



July 7, 2014

Mr. Jim Mueller  
Provectus  
2871 West Forest Road, Suite 2  
Freeport, IL 61032

**RE: Provect-CH4 Metals Results**

Dear Jim:

A test was performed on a sample of Provect-CH4 for analysis of leachable metals using the Synthetic Precipitation Leaching Procedure (SPLP). The metals results are summarized below and the laboratory report is attached for your reference.

Metal	SPLP Final pH	Maximum Contaminant Level (mg/L)	SPLP Concentration (mg/L)
Antimony	6.15	0.006	< 0.0010
Arsenic		0.010	0.0066
Cadmium		0.005	0.0012
Chromium		0.1	0.0025
Lead		0.015	< 0.0010
Mercury		0.002	< 0.0004
Selenium		0.05	0.0011
Thallium		0.002	< 0.0010

A 10-gram sample of Provect-CH4 was placed in a 250 mL bottle, then mixed with 200 mL of SPLP East solution. The sample tumbled for 18 hours. The sample pH was measured, then the sample was filtered through a 0.7-micron pore-size filter. The filtered extract was acidified with nitric acid then sent to ESC for analysis.

Based on the results above, SPLP metals concentrations for Provect-CH4 are below the maximum contaminant levels for drinking water according to Florida Department of Environmental Protection limits. If you have questions regarding these results, please call me at 608.669.1248.

Sincerely,

*Angela Hassell*

Angela Hassell  
Project Manager



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Est. 1970

Angela Hassell  
ReSolution Partners LLC  
967 Jonathon Drive  
Madison, WI 53713

### Report Summary

Thursday July 03, 2014

Report Number: L706727

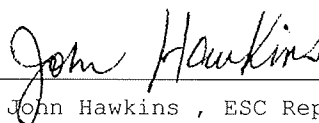
Samples Received: 06/25/14

Client Project:

Description:

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John Hawkins , ESC Representative

#### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,  
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,  
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,  
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,  
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,  
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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REPORT OF ANALYSIS

July 03, 2014

Angela Hassell  
 ReSolution Partners LLC  
 967 Jonathon Drive  
 Madison, WI 53713

Date Received : June 25, 2014  
 Description :  
 Sample ID : RYR  
 Collected By : Angela Hassell  
 Collection Date : 06/24/14 10:50

ESC Sample # : L706727-01  
 Site ID :  
 Project :

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Antimony	BDL	0.0010	mg/l	0.0060	200.8	07/02/14 2317	LRL	1
Arsenic	0.0066	0.0010	mg/l	0.010	200.8	07/02/14 2317	LRL	1
Cadmium	0.0012	0.00050	mg/l	0.0050	200.8	07/02/14 2317	LRL	1
Chromium	0.0025	0.0020	mg/l	0.10	200.8	07/02/14 2317	LRL	1
Lead	BDL	0.0010	mg/l	0.015	200.8	07/02/14 2317	LRL	1
Selenium	0.0011	0.0010	mg/l	0.050	200.8	07/02/14 2317	LRL	1
Thallium	BDL	0.0010	mg/l	0.0020	200.8	07/02/14 2317	LRL	1
Mercury	BDL	0.00040	mg/l	0.0020	245.1	06/27/14 1055	BRJ	2

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 07/03/14 09:09 Printed: 07/03/14 09:10

Attachment A  
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L706727-01	WG728790	SAMP	Mercury	R2950985	0

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
07/03/14 at 09:10:16

TSR Signing Reports: 341  
R5 - Desired TAT

Metals by 6020, Limited sample volume project. Non-regulatory samples. JVH 5-20-14

Sample: L706727-01 Account: RESPARMWI Received: 06/25/14 09:00 Due Date: 07/03/14 00:00 RPT Date: 07/03/14 09:09



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July 03, 2014

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
Mercury	< .0002	mg/l			WG728790	06/27/14 10:37
Arsenic	< .001	mg/l			WG729773	07/02/14 15:39
Cadmium	< .0005	mg/l			WG729773	07/02/14 15:39
Chromium	< .001	mg/l			WG729773	07/02/14 15:39
Lead	< .001	mg/l			WG729773	07/02/14 15:39
Selenium	< .001	mg/l			WG729773	07/02/14 15:39
Thallium	< .001	mg/l			WG729773	07/02/14 15:39
Antimony	< .001	mg/l			WG729773	07/02/14 18:46

Analyte	Units	Result	Duplicate Duplicate	RPD	Limit	Ref Samp	Batch
Mercury	mg/l	0.0	0.0000382	4.00	20	L706637-01	WG728790

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
Mercury	mg/l	.003	0.00266	89.0	85-115	WG728790
Arsenic	mg/l	.05	0.0428	86.0	85-115	WG729773
Cadmium	mg/l	.05	0.0462	92.0	85-115	WG729773
Chromium	mg/l	.05	0.0436	87.0	85-115	WG729773
Lead	mg/l	.05	0.0445	89.0	85-115	WG729773
Selenium	mg/l	.05	0.0481	96.0	85-115	WG729773
Thallium	mg/l	.05	0.0462	92.0	85-115	WG729773
Antimony	mg/l	.05	0.0478	96.0	85-115	WG729773

Analyte	Units	Laboratory Control Result	Sample Ref	Duplicate %Rec	Limit	RPD	Limit	Batch
Arsenic	mg/l	0.0430	0.0428	86.0	85-115	1.00	20	WG729773
Cadmium	mg/l	0.0458	0.0462	92.0	85-115	1.00	20	WG729773
Chromium	mg/l	0.0432	0.0436	86.0	85-115	1.00	20	WG729773
Lead	mg/l	0.0449	0.0445	90.0	85-115	1.00	20	WG729773
Selenium	mg/l	0.0483	0.0481	96.0	85-115	0.0	20	WG729773
Thallium	mg/l	0.0461	0.0462	92.0	85-115	0.0	20	WG729773
Antimony	mg/l	0.0478	0.0478	96.0	85-115	0.0	20	WG729773

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Mercury	mg/l	0.00275	0.0000382	.003	90.0	70-130	L706637-01	WG728790
Arsenic	mg/l	0.139	0.0915	.005	94.0	75-125	L707678-04	WG729773
Cadmium	mg/l	0.148	0.104	.005	88.0	75-125	L707678-04	WG729773
Chromium	mg/l	0.0596	0.0124	.005	94.0	75-125	L707678-04	WG729773
Lead	mg/l	3.59	3.64	.005	0.0*	75-125	L707678-04	WG729773
Selenium	mg/l	0.0870	0.0495	.005	75.0	75-125	L707678-04	WG729773

Analyte	Units	MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Mercury	mg/l	0.00268	0.00275	88.2	70-130	2.00	20	L706637-01	WG728790

\* Performance of this Analyte is outside of established criteria.  
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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July 03, 2014

Table with columns: Analyte, Units, MSD, Matrix Spike Ref, Duplicate %Rec, Limit, RPD, Limit, Ref Samp, Batch. Rows include Arsenic, Cadmium, Chromium, Lead, and Selenium.

Serial Dilution

Batch number /Run number / Sample number cross reference

WG728790: R2950985: L706727-01
WG729773: R2954965: L706727-01

\* \* Calculations are performed prior to rounding of reported values.
\* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'





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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

B085

1706727

page 1 of 1

<b>Analytical Lab:</b> ESC Lab Sciences Address: 12065 Lebanon Road City/State/Zip: Mt. Juliet, TN Lab Contact: John Hawkins Phone Number: 615-758-5858 Sampler Name (print): Angela Hassell Phone Number: 608-669-1248		<b>Client Name:</b> ReResolution Partners, LLC Project ID: Project Number: Address: 967 Jonathon Drive City/State/Zip: Madison, WI 53713 Project Manager: Angela Hassell ESC Quote: RESPARMW1120209B		<b>Report To:</b> Angela Hassell Email Address: <a href="mailto:ahassell@resolutionpartnersllc.net">ahassell@resolutionpartnersllc.net</a> <b>Report To:</b> Kevin Baker Email Address: <a href="mailto:kbaker@resolutionpartnersllc.net">kbaker@resolutionpartnersllc.net</a> <b>Report To:</b> Bernd Rehm Email Address: <a href="mailto:brehm@resolutionpartnersllc.net">brehm@resolutionpartnersllc.net</a> Invoice To: Angela Hassell	
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Sample Information		Preservative		Matrix		Analyze For:	TAT		
Description	Date Sampled	6/24/2014	1050	2	Grab	Filtered	<input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> HNO3 <input checked="" type="checkbox"/> HCl <input checked="" type="checkbox"/> NaOH <input type="checkbox"/> H2SO4 plastic <input type="checkbox"/> H2SO4 glass <input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Waste Water <input type="checkbox"/> Drinking Water <input type="checkbox"/> Sludge <input type="checkbox"/> Soil <input type="checkbox"/> Other:	<input type="checkbox"/> Metals (200, 81, Sb, As, Cd, Cr, Pb, Se, Tl) <input type="checkbox"/> Mercury (245) <input checked="" type="checkbox"/> RUSH: <input checked="" type="checkbox"/> Standard
	No. of Containers	6/24/2014	1050	2	Grab	Filtered			
R/YR									

Special Instructions:

Method of Shipment: \_\_\_\_\_

Relinquished By/Date: *Angela Hassell* 6/24/14

Relinquished By/Date: *[Signature]* 6/25/14 *one*

Tracking No: \_\_\_\_\_

Received By/Date: \_\_\_\_\_

Received By/Date: \_\_\_\_\_

Laboratory Comments: JAR

3-6  
JWS

PH = 6.2

4963 4580 4596