



September 12, 2024

Ms. Anne Antin
Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Dear Anne,

Thank you for participating in the HW0724 Soil / Hazardous Waste PT Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova. This report presents some additional sections and features which will give you more information on the study data for the standards that were reported by your laboratory and more information regarding the overall performance of your laboratory in relation to other study participants.

The enclosed report is in two sections, the "Evaluation Report" and the "Statistical Report". The "Evaluation Report" contains the evaluation of your reported data as well the reported method, analysis date and analyst. The "Evaluation Report" is an updated and enhanced version of the reports you previously received at the conclusion of our PT studies. The "Statistical Report" contains your passing percentage as well as statistics from the study for the analytes reported by your laboratory.

For any analyte falling outside the established acceptance limits, our PT management staff would like to assist you in determining the most appropriate course of corrective action for your facility. Please contact us at any time if we may be of service to you.

Thank you again for participating in the HW0724 Soil / Hazardous Waste PT Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 866-942-2978.



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Report Definitions:

Assigned Value

The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the NELAC Institute (TNI) criteria (ref: TNI FOPT tables, TNI PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation Limits

Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the NELAC Institute (TNI) criteria (ref: TNI FOPT tables, TNI PT Committee) and other documents

Evaluation

Acceptable

The reported value falls within the Acceptance Limits.

Not Acceptable

The reported value falls outside the Acceptance Limits.

No Evaluation

The reported value is non-numeric and can not be evaluated.

NR

As required by the TNI standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported).

Study Mean and Standard Deviation

The mean and standard deviation are calculated from the study data using robust statistical calculations when possible. Other statistical calculations may be used if robust statistical calculations are not possible. The displayed values are independent of any statistical calculations required for the

This report must not be reproduced except in full, without the written approval of Phenova.
Various aspects of Phenova's proficiency testing schemes can from time to time be subcontracted. If subcontracting occurs, it is placed with a competent and qualified subcontractor and Phenova is responsible for all work performed.
This report must not be used to claim product certification, approval, or endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the federal government.



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

State Regulatory Agency Request(s):

No requests were made to send a copy of your HW0724 final results to a state agency.

Other Regulatory Agency Request(s):

No requests were made to send a copy of your HW0724 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your HW0724 final results to a third party.

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Soil / Hazardous Waste PT

Study: HW0724

Opening Date: July 22, 2024 - Closing Date: September 5, 2024

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

Pesticides (PT-PEST-SOIL)

Lot #: 7097-14

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7025	Aldrin	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	279	231.72	78.7 - 350	Acceptable
7110	alpha-BHC	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	337	266.07	92.8 - 421	Acceptable
7115	beta-BHC	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	345	253.38	92.4 - 428	Acceptable
7105	delta-BHC	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	445	354.09	122 - 593	Acceptable
7120	gamma-BHC (Lindane)	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	365	288.81	97.8 - 462	Acceptable
7240	alpha-Chlordane	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	432	352.35	150 - 544	Acceptable
7245	gamma-Chlordane	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	466	378.38	182 - 571	Acceptable
7355	4,4'-DDD	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	184	161.61	53.1 - 263	Acceptable
7360	4,4'-DDE	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	439	345.72	148 - 562	Acceptable
7365	4,4'-DDT	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	103	72.73	19.1 - 146	Acceptable
7470	Dieldrin	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	426	357.21	161 - 535	Acceptable
7510	Endosulfan I	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	321	178.56	69.5 - 354	Acceptable
7515	Endosulfan II	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	373	219.46	77.1 - 410	Acceptable
7520	Endosulfan sulfate	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	165	136.15	31.5 - 236	Acceptable
7540	Endrin	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	195	131.36	72.2 - 257	Acceptable
7530	Endrin aldehyde	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	365	252.53	36.5 - 401	Acceptable
7535	Endrin ketone	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	397	317.24	94.8 - 506	Acceptable
7685	Heptachlor	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	158	127.34	46.3 - 207	Acceptable
7690	Heptachlor epoxide	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	323	278.97	117 - 420	Acceptable
7810	Methoxychlor	8/21/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	214	171.02	21.4 - 306	Acceptable

Chlordane (PT-CHLR-SOIL)

Lot #: 7097-15

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
7250	Chlordane	8/27/2024	tr es	10178811	EPA 8081B Rev.2 2007	µg/kg	937	1103.3	196 - 1160	Acceptable

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Soil / Hazardous Waste PT

Study: HW0724

Opening Date: July 22, 2024 - Closing Date: September 5, 2024

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

PCBs (PT-PCB-SOIL)

Lot #: 7097-17

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
8880	Aroclor 1016	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	14.2	12.4358	3.32 - 19.1	Acceptable
8885	Aroclor 1221	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
8890	Aroclor 1232	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
8895	Aroclor 1242	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
8900	Aroclor 1248	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
8905	Aroclor 1254	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
8910	Aroclor 1260	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	<0.1	<0.2		Acceptable
Additional State Specific Analytes										
8870	Total PCBs	9/3/2024	tr es	10179358	EPA 8082A Rev.Update IV 2007	mg/kg	14.2	12.4358	3.67 - 20.9	Acceptable

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Soil / Hazardous Waste PT

Study: HW0724

Opening Date: July 22, 2024 - Closing Date: September 5, 2024

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

TCLP Metals (PT-TCLPMET-SOIL)

Lot #: 7097-52

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
Additional State Specific Analytes										
1005	Antimony					mg/L	3.62		2.74 - 4.32	NR
1010	Arsenic	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.26	2.8	1.80 - 2.81	Acceptable
1015	Barium	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	3.20	3.0	2.51 - 3.77	Acceptable
1020	Beryllium					mg/L	3.42		2.50 - 4.09	NR
1025	Boron					mg/L	3.08		2.21 - 3.84	NR
1030	Cadmium	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.77	1.61	1.40 - 2.08	Acceptable
1040	Chromium	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	3.42	3.01	2.70 - 3.91	Acceptable
1050	Cobalt					mg/L	3.07		2.29 - 3.56	NR
1055	Copper					mg/L	3.04		2.25 - 3.69	NR
1075	Lead	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	2.26	2.3	1.72 - 2.62	Acceptable
1095	Mercury	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.53	0.86	0.604 - 1.73	Acceptable
1105	Nickel					mg/L	1.87		1.46 - 2.19	NR
1140	Selenium	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.39	1.17	1.07 - 1.71	Acceptable
1150	Silver	8/30/2024	sh	10118806	EPA 1311 Rev.Update I 1992	mg/L	1.95	1.84	1.18 - 2.46	Acceptable
1165	Thallium					mg/L	4.17		2.64 - 4.96	NR
1190	Zinc					mg/L	3.27		2.48 - 4.05	NR

6390 Joyce Drive
100
Golden, CO 80403Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

PT Study Score Report

EPA ID:

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Study Number	Number of Reported Results	Number of Passing Results	Percent Passing
HW0724	37	37	100%

Report Definitions:

<i>Number of Reported Results</i>	The number of results reported which could be evaluated. Results receiving an evaluation of "NR" or "No Evaluation" are not included.
<i>Number of Passing Results</i>	The number of results reported receiving an evaluation of "Acceptable" or "Check for Error".
<i>Percent Passing</i>	The percentage of results reported receiving an evaluation of "Acceptable" or "Check for Error".



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Statistical Summary Report - Soil / Hazardous Waste PT

Opening Date: July 22, 2024 - Closing Date: September 5, 2024

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

Pesticides (PT-PEST-SOIL) Lot #: 7097-14

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7025	Aldrin	µg/kg	215	55.6	28.2	125
7110	alpha-BHC	µg/kg	257	62.9	27.5	125
7115	beta-BHC	µg/kg	260	65.9	26.8	124
7105	delta-BHC	µg/kg	357	94.5	27.4	133
7120	gamma-BHC (Lindane)	µg/kg	280	70.2	26.8	127
7240	alpha-Chlordane	µg/kg	347	67.6	34.7	126
7245	gamma-Chlordane	µg/kg	377	75.9	39.1	123
7355	4,4'-DDD	µg/kg	158	38.4	28.9	143
7360	4,4'-DDE	µg/kg	355	94.9	33.7	128
7365	4,4'-DDT	µg/kg	82.6	19.9	18.5	142
7470	Dieldrin	µg/kg	348	82.5	37.8	126
7510	Endosulfan I	µg/kg	187	49.8	21.7	110
7515	Endosulfan II	µg/kg	221	52.5	20.7	110
7520	Endosulfan sulfate	µg/kg	134	37.3	19.1	143
7540	Endrin	µg/kg	165	44.4	37.0	132
7530	Endrin aldehyde	µg/kg	188	60.6	10.0	110
7535	Endrin ketone	µg/kg	300	70.6	23.9	127
7685	Heptachlor	µg/kg	126	36.0	29.3	131
7690	Heptachlor epoxide	µg/kg	269	62.7	36.2	130
7810	Methoxychlor	µg/kg	159	54.1	10.0	143

Chlordane (PT-CHLR-SOIL) Lot #: 7097-15

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
7250	Chlordane	µg/kg	680	262	20.9	124

PCBs (PT-PCB-SOIL) Lot #: 7097-17

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
8880	Aroclor 1016	mg/kg	11.2	2.58	23.4	135
8885	Aroclor 1221	mg/kg	N/A	N/A	N/A	N/A
8890	Aroclor 1232	mg/kg	N/A	N/A	N/A	N/A
8895	Aroclor 1242	mg/kg	N/A	N/A	N/A	N/A
8900	Aroclor 1248	mg/kg	N/A	N/A	N/A	N/A
8905	Aroclor 1254	mg/kg	N/A	N/A	N/A	N/A
8910	Aroclor 1260	mg/kg	N/A	N/A	N/A	N/A

Additional State Specific Analytes

8870	Total PCBs	mg/kg	12.3	3.55	25.8	147
------	------------	-------	------	------	------	-----



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Statistical Summary Report - Soil / Hazardous Waste PT

Opening Date: July 22, 2024 - Closing Date: September 5, 2024

Laboratory: Hawaii Analytical Laboratory, LLC
3615 Harding Ave Ste 308
Honolulu, HI 96816
USA

Contact: Ms. Anne Antin
8087350422

EPA Lab ID:

TCLP Metals (PT-TCLPMET-SOIL)

Lot #: 7097-52

NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
Additional State Specific Analytes						
1005	Antimony	mg/L	3.71	0.269	75.7	119
1010	Arsenic	mg/L	2.34	0.202	79.6	124
1015	Barium	mg/L	3.48	0.229	78.4	118
1020	Beryllium	mg/L	3.36	0.191	73.1	120
1025	Boron	mg/L	3.28	0.210	71.8	125
1030	Cadmium	mg/L	1.82	0.121	79.1	118
1040	Chromium	mg/L	3.39	0.235	78.9	114
1050	Cobalt	mg/L	3.06	0.145	74.6	116
1055	Copper	mg/L	3.08	0.146	74.0	121
1075	Lead	mg/L	2.28	0.139	76.1	116
1095	Mercury	mg/L	1.37	0.259	39.5	113
1105	Nickel	mg/L	1.87	0.121	78.1	117
1140	Selenium	mg/L	1.45	0.0636	77.0	123
1150	Silver	mg/L	1.95	0.143	60.5	126
1165	Thallium	mg/L	3.97	0.284	63.3	119
1190	Zinc	mg/L	3.32	0.286	75.8	124