COMPOSITE#4) by combining every three soil samples collected from the stockpiled soil. The composite samples were analyzed for Title 22 Metals, Mercury, total petroleum hydrocarbon diesel range organics (TPH-DRO) and total petroleum hydrocarbon gasoline range organics (TPH-GRO) by EPA Method 8015B, organochlorine pesticides by EPA Method 8081, and polychlorinated biphenyls (PCBs) by EPA Method 8082.

## **ANALYTICAL RESULTS**

A copy of the laboratory analytical report is included as **Attachment B**. The analytical data was compared to the screening levels in Human Health Risk Assessment Note No. 3, published by the California Department of Toxic Substances Control (DTSC). Laboratory analysis of soil samples collected did not identify concentrations of mercury, GRO, or PCBs above laboratory method reporting limits. Concentrations of pesticides detected did not exceed the applicable screening levels. There are no widely accepted screening levels for petroleum hydrocarbons in California.

Metals were identified in each of the soil samples collected. Metals are naturally occurring elements in soils. Aside from arsenic, none of the metals detected exceeded the screening levels. Arsenic detections in soils on the site were 3.0 milligrams per kilogram (mg/kg), 5.8 mg/kg, below method detection limits, and 3.2 mg/kg, respectively. The concentrations of arsenic detected in the soils sampled from the site are considered within the normal range (up to 12 mg/kg according to the DTSC) of naturally occurring background concentrations.

## **CONCLUSIONS AND RECOMMENDATIONS**

Apex completed the soil sampling and analysis at the Subject Property to evaluate the potential presence of common contaminants in undocumented stockpiled soil observed on the Site during a Phase I ESA. Based on the analyses, the stockpiled soil does not appear to warrant special handling or disposal, and no further investigation or action is recommended at this time.

Apex appreciates the opportunity to assist Artis Senior Living, LLC with this project.

Sincerely,  
**APEX COMPANIES, LLC**

Final to be signed

Ronald J. Kofron, CEG 1527  
Program Manager

Final to be signed

Matthew C. Neigh  
Program Manager

## **LIMITATIONS**

This report is prepared for the sole benefit of Artis Senior Living, LLC, and may not be relied upon by any other person or entity. The findings set forth in this report are limited in time and scope to the circumstances at the time of the field investigation.

The findings and conclusions presented in this report are not specific certainties; rather they are probabilities based upon professional judgment, analytical results and comparison to published screening levels and background concentrations of arsenic and other metals in soils in the vicinity of the subject property. Apex is not able to represent that the Site presents no environmental conditions other than those described during this investigation.

Implementation or use of the recommendations, findings or conclusions in this report does not assure the elimination of present or future liability or the fulfillment of the property owner's obligations under local, state or Federal laws.

## **ATTACHMENT A**

Site Map – Soil Borings



**Figure 1 – Soil Sample Locations**

ARTIS Senior Living –San Marcos  
Source: Google Earth 2016

## **ATTACHMENT B**

Analytical Results



September 20, 2017

Ron Kofron  
APEX Companies, LLC  
10675 Sorrento Valley Rd., Suite 203  
San Diego, CA 92121  
Tel: (858) 558-1120  
Fax:(858) 558-1121

ELAP No.: 1838  
CSDLAC No.: 10196  
ORELAP No.: CA300003  
TCEQ No. : T104704502

Re: ATL Work Order Number : 1703329

Client Reference : ARTIS-SAN MARCOS, ARTIS-053

Enclosed are the results for sample(s) received on September 13, 2017 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddie Rodriguez", followed by the initials "ER" in a smaller, less distinct script.

Eddie Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



## Certificate of Analysis

APEX Companies, LLC

10675 Sorrento Valley Rd., Suite 203

San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

### SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
COMPOSITE # 1	1703329-13	Soil	9/12/17 0:00	9/13/17 14:00
COMPOSITE # 2	1703329-14	Soil	9/12/17 0:00	9/13/17 14:00
COMPOSITE # 3	1703329-15	Soil	9/12/17 0:00	9/13/17 14:00
COMPOSITE # 4	1703329-16	Soil	9/12/17 0:00	9/13/17 14:00





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Reported : 09/20/2017

## Client Sample ID COMPOSITE # 1

Lab ID: 1703329-13

### Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Arsenic</b>	<b>3.0</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Barium</b>	<b>94</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
Beryllium	ND	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
Cadmium	ND	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Chromium</b>	<b>10</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Cobalt</b>	<b>4.8</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Copper</b>	<b>26</b>	2.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Lead</b>	<b>4.4</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
Molybdenum	ND	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Nickel</b>	<b>6.0</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Selenium</b>	<b>1.5</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
Silver	ND	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
Thallium	ND	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Vanadium</b>	<b>21</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	
<b>Zinc</b>	<b>61</b>	1.0	1	B7I0365	09/14/2017	09/14/17 16:51	

### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7I0366	09/14/2017	09/14/17 14:53	

### Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7I0339	09/14/2017	09/14/17 13:37	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>105 %</i>	<i>50 - 138</i>		B7I0339	09/14/2017	09/14/17 13:37	

### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<b>DRO</b>	<b>59</b>	10	1	B7I0350	09/14/2017	09/15/17 08:33	
<b>ORO</b>	<b>130</b>	10	1	B7I0350	09/14/2017	09/15/17 08:33	



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### Client Sample ID COMPOSITE # 1

**Lab ID: 1703329-13**

#### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: p-Terphenyl</i>	<i>124 %</i>	<i>22 - 143</i>		B7I0350	09/14/2017	<i>09/15/17 08:33</i>	

#### Organochlorine Pesticides by EPA 8081

Analyst: CR

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
<b>4,4'-DDE</b>	<b>21</b>	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
4,4'-DDT [2C]	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Aldrin	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
alpha-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
alpha-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
beta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Chlordane	ND	8.5	1	B7I0360	09/14/2017	09/15/17 14:00	
delta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Dieldrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endosulfan I	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endosulfan II	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endosulfan sulfate	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endrin aldehyde	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Endrin ketone	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:00	
gamma-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
gamma-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Heptachlor	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Heptachlor epoxide	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Methoxychlor	ND	5.0	1	B7I0360	09/14/2017	09/15/17 14:00	
Toxaphene	ND	50	1	B7I0360	09/14/2017	09/15/17 14:00	
<i>Surrogate: Decachlorobiphenyl</i>	<i>33.8 %</i>	<i>11 - 118</i>		B7I0360	09/14/2017	<i>09/15/17 14:00</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>32.7 %</i>	<i>15 - 114</i>		B7I0360	09/14/2017	<i>09/15/17 14:00</i>	



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**Client Sample ID COMPOSITE # 1**

**Lab ID: 1703329-13**

### Polychlorinated Biphenyls by EPA 8082

**Analyst: CR**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1221	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1232	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1242	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1248	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1254	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1260	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1262	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
Aroclor 1268	ND	16	1	B7I0373	09/14/2017	09/15/17 16:35	
<i>Surrogate: Decachlorobiphenyl</i>	<i>62.1 %</i>	<i>18 - 136</i>		B7I0373	09/14/2017	09/15/17 16:35	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>47.1 %</i>	<i>30 - 130</i>		B7I0373	09/14/2017	09/15/17 16:35	



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10675 Sorrento Valley Rd., Suite 203

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### Client Sample ID COMPOSITE # 2

**Lab ID: 1703329-14**

#### Title 22 Metals by ICP-AES EPA 6010B

**Analyst: GO**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	4.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Arsenic</b>	<b>5.8</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Barium</b>	<b>41</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Beryllium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Cadmium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Chromium</b>	<b>4.1</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Cobalt</b>	<b>2.6</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Copper</b>	<b>4.7</b>	4.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Lead</b>	<b>4.5</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Molybdenum	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Nickel</b>	<b>2.6</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Selenium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Silver	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
Thallium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Vanadium</b>	<b>15</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5
<b>Zinc</b>	<b>14</b>	2.0	2	B7I0365	09/14/2017	09/14/17 17:08	D5

#### Mercury by AA (Cold Vapor) EPA 7471A

**Analyst: KEK**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7I0366	09/14/2017	09/14/17 14:55	

#### Gasoline Range Organics by EPA 8015B (Modified)

**Analyst: VW**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7I0339	09/14/2017	09/14/17 13:55	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>110 %</i>	<i>50 - 138</i>		B7I0339	09/14/2017	<i>09/14/17 13:55</i>	

#### Diesel Range Organics by EPA 8015B

**Analyst: TKT**

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7I0350	09/14/2017	09/15/17 07:59	
ORO	ND	10	1	B7I0350	09/14/2017	09/15/17 07:59	



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 Reported : 09/20/2017

### Client Sample ID COMPOSITE # 2

**Lab ID: 1703329-14**

#### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: p-Terphenyl</i>	117 %	22 - 143		B7I0350	09/14/2017	09/15/17 07:59	

#### Organochlorine Pesticides by EPA 8081

Analyst: CR

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
4,4'-DDE [2C]	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
4,4'-DDT	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Aldrin	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
alpha-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
alpha-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
beta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Chlordane	ND	8.5	1	B7I0360	09/14/2017	09/15/17 14:10	
delta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Dieldrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endosulfan I	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endosulfan II	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endosulfan sulfate	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endrin aldehyde	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Endrin ketone	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:10	
gamma-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
gamma-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Heptachlor	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Heptachlor epoxide	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Methoxychlor	ND	5.0	1	B7I0360	09/14/2017	09/15/17 14:10	
Toxaphene	ND	50	1	B7I0360	09/14/2017	09/15/17 14:10	
<i>Surrogate: Decachlorobiphenyl</i>	41.8 %	11 - 118		B7I0360	09/14/2017	09/15/17 14:10	
<i>Surrogate: Tetrachloro-m-xylene</i>	42.0 %	15 - 114		B7I0360	09/14/2017	09/15/17 14:10	



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**Client Sample ID COMPOSITE # 2**

**Lab ID: 1703329-14**

### Polychlorinated Biphenyls by EPA 8082

**Analyst: CR**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1221	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1232	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1242	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1248	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1254	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1260	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1262	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
Aroclor 1268	ND	16	1	B7I0373	09/14/2017	09/15/17 17:13	
<i>Surrogate: Decachlorobiphenyl</i>	<i>51.8 %</i>	<i>18 - 136</i>		B7I0373	09/14/2017	09/15/17 17:13	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>42.0 %</i>	<i>30 - 130</i>		B7I0373	09/14/2017	09/15/17 17:13	



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 Reported : 09/20/2017

### Client Sample ID COMPOSITE # 3 Lab ID: 1703329-15

#### Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	10	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Arsenic	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
<b>Barium</b>	<b>23</b>	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Beryllium	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Cadmium	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Chromium	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Cobalt	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Copper	ND	10	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Lead	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Molybdenum	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Nickel	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Selenium	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Silver	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
Thallium	ND	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
<b>Vanadium</b>	<b>9.0</b>	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5
<b>Zinc</b>	<b>11</b>	5.0	5	B7I0365	09/14/2017	09/14/17 17:13	D5

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7I0366	09/14/2017	09/14/17 14:57	

#### Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7I0339	09/14/2017	09/14/17 14:14	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>114 %</i>	<i>50 - 138</i>		B7I0339	09/14/2017	<i>09/14/17 14:14</i>	

#### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7I0350	09/14/2017	09/15/17 07:42	
ORO	ND	10	1	B7I0350	09/14/2017	09/15/17 07:42	
<i>Surrogate: p-Terphenyl</i>	<i>122 %</i>	<i>22 - 143</i>		B7I0350	09/14/2017	<i>09/15/17 07:42</i>	



## Certificate of Analysis

APEX Companies, LLC

10675 Sorrento Valley Rd., Suite 203

San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

### Client Sample ID COMPOSITE # 3

Lab ID: 1703329-15

#### Organochlorine Pesticides by EPA 8081

Analyst: CR

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
4,4'-DDE [2C]	3.4	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
4,4'-DDT	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Aldrin	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
alpha-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
alpha-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
beta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Chlordane	ND	8.5	1	B7I0360	09/14/2017	09/15/17 14:21	
delta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Dieldrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endosulfan I	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endosulfan II	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endosulfan sulfate	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endrin aldehyde	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Endrin ketone	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:21	
gamma-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
gamma-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Heptachlor	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Heptachlor epoxide	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Methoxychlor	ND	5.0	1	B7I0360	09/14/2017	09/15/17 14:21	
Toxaphene	ND	50	1	B7I0360	09/14/2017	09/15/17 14:21	
<i>Surrogate: Decachlorobiphenyl</i>	55.9 %	11 - 118		B7I0360	09/14/2017	09/15/17 14:21	
<i>Surrogate: Tetrachloro-m-xylene</i>	53.2 %	15 - 114		B7I0360	09/14/2017	09/15/17 14:21	





## Certificate of Analysis

APEX Companies, LLC

10675 Sorrento Valley Rd., Suite 203

San Diego, CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

**Client Sample ID COMPOSITE # 3**

**Lab ID: 1703329-15**

### Polychlorinated Biphenyls by EPA 8082

**Analyst: CR**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1221	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1232	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1242	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1248	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1254	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1260	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1262	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
Aroclor 1268	ND	16	1	B7I0373	09/14/2017	09/15/17 17:32	
<i>Surrogate: Decachlorobiphenyl</i>	<i>67.7 %</i>	<i>18 - 136</i>		B7I0373	09/14/2017	09/15/17 17:32	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>53.9 %</i>	<i>30 - 130</i>		B7I0373	09/14/2017	09/15/17 17:32	



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Project Number : ARTIS-SAN MARCOS, ARTIS-053

10675 Sorrento Valley Rd., Suite 203

Report To : Ron Kofron

San Diego , CA 92121

Reported : 09/20/2017

### Client Sample ID COMPOSITE # 4

Lab ID: 1703329-16

#### Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	4.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Arsenic	3.2	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Barium	50	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Beryllium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Cadmium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Chromium	5.6	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Cobalt	3.2	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Copper	8.1	4.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Lead	5.2	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Molybdenum	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Nickel	3.3	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Selenium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Silver	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Thallium	ND	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Vanadium	23	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5
Zinc	30	2.0	2	B7I0365	09/14/2017	09/14/17 17:11	D5

#### Mercury by AA (Cold Vapor) EPA 7471A

Analyst: KEK

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B7I0366	09/14/2017	09/14/17 15:03	

#### Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	1	B7I0339	09/14/2017	09/14/17 14:32	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>113 %</i>	<i>50 - 138</i>		B7I0339	09/14/2017	09/14/17 14:32	

#### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	ND	10	1	B7I0350	09/14/2017	09/15/17 08:16	
ORO	ND	10	1	B7I0350	09/14/2017	09/15/17 08:16	



## Certificate of Analysis

APEX Companies, LLC

Project Number : ARTIS-SAN MARCOS, ARTIS-053

10675 Sorrento Valley Rd., Suite 203

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San Diego , CA 92121

Reported : 09/20/2017

### Client Sample ID COMPOSITE # 4

**Lab ID: 1703329-16**

#### Diesel Range Organics by EPA 8015B

Analyst: TKT

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: p-Terphenyl</i>	<i>121 %</i>	<i>22 - 143</i>		B7I0350	09/14/2017	<i>09/15/17 08:16</i>	

#### Organochlorine Pesticides by EPA 8081

Analyst: CR

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
4,4'-DDE [2C]	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
4,4'-DDT	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Aldrin	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
alpha-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
alpha-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
beta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Chlordane	ND	8.5	1	B7I0360	09/14/2017	09/15/17 14:31	
delta-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Dieldrin [2C]	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endosulfan I	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endosulfan II	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endosulfan sulfate	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endrin	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endrin aldehyde	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Endrin ketone	ND	2.0	1	B7I0360	09/14/2017	09/15/17 14:31	
gamma-BHC	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
gamma-Chlordane	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Heptachlor	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Heptachlor epoxide	ND	1.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Methoxychlor	ND	5.0	1	B7I0360	09/14/2017	09/15/17 14:31	
Toxaphene	ND	50	1	B7I0360	09/14/2017	09/15/17 14:31	
<i>Surrogate: Decachlorobiphenyl</i>	<i>40.8 %</i>	<i>11 - 118</i>		B7I0360	09/14/2017	<i>09/15/17 14:31</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>42.4 %</i>	<i>15 - 114</i>		B7I0360	09/14/2017	<i>09/15/17 14:31</i>	



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10675 Sorrento Valley Rd., Suite 203

San Diego, CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

**Client Sample ID COMPOSITE # 4**

**Lab ID: 1703329-16**

### Polychlorinated Biphenyls by EPA 8082

**Analyst: CR**

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1221	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1232	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1242	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1248	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1254	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1260	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1262	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
Aroclor 1268	ND	16	1	B7I0373	09/14/2017	09/15/17 17:50	
<i>Surrogate: Decachlorobiphenyl</i>	<i>65.7 %</i>	<i>18 - 136</i>		B7I0373	09/14/2017	09/15/17 17:50	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>55.5 %</i>	<i>30 - 130</i>		B7I0373	09/14/2017	09/15/17 17:50	



## Certificate of Analysis

APEX Companies, LLC  
 10675 Sorrento Valley Rd., Suite 203  
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Project Number : ARTIS-SAN MARCOS, ARTIS-053  
 Report To : Ron Kofron  
 Reported : 09/20/2017

### QUALITY CONTROL SECTION

#### Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result	PQL	MDL	Spike	Source	% Rec	% Rec	RPD	RPD	Notes
	(mg/kg)	(mg/kg)	(mg/kg)	Level	Result	% Rec	Limits	RPD	Limit	

**Batch B710365 - EPA 3050B\_S**

**Blank (B710365-BLK1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Antimony	ND	2.0	0.51
Arsenic	ND	1.0	0.12
Barium	ND	1.0	0.12
Beryllium	ND	1.0	0.03
Cadmium	ND	1.0	0.14
Chromium	ND	1.0	0.26
Cobalt	ND	1.0	0.07
Copper	ND	2.0	0.19
Lead	ND	1.0	0.18
Molybdenum	ND	1.0	0.12
Nickel	ND	1.0	0.18
Selenium	ND	1.0	0.40
Silver	ND	1.0	0.12
Thallium	ND	1.0	0.38
Vanadium	ND	1.0	0.06
Zinc	ND	1.0	0.15

**LCS (B710365-BS1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Antimony	46.0489	2.0	0.51	50.0000	92.1	80 - 120
Arsenic	44.1739	1.0	0.12	50.0000	88.3	80 - 120
Barium	45.4366	1.0	0.12	50.0000	90.9	80 - 120
Beryllium	44.2220	1.0	0.03	50.0000	88.4	80 - 120
Cadmium	42.3671	1.0	0.14	50.0000	84.7	80 - 120
Chromium	45.6969	1.0	0.26	50.0000	91.4	80 - 120
Cobalt	45.9687	1.0	0.07	50.0000	91.9	80 - 120
Copper	45.4251	2.0	0.19	50.0000	90.9	80 - 120
Lead	44.7094	1.0	0.18	50.0000	89.4	80 - 120
Molybdenum	45.5151	1.0	0.12	50.0000	91.0	80 - 120
Nickel	44.4334	1.0	0.18	50.0000	88.9	80 - 120
Selenium	41.6827	1.0	0.40	50.0000	83.4	80 - 120
Silver	43.7524	1.0	0.12	50.0000	87.5	80 - 120
Thallium	46.1231	1.0	0.38	50.0000	92.2	80 - 120
Vanadium	45.6155	1.0	0.06	50.0000	91.2	80 - 120
Zinc	42.7502	1.0	0.15	50.0000	85.5	80 - 120

**Matrix Spike (B710365-MS1)**

Source: 1703329-16

Prepared: 9/14/2017 Analyzed: 9/14/2017

Antimony	56.3879	2.0	0.51	125.000	0.656492	44.6	33 - 98
Arsenic	84.1096	1.0	0.12	125.000	3.21263	64.7	48 - 101
Barium	130.819	1.0	0.12	125.000	50.2131	64.5	25 - 131
Beryllium	85.5540	1.0	0.03	125.000	0.198208	68.3	56 - 97



## Certificate of Analysis

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San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

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### Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B7I0365 - EPA 3050B\_S (continued)**

**Matrix Spike (B7I0365-MS1) - Continued**

Source: 1703329-16

Prepared: 9/14/2017 Analyzed: 9/14/2017

Cadmium	77.6254	1.0	0.14	125.000	ND	62.1	53 - 94		
Chromium	88.4362	1.0	0.26	125.000	5.61286	66.3	45 - 113		
Cobalt	85.2996	1.0	0.07	125.000	3.22656	65.7	51 - 97		
Copper	93.8398	2.0	0.19	125.000	8.06116	68.6	51 - 113		
Lead	85.9146	1.0	0.18	125.000	5.23999	64.5	33 - 127		
Molybdenum	80.8842	1.0	0.12	125.000	0.322632	64.4	54 - 97		
Nickel	82.6118	1.0	0.18	125.000	3.25865	63.5	46 - 102		
Selenium	78.7569	1.0	0.40	125.000	0.659125	62.5	52 - 93		
Silver	83.3988	1.0	0.12	125.000	ND	66.7	58 - 98		
Thallium	80.3740	1.0	0.38	125.000	ND	64.3	46 - 93		
Vanadium	102.638	1.0	0.06	125.000	23.4147	63.4	55 - 104		
Zinc	103.044	1.0	0.15	125.000	30.4844	58.0	26 - 118		

**Matrix Spike Dup (B7I0365-MSD1)**

Source: 1703329-16

Prepared: 9/14/2017 Analyzed: 9/14/2017

Antimony	62.1237	2.0	0.51	125.000	0.656492	49.2	33 - 98	9.68	20
Arsenic	86.4115	1.0	0.12	125.000	3.21263	66.6	48 - 101	2.70	20
Barium	128.488	1.0	0.12	125.000	50.2131	62.6	25 - 131	1.80	20
Beryllium	87.2174	1.0	0.03	125.000	0.198208	69.6	56 - 97	1.93	20
Cadmium	79.1767	1.0	0.14	125.000	ND	63.3	53 - 94	1.98	20
Chromium	90.5476	1.0	0.26	125.000	5.61286	67.9	45 - 113	2.36	20
Cobalt	87.0260	1.0	0.07	125.000	3.22656	67.0	51 - 97	2.00	20
Copper	96.9199	2.0	0.19	125.000	8.06116	71.1	51 - 113	3.23	20
Lead	87.2446	1.0	0.18	125.000	5.23999	65.6	33 - 127	1.54	20
Molybdenum	83.7660	1.0	0.12	125.000	0.322632	66.8	54 - 97	3.50	20
Nickel	85.3225	1.0	0.18	125.000	3.25865	65.7	46 - 102	3.23	20
Selenium	79.8650	1.0	0.40	125.000	0.659125	63.4	52 - 93	1.40	20
Silver	85.2758	1.0	0.12	125.000	ND	68.2	58 - 98	2.23	20
Thallium	81.9492	1.0	0.38	125.000	ND	65.6	46 - 93	1.94	20
Vanadium	103.736	1.0	0.06	125.000	23.4147	64.3	55 - 104	1.06	20
Zinc	107.502	1.0	0.15	125.000	30.4844	61.6	26 - 118	4.23	20



## Certificate of Analysis

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Project Number : ARTIS-SAN MARCOS, ARTIS-053  
 Report To : Ron Kofron  
 Reported : 09/20/2017

### Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
<b>Batch B710366 - EPA 7471_S</b>										
<b>Blank (B710366-BLK1)</b>					Prepared: 9/14/2017 Analyzed: 9/14/2017					
Mercury	ND	0.10	0.005							
<b>LCS (B710366-BS1)</b>					Prepared: 9/14/2017 Analyzed: 9/14/2017					
Mercury	0.878573	0.10	0.005	0.833333		105	80 - 120			
<b>Matrix Spike (B710366-MS1)</b>					Source: 1703324-01 Prepared: 9/14/2017 Analyzed: 9/14/2017					
Mercury	0.997894	0.10	0.005	0.833333	0.013072	118	70 - 130			
<b>Matrix Spike Dup (B710366-MSD1)</b>					Source: 1703324-01 Prepared: 9/14/2017 Analyzed: 9/14/2017					
Mercury	1.00602	0.10	0.005	0.833333	0.013072	119	70 - 130	0.811	20	
<b>Post Spike (B710366-PS1)</b>					Source: 1703324-01 Prepared: 9/14/2017 Analyzed: 9/14/2017					
Mercury	0.006583			5.00000E-3	0.000157	129	85 - 115			M1



## Certificate of Analysis

APEX Companies, LLC  
 10675 Sorrento Valley Rd., Suite 203  
 San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053  
 Report To : Ron Kofron  
 Reported : 09/20/2017

### Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B710339 - GCVOA\_S**

**Blank (B710339-BLK1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Gasoline Range Organics	ND	1.0	0.20						
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*Surrogate: 4-Bromofluorobenzene*      0.2280                0.200000           114      50 - 138

**LCS (B710339-BS1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Gasoline Range Organics	4.04600	1.0	0.20	5.00000		80.9	70 - 130		
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*Surrogate: 4-Bromofluorobenzene*      0.2164                0.200000           108      50 - 138

**Matrix Spike (B710339-MS1)**

**Source: 1703269-10**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Gasoline Range Organics	4.00500	1.0	0.20	5.00000	ND	80.1	17 - 141		
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*Surrogate: 4-Bromofluorobenzene*      0.2331                0.200000           117      50 - 138

**Matrix Spike Dup (B710339-MSD1)**

**Source: 1703269-10**

Prepared: 9/14/2017 Analyzed: 9/14/2017

Gasoline Range Organics	3.99400	1.0	0.20	5.00000	ND	79.9	17 - 141	0.275	20
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*Surrogate: 4-Bromofluorobenzene*      0.2298                0.200000           115      50 - 138





## Certificate of Analysis

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 Reported : 09/20/2017

### Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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**Batch B710350 - GCSEMI\_DRO\_S**

**Blank (B710350-BLK1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

DRO	ND	10	10						
ORO	ND	10	10						

<i>Surrogate: p-Terphenyl</i>	93.35			80.0000		117	22 - 143		
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**LCS (B710350-BS1)**

Prepared: 9/14/2017 Analyzed: 9/14/2017

DRO	1300.74	10	10	1000.00		130	30 - 133		
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<i>Surrogate: p-Terphenyl</i>	94.93			80.0000		119	22 - 143		
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**Matrix Spike (B710350-MS1)**

Source: 1703269-10

Prepared: 9/14/2017 Analyzed: 9/14/2017

DRO	1353.42	10	10	1000.00	ND	135	13 - 148		
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<i>Surrogate: p-Terphenyl</i>	90.87			80.0000		114	22 - 143		
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**Matrix Spike Dup (B710350-MSD1)**

Source: 1703269-10

Prepared: 9/14/2017 Analyzed: 9/14/2017

DRO	1315.69	10	10	1000.00	ND	132	13 - 148	2.83	20
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<i>Surrogate: p-Terphenyl</i>	91.35			80.0000		114	22 - 143		
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Project Number : ARTIS-SAN MARCOS, ARTIS-053  
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 Reported : 09/20/2017

### Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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**Batch B7I0360 - GCSEMI\_PCB/PEST\_S**

**Blank (B7I0360-BLK1)**

Prepared: 9/14/2017 Analyzed: 9/15/2017

4,4'-DDD	ND	2.0	0.10
4,4'-DDD [2C]	ND	2.0	0.10
4,4'-DDE	ND	2.0	0.07
4,4'-DDE [2C]	ND	2.0	0.07
4,4'-DDT	ND	2.0	0.14
4,4'-DDT [2C]	ND	2.0	0.14
Aldrin	ND	1.0	0.08
Aldrin [2C]	ND	1.0	0.08
alpha-BHC	ND	1.0	0.04
alpha-BHC [2C]	ND	1.0	0.04
alpha-Chlordane	ND	1.0	0.04
alpha-Chlordane [2C]	ND	1.0	0.04
beta-BHC	ND	1.0	0.04
beta-BHC [2C]	ND	1.0	0.04
Chlordane	ND	8.5	0.90
Chlordane [2C]	ND	8.5	0.90
delta-BHC	ND	1.0	0.04
delta-BHC [2C]	ND	1.0	0.04
Dieldrin	ND	2.0	0.05
Dieldrin [2C]	ND	2.0	0.05
Endosulfan I	ND	1.0	0.04
Endosulfan I [2C]	ND	1.0	0.04
Endosulfan II	ND	2.0	0.10
Endosulfan II [2C]	ND	2.0	0.10
Endosulfan sulfate	ND	2.0	0.06
Endosulfan Sulfate [2C]	ND	2.0	0.06
Endrin	ND	2.0	0.08
Endrin [2C]	ND	2.0	0.08
Endrin aldehyde	ND	2.0	0.09
Endrin aldehyde [2C]	ND	2.0	0.09
Endrin ketone	ND	2.0	0.07
Endrin ketone [2C]	ND	2.0	0.07
gamma-BHC	ND	1.0	0.05
gamma-BHC [2C]	ND	1.0	0.05
gamma-Chlordane	ND	1.0	0.04
gamma-Chlordane [2C]	ND	1.0	0.04
Heptachlor	ND	1.0	0.07
Heptachlor [2C]	ND	1.0	0.07
Heptachlor epoxide	ND	1.0	0.04
Heptachlor epoxide [2C]	ND	1.0	0.04
Methoxychlor	ND	5.0	0.10



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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**Batch B7I0360 - GCSEMI\_PCB/PEST\_S (continued)**

**Blank (B7I0360-BLK1) - Continued**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Methoxychlor [2C]	ND	5.0	0.10
Toxaphene	ND	50	8.2
Toxaphene [2C]	ND	50	8.2

<i>Surrogate: Decachlorobiphenyl</i>	<i>14.54</i>		<i>16.6667</i>	<i>87.2</i>	<i>11 - 118</i>
<i>Surrogate: Decachlorobiphenyl [</i>	<i>15.42</i>		<i>16.6667</i>	<i>92.5</i>	<i>11 - 118</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>13.12</i>		<i>16.6667</i>	<i>78.7</i>	<i>15 - 114</i>
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>13.67</i>		<i>16.6667</i>	<i>82.0</i>	<i>15 - 114</i>

**LCS (B7I0360-BS1)**

Prepared: 9/14/2017 Analyzed: 9/15/2017

4,4'-DDD	18.4167	2.0	0.10	16.6667	110	59 - 125
4,4'-DDD [2C]	17.4818	2.0	0.10	16.6667	105	59 - 125
4,4'-DDE	15.8832	2.0	0.07	16.6667	95.3	64 - 114
4,4'-DDE [2C]	16.2212	2.0	0.07	16.6667	97.3	64 - 114
4,4'-DDT	13.9403	2.0	0.14	16.6667	83.6	24 - 141
4,4'-DDT [2C]	13.9683	2.0	0.14	16.6667	83.8	24 - 141
Aldrin	15.2363	1.0	0.08	16.6667	91.4	68 - 108
Aldrin [2C]	14.6560	1.0	0.08	16.6667	87.9	68 - 108
alpha-BHC	15.7137	1.0	0.04	16.6667	94.3	69 - 110
alpha-BHC [2C]	15.1770	1.0	0.04	16.6667	91.1	69 - 110
alpha-Chlordane	15.5872	1.0	0.04	16.6667	93.5	64 - 114
alpha-Chlordane [2C]	15.1878	1.0	0.04	16.6667	91.1	64 - 114
beta-BHC	15.2775	1.0	0.04	16.6667	91.7	66 - 108
beta-BHC [2C]	15.1913	1.0	0.04	16.6667	91.1	66 - 108
delta-BHC	14.1035	1.0	0.04	16.6667	84.6	39 - 114
delta-BHC [2C]	13.8575	1.0	0.04	16.6667	83.1	39 - 114
Dieldrin	14.8388	2.0	0.05	16.6667	89.0	66 - 117
Dieldrin [2C]	14.5818	2.0	0.05	16.6667	87.5	66 - 117
Endosulfan I	14.5438	1.0	0.04	16.6667	87.3	64 - 112
Endosulfan I [2C]	14.1990	1.0	0.04	16.6667	85.2	64 - 112
Endosulfan II	16.3727	2.0	0.10	16.6667	98.2	61 - 120
Endosulfan II [2C]	16.0253	2.0	0.10	16.6667	96.2	61 - 120
Endosulfan sulfate	17.0440	2.0	0.06	16.6667	102	54 - 114
Endosulfan Sulfate [2C]	16.4203	2.0	0.06	16.6667	98.5	54 - 114
Endrin	16.6458	2.0	0.08	16.6667	99.9	68 - 124
Endrin [2C]	16.1975	2.0	0.08	16.6667	97.2	68 - 124
Endrin aldehyde	16.2358	2.0	0.09	16.6667	97.4	61 - 116
Endrin aldehyde [2C]	13.9445	2.0	0.09	16.6667	83.7	61 - 116
Endrin ketone	18.0887	2.0	0.07	16.6667	109	47 - 129
Endrin ketone [2C]	17.1530	2.0	0.07	16.6667	103	47 - 129
gamma-BHC	15.4605	1.0	0.05	16.6667	92.8	69 - 115
gamma-BHC [2C]	14.7825	1.0	0.05	16.6667	88.7	69 - 115



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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**Batch B710360 - GCSEMI\_PCB/PEST\_S (continued)**

**LCS (B710360-BS1) - Continued**

Prepared: 9/14/2017 Analyzed: 9/15/2017

gamma-Chlordane	14.9348	1.0	0.04	16.6667		89.6	64 - 111			
gamma-Chlordane [2C]	14.6770	1.0	0.04	16.6667		88.1	64 - 111			
Heptachlor	16.4037	1.0	0.07	16.6667		98.4	67 - 115			
Heptachlor [2C]	15.5743	1.0	0.07	16.6667		93.4	67 - 115			
Heptachlor epoxide	14.8680	1.0	0.04	16.6667		89.2	67 - 109			
Heptachlor epoxide [2C]	14.2717	1.0	0.04	16.6667		85.6	67 - 109			
Methoxychlor	16.7015	5.0	0.10	16.6667		100	27 - 139			
Methoxychlor [2C]	16.2883	5.0	0.10	16.6667		97.7	27 - 139			
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<i>Surrogate: Decachlorobiphenyl</i>	<i>14.39</i>			<i>16.6667</i>		<i>86.3</i>	<i>11 - 118</i>			
<i>Surrogate: Decachlorobiphenyl [</i>	<i>15.14</i>			<i>16.6667</i>		<i>90.9</i>	<i>11 - 118</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>14.17</i>			<i>16.6667</i>		<i>85.0</i>	<i>15 - 114</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>15.37</i>			<i>16.6667</i>		<i>92.2</i>	<i>15 - 114</i>			

**Matrix Spike (B710360-MS1)**

Source: 1703320-08

Prepared: 9/14/2017 Analyzed: 9/15/2017

4,4'-DDD	12.7710	2.0	0.10	16.6667	ND	76.6	0 - 151			
4,4'-DDD [2C]	12.0387	2.0	0.10	16.6667	ND	72.2	0 - 151			
4,4'-DDE	10.9552	2.0	0.07	16.6667	0.094667	65.2	4 - 144			
4,4'-DDE [2C]	11.2013	2.0	0.07	16.6667	0.123167	66.5	4 - 144			
4,4'-DDT	9.45017	2.0	0.14	16.6667	ND	56.7	0 - 158			
4,4'-DDT [2C]	10.4982	2.0	0.14	16.6667	ND	63.0	0 - 158			
Aldrin	10.2385	1.0	0.08	16.6667	ND	61.4	12 - 128			
Aldrin [2C]	10.2745	1.0	0.08	16.6667	ND	61.6	12 - 128			
alpha-BHC	11.3435	1.0	0.04	16.6667	ND	68.1	1 - 131			
alpha-BHC [2C]	11.6243	1.0	0.04	16.6667	ND	69.7	1 - 131			
alpha-Chlordane	10.7490	1.0	0.04	16.6667	ND	64.5	1 - 137			
alpha-Chlordane [2C]	10.4395	1.0	0.04	16.6667	ND	62.6	1 - 137			
beta-BHC	10.9947	1.0	0.04	16.6667	ND	66.0	0 - 138			
beta-BHC [2C]	11.7483	1.0	0.04	16.6667	ND	70.5	0 - 138			
delta-BHC	9.88867	1.0	0.04	16.6667	ND	59.3	14 - 116			
delta-BHC [2C]	10.2730	1.0	0.04	16.6667	ND	61.6	14 - 116			
Dieldrin	10.1815	2.0	0.05	16.6667	ND	61.1	0 - 150			
Dieldrin [2C]	10.1557	2.0	0.05	16.6667	ND	60.9	0 - 150			
Endosulfan I	9.78250	1.0	0.04	16.6667	ND	58.7	0 - 141			
Endosulfan I [2C]	9.84483	1.0	0.04	16.6667	ND	59.1	0 - 141			
Endosulfan II	11.4052	2.0	0.10	16.6667	ND	68.4	24 - 133			
Endosulfan II [2C]	11.4222	2.0	0.10	16.6667	ND	68.5	24 - 133			
Endosulfan sulfate	11.7842	2.0	0.06	16.6667	ND	70.7	25 - 122			
Endosulfan Sulfate [2C]	11.5497	2.0	0.06	16.6667	ND	69.3	25 - 122			
Endrin	11.6077	2.0	0.08	16.6667	ND	69.6	0 - 160			
Endrin [2C]	11.4217	2.0	0.08	16.6667	ND	68.5	0 - 160			
Endrin aldehyde	11.4788	2.0	0.09	16.6667	ND	68.9	18 - 129			



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### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B7I0360 - GCSEMI\_PCB/PEST\_S (continued)**

**Matrix Spike (B7I0360-MS1) - Continued**

**Source: 1703320-08**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Endrin aldehyde [2C]	7.75083	2.0	0.09	16.6667	ND	46.5	18 - 129			
Endrin ketone	12.8400	2.0	0.07	16.6667	ND	77.0	24 - 133			
Endrin ketone [2C]	12.1338	2.0	0.07	16.6667	ND	72.8	24 - 133			
gamma-BHC	10.8423	1.0	0.05	16.6667	ND	65.1	0 - 143			
gamma-BHC [2C]	10.8530	1.0	0.05	16.6667	ND	65.1	0 - 143			
gamma-Chlordane	10.4608	1.0	0.04	16.6667	ND	62.8	0 - 145			
gamma-Chlordane [2C]	10.0588	1.0	0.04	16.6667	ND	60.4	0 - 145			
Heptachlor	11.3668	1.0	0.07	16.6667	ND	68.2	12 - 132			
Heptachlor [2C]	11.1677	1.0	0.07	16.6667	ND	67.0	12 - 132			
Heptachlor epoxide	10.2990	1.0	0.04	16.6667	ND	61.8	0 - 140			
Heptachlor epoxide [2C]	9.98083	1.0	0.04	16.6667	ND	59.9	0 - 140			
Methoxychlor	12.1815	5.0	0.10	16.6667	ND	73.1	1 - 157			
Methoxychlor [2C]	11.8920	5.0	0.10	16.6667	ND	71.4	1 - 157			

<i>Surrogate: Decachlorobiphenyl</i>	8.764			16.6667		52.6	11 - 118			
<i>Surrogate: Decachlorobiphenyl [</i>	9.897			16.6667		59.4	11 - 118			
<i>Surrogate: Tetrachloro-m-xylene</i>	5.661			16.6667		34.0	15 - 114			
<i>Surrogate: Tetrachloro-m-xylene</i>	7.035			16.6667		42.2	15 - 114			

**Matrix Spike Dup (B7I0360-MSD1)**

**Source: 1703320-08**

Prepared: 9/14/2017 Analyzed: 9/15/2017

4,4'-DDD	12.8338	2.0	0.10	16.6667	ND	77.0	0 - 151	0.491	20	
4,4'-DDD [2C]	12.2333	2.0	0.10	16.6667	ND	73.4	0 - 151	1.60	20	
4,4'-DDE	11.2233	2.0	0.07	16.6667	0.094667	66.8	4 - 144	2.42	20	
4,4'-DDE [2C]	11.4645	2.0	0.07	16.6667	0.123167	68.0	4 - 144	2.32	20	
4,4'-DDT	9.42250	2.0	0.14	16.6667	ND	56.5	0 - 158	0.293	20	
4,4'-DDT [2C]	10.2665	2.0	0.14	16.6667	ND	61.6	0 - 158	2.23	20	
Aldrin	10.5073	1.0	0.08	16.6667	ND	63.0	12 - 128	2.59	20	
Aldrin [2C]	10.3382	1.0	0.08	16.6667	ND	62.0	12 - 128	0.618	20	
alpha-BHC	11.5092	1.0	0.04	16.6667	ND	69.1	1 - 131	1.45	20	
alpha-BHC [2C]	11.5182	1.0	0.04	16.6667	ND	69.1	1 - 131	0.917	20	
alpha-Chlordane	11.0115	1.0	0.04	16.6667	ND	66.1	1 - 137	2.41	20	
alpha-Chlordane [2C]	10.6847	1.0	0.04	16.6667	ND	64.1	1 - 137	2.32	20	
beta-BHC	11.0182	1.0	0.04	16.6667	ND	66.1	0 - 138	0.214	20	
beta-BHC [2C]	11.4205	1.0	0.04	16.6667	ND	68.5	0 - 138	2.83	20	
delta-BHC	10.0843	1.0	0.04	16.6667	ND	60.5	14 - 116	1.96	20	
delta-BHC [2C]	10.2200	1.0	0.04	16.6667	ND	61.3	14 - 116	0.517	20	
Dieldrin	10.4443	2.0	0.05	16.6667	ND	62.7	0 - 150	2.55	20	
Dieldrin [2C]	10.3917	2.0	0.05	16.6667	ND	62.4	0 - 150	2.30	20	
Endosulfan I	10.0095	1.0	0.04	16.6667	ND	60.1	0 - 141	2.29	20	
Endosulfan I [2C]	10.0717	1.0	0.04	16.6667	ND	60.4	0 - 141	2.28	20	
Endosulfan II	11.5943	2.0	0.10	16.6667	ND	69.6	24 - 133	1.64	20	
Endosulfan II [2C]	11.4860	2.0	0.10	16.6667	ND	68.9	24 - 133	0.557	20	



## Certificate of Analysis

APEX Companies, LLC

10675 Sorrento Valley Rd., Suite 203

San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

### Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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**Batch B7I0360 - GCSEMI\_PCB/PEST\_S (continued)**

**Matrix Spike Dup (B7I0360-MSD1) - Continued**

**Source: 1703320-08**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Endosulfan sulfate	11.9985	2.0	0.06	16.6667	ND	72.0	25 - 122	1.80	20	
Endosulfan Sulfate [2C]	11.8310	2.0	0.06	16.6667	ND	71.0	25 - 122	2.41	20	
Endrin	11.7532	2.0	0.08	16.6667	ND	70.5	0 - 160	1.25	20	
Endrin [2C]	11.6532	2.0	0.08	16.6667	ND	69.9	0 - 160	2.01	20	
Endrin aldehyde	11.8180	2.0	0.09	16.6667	ND	70.9	18 - 129	2.91	20	
Endrin aldehyde [2C]	8.01133	2.0	0.09	16.6667	ND	48.1	18 - 129	3.31	20	
Endrin ketone	13.0348	2.0	0.07	16.6667	ND	78.2	24 - 133	1.51	20	
Endrin ketone [2C]	12.4162	2.0	0.07	16.6667	ND	74.5	24 - 133	2.30	20	
gamma-BHC	11.0122	1.0	0.05	16.6667	ND	66.1	0 - 143	1.55	20	
gamma-BHC [2C]	10.8625	1.0	0.05	16.6667	ND	65.2	0 - 143	0.0875	20	
gamma-Chlordane	10.7240	1.0	0.04	16.6667	ND	64.3	0 - 145	2.48	20	
gamma-Chlordane [2C]	10.3065	1.0	0.04	16.6667	ND	61.8	0 - 145	2.43	20	
Heptachlor	11.5678	1.0	0.07	16.6667	ND	69.4	12 - 132	1.75	20	
Heptachlor [2C]	11.1448	1.0	0.07	16.6667	ND	66.9	12 - 132	0.205	20	
Heptachlor epoxide	10.5585	1.0	0.04	16.6667	ND	63.4	0 - 140	2.49	20	
Heptachlor epoxide [2C]	10.2083	1.0	0.04	16.6667	ND	61.2	0 - 140	2.25	20	
Methoxychlor	12.5158	5.0	0.10	16.6667	ND	75.1	1 - 157	2.71	20	
Methoxychlor [2C]	12.1887	5.0	0.10	16.6667	ND	73.1	1 - 157	2.46	20	
<i>Surrogate: Decachlorobiphenyl</i>	8.888			16.6667		53.3	11 - 118			
<i>Surrogate: Decachlorobiphenyl [</i>	9.799			16.6667		58.8	11 - 118			
<i>Surrogate: Tetrachloro-m-xylene</i>	5.720			16.6667		34.3	15 - 114			
<i>Surrogate: Tetrachloro-m-xylene</i>	6.952			16.6667		41.7	15 - 114			



## Certificate of Analysis

APEX Companies, LLC  
 10675 Sorrento Valley Rd., Suite 203  
 San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053  
 Report To : Ron Kofron  
 Reported : 09/20/2017

### Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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**Batch B7I0373 - GCSEMI\_PCB/PEST\_S**

**Blank (B7I0373-BLK1)**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Aroclor 1016	ND	16	4.6
Aroclor 1221	ND	16	4.6
Aroclor 1232	ND	16	4.6
Aroclor 1242	ND	16	4.6
Aroclor 1248	ND	16	4.6
Aroclor 1254	ND	16	4.6
Aroclor 1260	ND	16	4.6
Aroclor 1262	ND	16	4.6
Aroclor 1268	ND	16	4.6

<i>Surrogate: Decachlorobiphenyl</i>	13.04		16.6667	78.2	18 - 136
<i>Surrogate: Tetrachloro-m-xylene</i>	12.97		16.6667	77.8	30 - 130

**LCS (B7I0373-BS1)**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Aroclor 1016	143.442	16	4.6	166.667
Aroclor 1260	159.117	16	4.6	166.667

86.1	73 - 111
95.5	75 - 125

<i>Surrogate: Decachlorobiphenyl</i>	14.19		16.6667	85.1	18 - 136
<i>Surrogate: Tetrachloro-m-xylene</i>	13.27		16.6667	79.6	30 - 130

**Matrix Spike (B7I0373-MS1)**

**Source: 1703329-14**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Aroclor 1016	122.190	16	4.6	166.667	ND	73.3	36 - 127
Aroclor 1260	139.703	16	4.6	166.667	ND	83.8	31 - 142

<i>Surrogate: Decachlorobiphenyl</i>	4.071		16.6667	24.4	18 - 136
<i>Surrogate: Tetrachloro-m-xylene</i>	10.27		16.6667	61.6	30 - 130

**Matrix Spike Dup (B7I0373-MSD1)**

**Source: 1703329-14**

Prepared: 9/14/2017 Analyzed: 9/15/2017

Aroclor 1016	122.289	16	4.6	166.667	ND	73.4	36 - 127	0.0804	20
Aroclor 1260	137.604	16	4.6	166.667	ND	82.6	31 - 142	1.51	20

<i>Surrogate: Decachlorobiphenyl</i>	11.84		16.6667	71.0	18 - 136
<i>Surrogate: Tetrachloro-m-xylene</i>	10.17		16.6667	61.0	30 - 130



## Certificate of Analysis

APEX Companies, LLC

10675 Sorrento Valley Rd., Suite 203

San Diego , CA 92121

Project Number : ARTIS-SAN MARCOS, ARTIS-053

Report To : Ron Kofron

Reported : 09/20/2017

### Notes and Definitions

M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D5	Sample diluted due to failing internal standard in the original run.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

#### Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.



# CHAIN OF CUSTODY RECORD

Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt					
		Condition	Y	N	Condition	Y	N
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	1. CHILLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. # OF SAMPLES MATCH COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	2. HEADSPACE (VOL)	<input type="checkbox"/>	<input type="checkbox"/>	6. PRESERVED	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> GSO		3. CONTAINER INTACT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. COOLER TEMP, deg C	4.7	
<input type="checkbox"/> Other:		4. SEALED	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

CUSTOMER	Company: <b>APEX COMPANIES LLC</b>	Address:	Tel:
	SEND REPORT TO: Attn: <b>RON KOFRON</b> Email:	City: State: Zip:	SEND INVOICE TO: Email: <input type="checkbox"/> same as SEND REPORT TO
	Company:	City: State: Zip:	Attn: <b>KOFRON</b> Email:
	Address: <b>10675 SORRENTO VALLEY ROAD</b>	City: <b>SAN DIEGO</b> State: <b>CA</b> Zip: <b>92121</b>	Company:

PROJECT SAMPLES	Project Name: <b>ARTIS-SAN MARCOS</b>	Quote No: <b>E171051</b>	Special Instructions/Comments: <b>CREATE 4 COMPOSITE SAMPLES: 1-3 8-9 4-6 10-12</b>		Encircle or Write Requested Analysis												Encircle Sample Matrix				Container	QA/QC			
	Project No.: <b>ARTIS-053</b>	PO #:			8260 / 624 (Volatiles)	8015 (Pb)	8015 (Pb) + <b>ORO</b>	8270 (Semi-volatiles)	8081 (Organochlorine Pesticides)	8082 (CBs)	6010 7000 (Title 22 Metals)	TO-15	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL	TAT	#	Type: 1=Tube, 2=VOL, 3=Liter, 4=Ring, 5=Jar, 6=Canister, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=CC, 5=Zn, 6=NaOH, 7=NAAS203	REMARKS	<input type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV	
	Sampler: <b>KOFRON</b>				1	1703329-01	S-1	9/12/17	549																
					2	-02	S-2	COMPOSITE #1	551	XX	XXX								5						
					3	-03	S-3		553																
					4	-04	S-4		554																
					5	-05	S-5	COMPOSITE #2	555	XX	XXX								5						
					6	-06	S-6		556																
					7	-07	S-7		557																
					8	-08	S-8	COMPOSITE #3	558	XX	XXX								5						
				9	-09	S-9	559																		
				10			GO TO PAGE 2																		

S Page 27 of 28	1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM. 2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM. 3. The following turnaround time conditions apply: TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM) TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM) TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM) TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM) TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM) 4. Weekend, holiday, after-hours work - ask for quote. 5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab - ask for quote. 6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples. 7. Electronic records maintained for five (5) years from report date. 8. Hard copy reports will be disposed of after 45 calendar days from report date. 9. Storage and Report Fees: - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested. - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20/ sample/week if extended storage is requested. - Hard copy and regenerated reports/EDDs: \$17.50 per hard copy report requested; \$50.00 per regenerated/reformat ed report; \$35 per reprocessed EDD. 10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure. 11. Unanalyzed samples will incur a disposal fee of \$7 per sample.	
	Relinquished by: (Signature and Printed Name) <b>[Signature]</b> Date: <b>9/13/17</b> Time: <b>2:00 PM</b>	Received by: (Signature and Printed Name) <b>[Signature]</b> Date: <b>9/13/17</b> Time: <b>14:00</b>
	Relinquished by: (Signature and Printed Name) <b>[Signature]</b> Date: <b>9/13/17</b> Time: <b>17:50</b>	Received by: (Signature and Printed Name) <b>[Signature]</b> Date: <b>9/13/17</b> Time: <b>17:50</b>

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

**R. KOFRON** **[Signature]**  
Submitter Print Name Signature

# CHAIN OF CUSTODY RECORD

Instruction: Complete all shaded areas.

Method of Transport		Sample Conditions Upon Receipt						
		Condition		Y	N	Condition		Y
<input type="checkbox"/> Client	<input checked="" type="checkbox"/> ATL	1. CHILLED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5. # OF SAMPLES MATCH COC		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> FedEx	<input type="checkbox"/> OnTrac	2. HEADSPACE (VDA)	<input type="checkbox"/>	<input type="checkbox"/>	6. PRESERVED		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> GSO		3. CONTAINER INTACT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. COOLER TEMP, deg C:			
<input type="checkbox"/> Other: _____		4. SEALED	<input type="checkbox"/>	<input checked="" type="checkbox"/>				

CUSTOMER

Company: <b>ADEX COMPANIES LLC</b>		Address:		Tel:	
Attn: <b>KOFFRON</b>		City:		Fax:	
SEND REPORT TO:		SEND INVOICE TO:		<input type="checkbox"/> same as SEND REPORT TO	
Email:		Email:			
Company:		Company:			
Address:		Address:			
City:		City:		State: Zip:	

PROJECT SAMPLES

ITEM	Lab No.	Sample Description	Date	Time	Encircle or Write Requested Analysis										Encircle Sample Matrix					TAT	Container #	Type: 1=Tube, 2=Vial, 3=Liter, 4=Pin, 5=Jar, 6=Can, 7=Canister	Material: 1=Glass, 2=Plastic, 3=Metal	Preservative: 1=HCl, 2=HNO3, 3=H2SO4, 4=AC, 5=Zn (Ac/2), 6=NaOH, 7=Na2S2O3	REMARKS	QA/QC <input type="checkbox"/> Routine <input type="checkbox"/> Caltrans <input type="checkbox"/> Legal <input type="checkbox"/> RWQCB <input type="checkbox"/> Level IV								
					8260 / 624 (Volatiles)	6015 (GRO)	8015 (DRO) + GRO	8270 (Semi-volatiles)	8081 (Organochlorine Pesticides)	8082 (P2Bs)	6010 / 2000 (Title 22 Metals)	TO-15	SOIL / SEDIMENT / SLUDGE	SOLIDS / WIPE / FILTER	WATER - DRINKING / GROUND	WATER - STORM / WASTE	AQUEOUS / LAYERED - OIL																	
1	1703329-10	S-10 COMPOSITE	9/12/17	600																														
2	1-11	S-11 #4		602																														
3	1-12	S-12		605																														
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		

Page 28 of 28

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- Hard copy reports will be disposed of after 45 calendar days from report date.
- Storage and Report Fees:  
- Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; \$2/sample/month if extended storage or hold is requested.  
- Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; \$20/sample/week if extended storage is requested.  
- Hard copy and regenerated reports/EDDs: \$17.50 per hard copy report requested; \$50.00 per regenerated/reformat ed report; \$35 per reprocessed EDD.
- Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
- Unanalyzed samples will incur a disposal fee of \$7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

**R. KOFFRON**  
Submitter Print Name

*[Signature]*  
Signature

Relinquished by: (Signature and Printed Name)	Date: <b>9/13/17</b>	Time: <b>2:00P</b>	Received by: (Signature and Printed Name)	Date: <b>9/13/17</b>	Time: <b>14:00</b>
Relinquished by: (Signature and Printed Name)	Date: <b>9/13/17</b>	Time: <b>12:50</b>	Received by: (Signature and Printed Name)	Date: <b>9/13/17</b>	Time: <b>17:50</b>
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time: