REVISED PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

Tax Lots 1202 and 1203 NW Civic Drive Gresham, Oregon

June 30, 2006

HAI Project No. 7002

REVISED PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

Tax Lots 1202 and 1203 NW Civic Drive Gresham, Oregon

June 30, 2006

Prepared for:

METRO Portland, Oregon

Prepared by:

Hahn and Associates, Inc. Portland, Oregon

HAI Project No. 7002

TABLE OF CONTENTS

SUMMARY OF FINDINGS	1
INTRODUCTION	2
BACKGROUND	2
•	
	4
6.1 Screening Reference Levels	5
CONCLUSIONS	6
LIMITATIONS AND SIGNATURES	6
REFERENCES	8
	6.2 Near-Surface Soil Samples CONCLUSIONS LIMITATIONS AND SIGNATURES

TABLE

1 Summary of Soil Testing Results

FIGURES

- 1 Location Map
- 2 Site Plan and Soil Sampling Locations

APPENDIX

A Laboratory Reports and Chain-of-Custody Documentation

1.0 SUMMARY OF FINDINGS

METRO retained Hahn and Associates, Inc. (HAI) to conduct Phase II Environmental Site Assessment (ESA) activities at an approximate 1.9-acre former agricultural property located on NW Civic Drive in Gresham, Oregon. Phase II investigation activities were conducted to evaluate near-surface soil quality at the property relating to persistent agricultural chemicals, the findings of which are summarized below:

- 1. HAI conducted field investigation activities on May 24, 2006 that consisted of the collection of five soil samples that were composited by the laboratory into two separate samples for analysis. Due to the presence of a gravel layer (greater than 2 feet in thickness) encountered over a large portion of the site, soil samples could not be collected from some of the originally proposed locations utilizing hand sampling techniques. Those areas where samples could not be collected included the former fence line/ditch areas as well as the formerly cultivated areas in the eastern and southern most portions of the site.
- Soil analytical testing results were compared to established human health risk-based screening levels and cleanup standards consistent with a possible future site use for residential purposes.
- 3. Analytical testing of the two composite soil samples did not detect organochlorine pesticides above laboratory reporting limits or applicable reference levels adjusted to account for the compositing procedure. In addition, concentrations of arsenic were consistent with those naturally-occurring for the region. Although lead was detected in one of the two composite samples exceeding its established background concentration, it was well below the risk-based screening level for residential site use.
- 4. Based on the data collected during the Phase II investigation activities, shallow site soil in the areas sampled, does not appear to contain residual concentrations of persistent agricultural chemicals that would pose an unacceptable risk to human health

METRO retained Hahn and Associates, Inc. (HAI) to conduct Phase II Environmental Site Assessment (ESA) activities at an approximate 1.9-acre former agricultural property located on NW Civic Drive in Gresham, Oregon (Figures 1 and 2). The subject property consists of two tax lots; 1202 and 1203. The Phase II investigation activities were conducted to evaluate potential impacts to soil resulting from historic agricultural practices conducted on the property.

The Phase I investigation activities presented herein were conducted in general accordance with our May 12, 2006 proposal entitled *Proposal and Cost Estimate for Phase II Environmental Site Assessment Activities, Tax Lots 1202 and 1203, NW Civic Drive, Gresham, Oregon.* Due to a significant amount of gravel overlaying portions of the site, not all of the proposed locations could be sampled.

3.0 BACKGROUND

In April 2006, HAI completed a Phase I ESA of the subject property¹. The results of the Phase I ESA were presented in our. The Phase I identified the following Recognized Environmental Condition (REC), as defined by American Society for Testing and Materials (ASTM) Practice E1527-00, in which additional investigation would be necessary to document and further evaluate such condition:

The property was reportedly part of a 200-acre farm from approximately the 1860s until the 1970s. The southern portion of the property was farmed from at least 1935 (and likely much earlier) until the 1940s, after which it was covered with natural vegetation. The northern portion continued to be farmed until the 1970s. Pesticide residues may be present in the near-surface soils of the property as a result of the potential historical usage of pesticides for agricultural purposes.

Recommendation: A subsurface investigation should be performed for the property to determine if site soils have been impacted by persistent agricultural chemicals.

¹ Hahn and Associates, Inc. (2006). A Phase I Environmental Site Assessment, Tax Lots 1202, and 1203, NW Civic Drive, Gresham, Oregon (Project No. 6977). April 26, 2006.

As such, it was recommended that an assessment of near-surface soils be conducted to evaluate the potential presence of persistent agricultural chemicals at the site. The Phase II ESA investigations discussed herein were conducted to address the Phase I ESA REC noted above.

4.0 FIELD ACTIVITIES

HAI conducted field investigation activities at the site on May 24, 2006. The Phase II investigation activities were designed to evaluate the potential presence of persistent agricultural chemicals in shallow soil at the site. Field investigation activities included the collection of near surface soil samples for laboratory analytical testing. Soil sampling locations are presented on Figure 2.

4.1 Soil Sampling Locations and Rational

Near surface soil samples were collected from a total of 5 locations (2a, 2b, 2c, 5a and 5b; Figure 2). All of the sampled locations were within the formerly cultivated areas and sample locations 5a and 5b were collected from the topographic low lying areas. Due to the presence of a gravel layer (greater than 2 feet in thickness) encountered over a large portion of the site, soil samples could not be collected from some of the originally proposed locations utilizing hand sampling techniques. Those areas where samples could not be collected included the former fence line/ditch areas as well as the formerly cultivated areas on the eastern and southern most portions of the site.

Near-surface soil that could be exposed was sampled at each location from a depth interval of 0.0 to 1.0 foot below ground surface (bgs; measured from the contact of the gravel and underlying soil).

4.2 Soil Sampling Methodologies

Soil samples were collected by hand following excavation with a clean decontaminated hand trowel or shovel. Upon collection, each soil sample was immediately placed in one 8-ounce, laboratory-supplied, sample jar and capped with a teflon-lined lid. Each sample jar was then labeled and transferred to a chilled, thermally-insulated container for shipment to the analytical laboratory. Standard sampling protocols, including the use of chain-of-custody documentation, were followed for all sampling procedures.

To reduce the potential for cross-contamination, all reusable soil sampling equipment was decontaminated prior to the collection of each sample using a detergent solution wash, followed by a double rinse with deionized water.

5.0 LABORATORY SAMPLE COMPOSITING AND ANALYTICAL TESTING PROGRAM

Soil samples were shipped under chain-of-custody documentation to Test America Company (Test America), an Oregon certified analytical laboratory located in Beaverton, Oregon.

The five discrete samples were composited by the laboratory into two samples for analytical testing summarized as follows:

- One three-part composite sample consisting of samples from locations 2a, 2b, and 2c (laboratory sample number "Composite [01,02,03]"); and
- One two-part composite sample consisting of the discrete samples from locations 5a and 5b (low-lying areas; laboratory sample number "Composite [05, 06]").

The two composite samples are representative of the majority of the former agricultural crop production area, and of the topographic low lying areas (potentially representing a worst-case scenario, though historic site topography may not be consistent with current site topography). The composite samples and their associated discrete sub-samples are identified as such on Table 1.

The composite samples from the former agricultural crop production area were analyzed for arsenic and lead by U.S. Environmental Protection Agency (EPA) Test Method 6000/7000 and organochlorine pesticides by EPA Test Method 8081A.

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

6.0 ANALYTICAL TESTING RESULTS

The following sections present the screening reference levels, results, and screening evaluation of the analytical testing for the near-surface soil sampling activities. Analytical data is summarized in Table 1.

6.1 Screening Reference Levels

Soil analytical testing results were compared to established human health risk-based screening levels and cleanup standards consistent with possible future site use for residential purposes.

The analytical data were compared to EPA Region 9 Preliminary Remedial Goals (PRGs; October 2004) for soil in a residential setting. Metals testing results were also compared to Oregon Department of Environmental Quality (DEQ) default background concentrations (October 2002). Screening reference levels are presented in Table 1.

6.2 Near-Surface Soil Samples

Analytical testing of the May 2006 near-surface soil sampling results are summarized by contaminant of interest below.

<u>Arsenic and Lead</u>: Analytical testing of composite samples detected arsenic at concentrations that are consistent with those of naturally-occurring concentrations for the region (Oregon DEQ 2002).

Lead was detected in both composite samples at concentrations of 42.5 milligrams per kilogram (mg/kg) (Composite [01,02,03]) and 12.3 mg/kg (Copmposite [05, 06]). While the higher of the two detected concentrations exceeds the established gackground concentration for lead, both detected concentrations are well below the PRG screening level of 400 mg/kg for residential soil.

Organochlorine Pesticides: Organochlorine pesticides were not detected in either of the two composite samples above laboratory reporting limits. The laboratory method reporting limits were all below the adjusted risk-based screening levels for the contaminants of interest (adjusted to compensate for the compositing procedure, as identified on Table 1).

Phase II ESA investigation activities have been performed for the approximately 1.9-acre former agricultural property located on NW Civic Drive in Gresham, Oregon. The purpose of the investigation activities was to evaluate potential impacts to soil from persistent agricultural chemicals. Five discreet soil samples were collected, composited into two composite samples (one three-part composite sample and one two-part composite sample), and analyzed for selected metals and organochlorine pesticides. Due to the presence of a dense gravel layer encountered over a large portion of the site, soil samples could not be collected from some of the originally proposed locations utilizing hand sampling techniques.

Analytical testing of soil samples that were collected did not detect organochlorine pesticides above laboratory reporting limits or applicable reference levels adjusted to compensate for the compositing procedure. Concentrations of arsenic detected in both composite samples are considered to be consistent with established background concentrations. Although lead was detected in one of two composite samples exceeding its established background concentration, it was below the risk-based screening level for residential site use.

Based on the data collected during the Phase II investigation activities, shallow site soil in the areas sampled, does not appear to contain residual concentrations of persistent agricultural chemicals that would pose an unacceptable risk to human health for future residential site use.

8.0 LIMITATIONS AND SIGNATURES

The information presented in this report was collected, analyzed, and interpreted following the standards of care, skill, and diligence ordinarily provided by a professional in the performance of similar services as of the time the services were performed. This report and the conclusions and/or recommendations contained in it are based solely upon research and/or observations, and physical sampling and analytical activities that were conducted.

The information presented in this report is based only upon activities witnessed by HAI or its contractors, and/or upon information provided to HAI by the Client and/or its contractors. The analytical data presented in this

report document only the concentrations of the target analytes in the particular sample, and not the property as a whole.

Unless otherwise specified in writing, this report has been prepared solely for the use by the Client and for use only in connection with the evaluation of the subject property. Any other use by the Client or any use by any other person shall be at the user's sole risk, and HAI shall have neither liability nor responsibility with respect to such use.

Hahn and Associates, Inc.

Prepared by:

Keary Knickerbocker

Sr. Project Manager

Date June 27, 2006

9.0 REFERENCES

EPA (2004). Region 9 Preliminary Remedial Goals (PRGs) 2004. Region 9, Solid and Hazardous Waste Programs, U.S. Environmental Protection Agency. Updated, October, 2004.

DEQ (2002). Memorandum entitled *Default Background Concentrations for Metals*. October 28, 2002.

10.0 GLOSSARY OF ABBREVIATIONS

ASTM	American Society for Testing and Materials
DEQ	Oregon Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
bgs	below ground surface
HAI	Hahn and Associates, Inc.
mg/kg	milligrams per kilogram
PRG	EPA Region 9 Preliminary Remedial Goal
REC	Recognized Environmental Condition

TABLE

Table 1 - Soil Analytical Results

Sample	Composite	Sample	Sample			Laborato	Laboratory Analytical Results	l Results		
*	Callpia	Date	Depth Interval		Organochic	Organochlorine Pesticides (ug/kg)	s (ug/kg)		Metals	Metals (mg/kg)
			(# pgs)	000	DDE	DDT	Dieldrin	All others	Arsenic	Lead
Reference Levels		Discrete Sample Reference Level 1 =>	ference Level 1 =>	2,400.	1,700.	1,700.	30.	varies	0.39	400.
		Oregon DEQ Default Background 4 =>	t Background 4 =>	1	ł	1	1		7.	17.
		Reference Level 2	evel 2 (adjusted) =>	1,200.	850.	850.	15.	varies		
		Reference Levels 3	els ³ (adjusted) =>	800.	566.67	566.67	10.	varies		
2a, 2b, 2c	01,02,03	24-May-06	0.0 - 1.0	7.86 U	7.86 U	7.86 U	7.86 U	n	3.18	42.5
5a, 5b	05, 06	24-May-06	0.0 - 1.0	7.96 U	7.96 U	7.96 U	7.96 U	D	3.38	12.3

ft bgs - feet below ground surface Notes:

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

DEQ - Oregon Department of Environmental Quality

U - not detected at or above the indicated laboratory method detection limit

Bold - detected concentration greater than relevant reference level

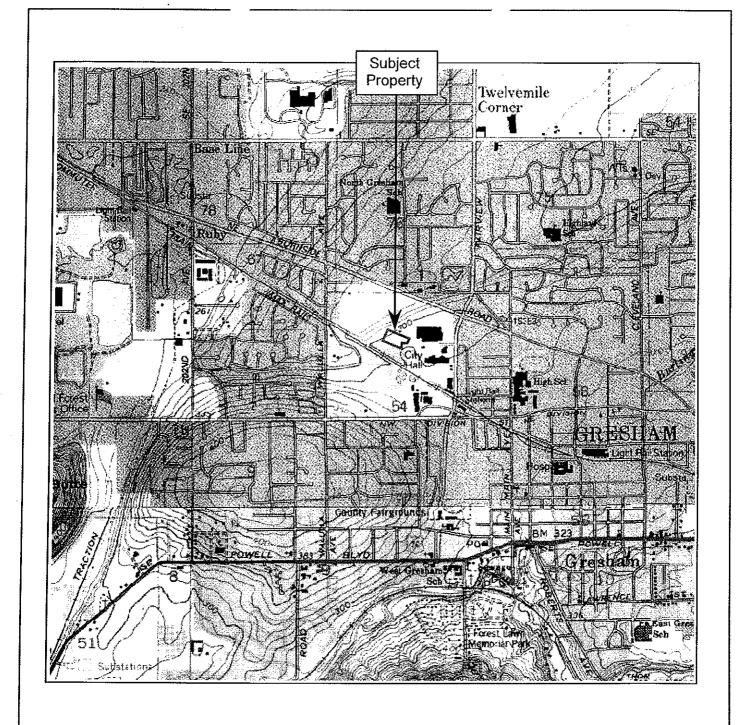
1 - EPA Region 9 Preliminary Remedial Goal (PRG) for residential soil (10/04)

2 - Organochlorine pesticide reference level divided by 2 to account for 2-point composite sample

3 - Organochlorine pesticide reference level divided by 3 to account for 3-point composite sample

4 - Reference Level based on Oregon DEQ Default Background Concentrations for Metals (October 2002)

FIGURES



Note: Base Map from the Camas (1994), Washington-Oregon USGS 7.5-Minute Quadrangle Contour Interval: 10 Feet



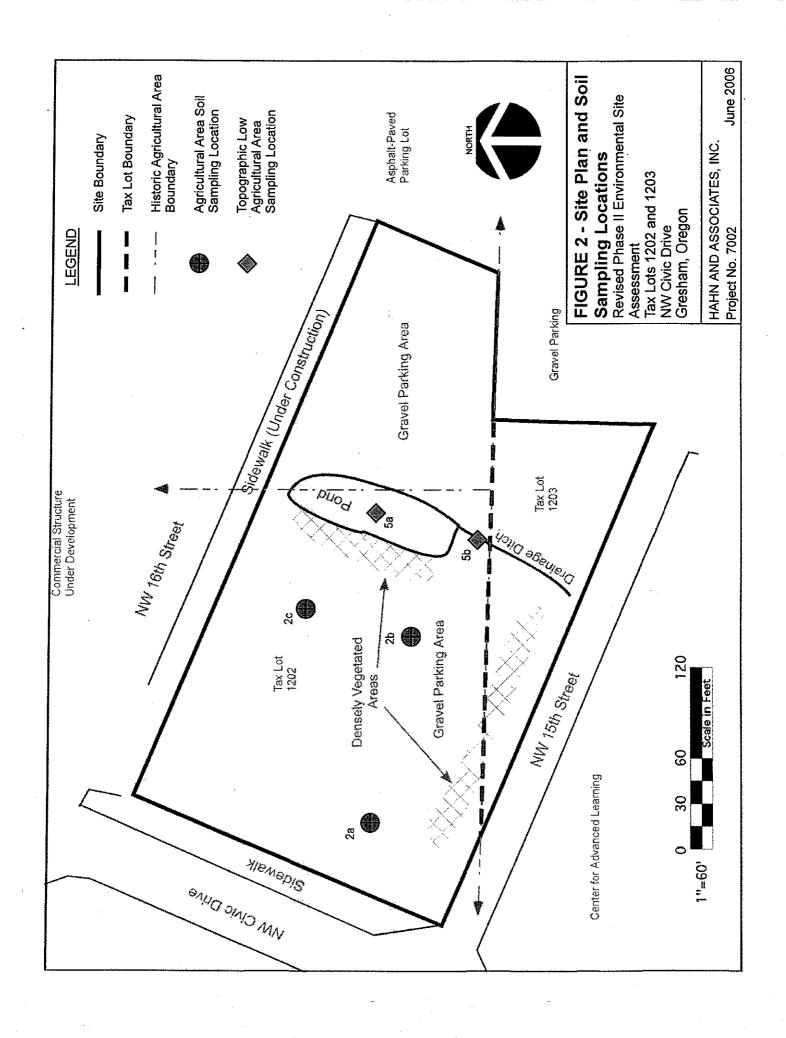


FIGURE 1 Site Location Map

Revised Phase II Environmental Site Assessment Tax Lots 1202 and 1203 NW Civic Drive Gresham, Oregon

HAHN AND ASSOCIATES, INC. Project No. 7002

June 2006



APPENDIX A

Laboratory Reports and Chain-of-Custody Documentation



9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

June 20, 2006

Keary Knickerbocker Hahn and Associates, Inc. 434 NW Sixth Ave., Suite 203 Portland, OR 97209

RE: CIVINV

Enclosed are the results of analyses for samples received by the laboratory on 05/25/06 13:32. The following list is a summary of the Work Orders contained in this report, generated on 06/20/06 12:35.

If you have any questions concerning this report, please feel free to contact me.

Work Order	<u>Project</u>	<u>ProjectNumber</u>
PPE1229	CIVINV	7002

TestAmerica - Portland, OR

Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

Project Manager:

CIVINV

Project Number: 7002

7002

Keary Knickerbocker

Report Created: 06/20/06 12:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
7002-060524-2a	PPE1229-01	Soil	05/24/06 10:16	05/25/06 13:32
7002-060524-2b	PPE1229-02	Soil	05/24/06 10:35	05/25/06 13:32
7002-060524-2c	PPE1229-03	Soil	05/24/06 10:35	05/25/06 13:32
Composite 01,02,03	PPE1229-04	Soil	05/24/06 11:05	05/25/06 13:32
7002-060524-5a	PPE1229-05	Soil	05/24/06 11:15	05/25/06 13:32
7002-060524-5b	PPE1229-06	Soil	05/24/06 10:35	05/25/06 13:32
Composite 05,06	PPE1229-07	Soil	05/24/06 11:05	05/25/06 13:32

TestAmerica - Portland, OR

Assume & Capton

Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

Project Number: Project Manager:

7002

Keary Knickerbocker

Report Created:

06/20/06 12:35

Total Metals per EPA 6000/7000 Series Methods

TestAmerica - Portland, OR

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE1229-04	(Composite 01,02,0	3)	So	il		Samp	oled: 05	/24/06 11:0)5		
Arsenic		EPA 6020	3.18		0.592	mg/kg dry	lx	6060087	06/02/06 09:44	06/15/06 18:39	
Lead	u		42.5		0.592	•	4			06/08/06 00:43	
PPE1229-07	(Composite 05,06)		So	il		Samp	ied: 05	/24/06 11:6)5		
Arsenic		EPA 6020	3.38		0.565	mg/kg dry	lx	6060087	06/02/06 09:44	06/15/06 18:46	
Lead		*	12.3		0,565	n			*	06/08/06 00:50	

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Roxanne L. Clifton, Project Manager



9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203 Portland, OR 97209

Project Name:

Project Manager:

CIVINV

Project Number: 7002

Keary Knickerbocker

Report Created:

06/20/06 12:35

Organochlorine Pesticides per EPA Method 8081A

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE1229-04 (Compo	osite 01,02,03)	Sc	il		Samı	pled: 05	5/24/06 11:0	05		···
Aldrin	EPA 8081A	ND	*****	7.86	ug/kg dry	1x	6060257	06/06/06 16:29	06/07/06 15:38	
alpha-BHC	II	ND		7.86	N	н	u	n		
beta-BHC	•	ND		7.86	"	*	n	1+	n	
delta-BHC	H	ND		7.86	u	#	11	н	π	
gamma-BHC (Lindane)	11	ND		7.86	#	*	#	и	π	
gamma-Chlordane	Ħ	ND		7.86	"	**		• 11	. •	
alpha-Chlordane	Ħ	ND		7.86	-	"	**	"	"	
Chlordane (tech)	и	ND		176	"	•	π	-	**	
4,4´-DDD	ü	ND		7.86	u	н	и	41	π	
4,4'-DDE	n	ND		7.86	u		н	41	n	
4,4'-DDT	#	ND	****	7.86	"		u	71		
Dieldrin	**	NĐ		7.86	u	*	н	71	•	
Endosulfan l	Ü	ND	~~~~	7.86	н		н	ч	11	
Endosulfan II	й	ND		7.86	и	•	10	и	и	
Endosulfan sulfate	11	ND		7.86	v	**	H	11	**	
Endrin	11	ND		7.86	*	*	и	11	я	
Endrin aldehyde	Ħ	ND		7.86	*		, 11	н	11	
Endrin ketone	п	ND		7.86	n		+	Ħ	7	
Heptachlor	*	ND		7.86			"	**	,	
Heptachlor epoxide	"	ND		7.86	*	#	u	ц	*	
Methoxychlor	11	ND		7.86	ч			п	te .	
Toxaphene	Ħ	ND		235	u		"	"	ч	
Surrogate(s): 2,4,5,6-Te	etrachloro-m-xylene		78.0%		36 -	140 %	"		n	

Sui roguie(s).	2,4,5,0-1 etrachioro-m-xytene

PPE1229-07 (Composite	05,06)	Soi	1		Samp	oled: 05	/24/06 11:0	95	
Aldrin	EPA 8081A	ND		7.96 u	ıg/kg dry	lx	6060257	06/06/06 16:29	06/07/06 16:01
alpha-BHC	н	ND		7.96		ч	"	4	u
beta-BHC	**	ND		7.96	"	"	н	**	
delta-BHC	#	ND		7.96		u	и	e	u .
gamma-BHC (Lindane)	स	ND	~~~~	7.96	u	u	п	77	íŧ
gamma-Chlordane	и	ND		7.96	•		11	"	н
alpha-Chlordane	u	ND	*****	7.96	"	и	"	7	u
Chlordane (tech)	u	ND		178	. 11	u	ч	0	**
4,4'-DDD	•	ND		7.96	**	н	н	77	n ·
4,4'-DDE	н	ND		7.96	**	*	**	•	
4,4° -D DT	и	ND	****	7.96	*	п		(1	If
Dieldrin	11	ND		7.96	"	Ħ	π	"	u
Endosulfan I	ग	ND		7.96	и	**	17	, N	u

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Roxanne L. Clifton, Project Manager





PORTLAND, OR 9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

Project Number: 7002

Project Manager:

Keary Knickerbocker

Report Created:

06/20/06 12:35

Organochlorine Pesticides per EPA Method 8081A

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE1229-07 (Composite 05	06)	So	il	·	Samp	oled: 05	/24/06 11:0)5		
Endosulfan II	EPA 8081A	ND	*****	7.96	ug/kg dry	lx	6060257	06/06/06 16:29	06/07/06 16:01	
Endosulfan sulfate	п	ND		7.96	#		•	7	**	
Endrin	17	ND		7.96	π	"		*	*	•
Endrin aldehyde	H	ND		7.96	π	4	π	•		
Endrin ketone	11	ND	****	7,96	11		-	**	*	
Heptachlor	**	ND		7.96	u		",	*	**	
Heptachlor epoxide	π-	ND		7.96	н	н	"			
Methoxychlor	π	ND		7.96	**	ч	ĸ	•	11	
Toxaphene	u	ND		238	#	11	**	м	41	

Surrogate(s): 2,4,5,6-Tetrachloro-m-xylene

83.8%

36 - 140 %

TestAmerica - Portland, OR

1 summeral Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

Project Number:

7002

Project Manager:

Keary Knickerbocker

Report Created: 06/20/06 12:35

Percent Dry Weight (Solids) per Standard Methods

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPE1229-04	(Composite 01,02,03)	So	il		Sam	pled: 05	/24/06 11:0	05		
% Solids	NCA SOP	84.4		1.00	% by Weight	lx	6051454	05/31/06 11:0	06/01/06 14:08	
PPE1229-07	(Composite 05,06)	So	il		Sam	pled: 05	/24/06 11:0	05		
% Solids	NCA SOP	83.5	in advance	1.00	% by Weight	lx	6051454	05/31/06 11:0	06/01/06 14:08	

TestAmerica - Portland, OR

Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV 7002

Project Number: Project Manager:

Keary Knickerbocker

Report Created:

06/20/06 12:35

Total Metals per EPA 6000/7000 Series Methods - Laboratory Quality Control Results TestAmerica - Portland, OR

QC Batch: 6060087	Soil Pr	eparation M	lethod:	EPA 30.	50									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD	(Limi	ts) Analyzed	Notes
Blank (6060087-BLK1)								Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	ND		0.521	mg/kg wet	Ιx				_			06/14/06 07:54	
Lead	n	ND	-	0.521	н	*1							06/07/06 22:27	
LCS (6060087-BS1)		•						Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	10.7		0,490	mg/kg wet	1x	_	9,80	109%	(80-120)			06/14/06 08:01	
Lead	н	9.28		0,490	•	*		п	94.7%	7	-		06/07/06 22:35	
Duplicate (6060087-DUP1)				QC Sour	ce: PPE090	8-16		Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	5.23		1.14	mg/kg dry	1x	5.10	-			2,52%	(40)	06/14/06 08:16	
Lead	"	11.2		1.14	rt	17	11.5		**		2.64%	"	06/07/06 22:50	
Matrix Spike (6060087-MS1)				QC Sour	ce: PPE090	8-16		Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	26.6		1.06	mg/kg dry	lx	5,10	21.2	101%	(75-125)			06/14/06 08:31	
Lead	n	35.5		1.06	u	н	11.5	**	113%	**		-	n	-
Matrix Spike (6060087-MS2)				QC Sour	ce: PPE116	0-49		Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	17,7		0.552	mg/kg dry	lx	5.10	11.0	115%	(75-125)		_	06/15/06 18:24	
Lead	7	69.0		0.552	π'	**	31.3		343%	п			06/17/06 06:16	Q-02
Post Spike (6060087-PS1)				QC Sour	ce: PPE090	B-16		Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	0.545			ug/ml	lx -	0.0431	0,400	125%	(75-125)	_		06/17/06 06:00	
Lead	н .	0.586			"	"	0.0966	n	122%	•			79 1	
Post Spike (6060087-PS2)				QC Sour	ce: PPE116)-49		Ext	racted:	06/02/06	09:44			
Arsenic	EPA 6020	0.595			ug/mi	lx	0.0990	0.400	124%	(75-125)			06/17/06 06:08	
Lead	н	1.06			"	4	0.607	ч	113%	17			"	

TestAmerica - Portland, OR

I summer of Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

Project Number: 7002

Project Manager: Keary Knickerbocker

Report Created: 06/20/06 12:35

Organochlorine Pesticides per EPA Method 8081A - Laboratory Quality Control Results TestAmerica - Portland, OR

QC Batch: 6060257	Soil Pr	eparation M	lethod: F	EPA 355	50								
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% (Limits)	‰ RPD	(Limi	ts) Analyzed	Notes
Blank (6060257-BLK1)								Ext	racted: 06/06/06	16:29			
Aldrin	EPA 8081A	ND	_	6.69	ug/kg wet	lx						06/07/06 13:48	
alpha-BHC	н	ND		6.69	II.	**					_	w	
beta-BHC	н	ND		6.69	"	"						н	
delta-BHC	"	ND		6.69		-		_		_			
gamma-BHC (Lindane)	#	ND		6.69	11	*		_				ı	
gamma-Chlordane	ч	ND		6.69	**	u	,					u	
alpha-Chlordane	•	ND		6.69	17							NI.	
Chlordane (tech)		ND		150	**	n						11	
4,4'-DDD	-	ND		6.69	IF	w	***						
4,4'-DDE	•	ND	***	6.69	"	*						и	
4,4'-DDT	•	ND		6,69			-	_			-	u	
Dieldrin	ft	ND		6.69	и	#	-	-				π	
Endosulfan 1	**	ND		6.69	н	11							
Endosulfan II	u	ND		6.69	"	**							
Endosulfan sulfate		ND	~~~	6,69	ч	77						**	
Endrin	**	ND		6.69	"	π						*	
Endrin aldehyde	4	ND		6.69	*	н						H	
Endrin ketone	11	ND		6.69	*	ıı					_	н	
Heptachlor		ND		6.69	u	**				_		н	
Heptachlor epoxide		ND		6.69		**						н	
Methoxychlor	**	ND		6.69	#	"							
Toxaphene	#	ND		200	**					-			
Surrogate(s): 2,4,5,6-Tetrachloro	>-m-xylene	Recovery: 87.	7%	Lim	ts: 36-140%	ū						06/07/06 13:4	8
LCS (6060257-BS1)								Ext	acted: 06/06/06	16:29			
Aldrin	EPA 8081A	26.1		6.69	ug/kg wet	lx		33.3	78.4% (64-136)			06/07/06 14:10	
gamma-BHC (Lindane)	u	25.9		6.69	77	"			77.8% (62-140)			11	
4,4'-DDT	4	27.5		6,69	**	u		и	82.6% (65-130)			н	

TestAmerica -	Portland.	OR

Dieldrin

Endrin

Heptachlor

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

78.7% (70-135)

77.8% (65-135)

81.4% (48-124)



Surrogate(s): 2,4,5,6-Tetrachloro-m-xylene



06/07/06 14:10

6.69

6,69

26,2

25.9



PORTLAND, OR 9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203 Portland, OR 97209

Project Name:

CIVINV

Project Number: Project Manager: 7002

Keary Knickerbocker 06/20/06 12:35

Report Created:

Organochlorine Pesticides per EPA Method 8081A - Laboratory Quality Control Results

QC Batch: 6060257	Soil P	reparation	Method:	EPA 35:	50									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limi	is) Analyzed	Notes
Matrix Spike (6060257-M	S1)			QC Sour	ce: PPE122	9-04		Ext	racted:	06/06/06	16:29			
Aldrin	EPA 8081A	34.7		39.4	ug/kg dry	5x	ND	39.2	88,5%	(64-136)		 .	06/07/06 14:32	
gamma-BHC (Lindane)	u	26.6		39.4	u		ND	"	67.9%	(62-140)			77	
4,4'-DDT	"	15.0		39.4	н	*	ND	**	38.3%	(65-130)			**	MS-
Dieldrin	**	21.7		39.4	*	4	ND	*1	55.4%	(70-135)			#	MS-
Endrin	n	9,70		39.4	11	ч	ND	π	24.7%	(65-135)			n	MS-
Heptachlor	77	14.4		39,4	н	п	ND	•	36.7%	(48-124)		_	*	MS-
Surrogate(s): 2,4,5,6-Tetrachlo	ro-m-xylene	Recovery:	81.6%	Lin	its: 36-140%	ý #							06/07/06 14:32	
Matrix Spike Dup (606025	7-MSD1)		_	QC Sour	ce: PPE122	9-04		Ext	racted:	06/06/06	16:29		٠	
Aldrin	EPA 8081A	33,1	***	39.2	ug/kg dry	5x	ND	39.0	84.9%	(64-136)	4.72%	(50)	06/07/06 14:55	
gamma-BHC (Lindane)		33.4		39.2	Ħ		ND	н	85.6%	(62-140)	22.7%	5 1		
I,4'-DDT	Ħ	23.1	_	39.2	π	77	ND	и,	59.2%	(65-130)	42.5%	ó 1	**	MS-
Dieldrin	"	30.1	_	39.2	π	"	ND	#	77.2%	(70-135)	32,4%	, "	#	
Endrin	•	20,1		39.2	u	н	ND	"	51.5%	(65-135)	69.8%	, "	•	MS-
leptachlor	#	26.1		39,2	4	"	ND	*	66 00/	(48-124)		**		

TestAmerica - Portland, OR

Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

Project Number: 7002

Keary Knickerbocker

Report Created:

06/20/06 12:35

																					.esi	

TestAmerica - Portland, OR

Project Manager:

QC Batch: 6051454

Other dry Preparation Method: Dry Weight

Analyte

Method Result MDL*

MRL

Units

Source Result Dil

Spike % (Limits) % (Limits) Analyzed

Extracted: 05/31/06 11:01

Notes

Duplicate (6051454-DUP1) % Solids

NCA SOP

74.7

QC Source: PPE1192-07 1.00 % by Weight

73.9

1.08% (20) 06/01/06 14:08

TestAmerica - Portland, OR

Roxanne L. Clifton, Project Manager





9405 S.W. NIMBUS AVENUE BEAVERTON, OR 97008-7132 ph: (503) 906.9200 fax: (503) 906.9210

Hahn and Associates, Inc.

434 NW Sixth Ave., Suite 203

Portland, OR 97209

Project Name:

CIVINV

7002

Project Number: Project Manager:

Keary Knickerbocker

Report Created: 06/20/06 12:35

Notes and Definitions

Report Specific Notes:

- MS-2 The Matrix Spike and/or Matrix Spike Duplicate were below the acceptance limits due to sample matrix interference. See Laboratory Control Sample.
- Q-02 The matrix spike recovery, and/or RPD, for this QC sample is outside of established control limits due to sample matrix interference.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA _ Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported

on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B.
 *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic - Electronic Signature added in accordance with TestAmerica's Electronic Reporting and Electronic Signatures Policy.

Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Portland, OR

Dil

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Roxanne L. Clifton, Project Manager





					•) 3	.•	{	 	
カンプリナ	CHAIN OF CUSTODY	Chain of Custody No.	Semples Received at 4C (Y or N) Appropriate Containers Used (Y or N) Provide Verbal Results (Y or N) Provide Preliminary Fax Results		RUSH		3	Hann.	6		Company 1ab 13:32
00	lest merica.	lect No.	rt Sample Test Sediment Test Both Mich) Test Separately Shake	Analyses to be Performed	Organ. Chlaimated Post Airsanic Lead		1 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		X	2:28	Time Received by
	Laboratory	09 Lab Project No.	Liquid with Sediment Sample Test Filtrate Multi-Phase Sample Test One (which)	Matrix	Soil Soil Altr Other	7	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	 	<u>-</u>	codates, Inc.	, Jare 1
	HAHN AND ASSOCIATES, INC. Environmental Consultants	434 NW Sixth Avenue, Suite 203 • Portland OR 97209 (503) 796-0717 • Fax (503) 227-2209	Vency Knicker backer 7003 CAVINV		Sample Number Prefix: 700; -00524-	5/24/06 1016	1035 0-1	1.05 0:-	2 1 IIIS 0-1	Hahn and Associates, Inc.	Company
	НА	434 NW	lager ne	Comments	Sample Numbe	G	46	Go	v	Relinguished by	Relinquished by

TAT:	Non-Conformances?
•	Circle Y or N
	(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By:	Logged-in By:	Unpacked/Labeled	By: Cooler ID: (of)
Date: 5/2-506 Time: 12:28 Initials: 3/	Date: 1000	Date:	Work Order No PPE1229 Client: Hahn Project: 700:2
Container Type: Cooler Box None/Other	Ship. Contain On Bottles	- 3 - 7	Packing Material Bubble Bags Styrofoam Foam Packs None/Other Other
Refrigerant: Gel Ice Pack Loose Ice None/Other Cooler Temperature (IR)	S. O Plastic G	_ None Glass (Frozen filters, To	Received Via: Bill# Fed Ex Client UPS NCA Courier DHL Mid Valley Senvoy TDP GS Other edlars and aqueous Metals exempt)
Temperature Blank?	°C of NA	Trip Blank?	Y or N or NA
Sample Containers: Intact? Provided by NCA? Correct Type? #Containers match COC Ds/time/date match COC Hold Times in hold?	? Y or N ? Y or N C? Y or N		reserved? Y or N or NA
PROJECT MANAGEME s the Chain of Custody of Comments.Problems	complete?		Y or N If N, circle the items that were incomplete
otal accord out us?			
otal access set up? las client been contacted rega PM Initials:		Time:	Y or N. Y or N. If Y, / Date Time