Cleanup Action Work Plan
Engineering Design Report
Addendum #1
Yakima Air Terminal – Richardson Airways Washdown Area
Yakima, Washington

August 25, 2009

Prepared for

City of Yakima, Washington
Yakima County, Washington

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INTRODUCTION

In June 2009, a Cleanup Action Work Plan (CAWP; Landau Associates 2009a) was prepared and submitted for the former Richardson Airways Washdown Site located in Yakima, Washington (site; Figure 1) on behalf of the City of Yakima (City) and Yakima County (County). The CAWP was prepared in accordance with the requirements of Consent Decree No. 08-2-04863-1 (Consent Decree) between the Washington State Department of Ecology (Ecology) and the City and County, and the Draft Cleanup Action Plan (CAP) prepared by Ecology in July 2008 and accepted as final in December 2008 (Ecology 2008). The purpose of the CAWP was to establish a plan to help ensure that the cleanup action for the remediation of contaminated soils at the site is designed, constructed, and implemented in a manner that is consistent with the CAP, accepted engineering practices, and the requirements specified in WAC 173-340-360. The CAWP also provided sufficient information for the development of construction plans and specifications, and documentation of the engineering concepts and design criteria used to develop the cleanup action.

This CAWP Addendum #1 was prepared in order to convey the results of a supplemental sampling event that was conducted after submittal of the CAWP, and identify how the results of the sampling modify portions of the approach for the cleanup action. Approval for the supplemental sampling was given by Ecology based on discussions during a June 15, 2009 meeting at Ecology (Dick Bassett, Doug Mayo, and Beth Clark). The sampling protocol was summarized in a June 26, 2009 email to Ecology (Clark, E. 2009).

PURPOSE OF SUPPLEMENTAL SAMPLING

The CAWP indicated that:

> "systematic confirmation sampling will be conducted to determine the limits of the excavation. The sampling may be done prior to and/or during excavation depending on the specific sampling locations. The proposed excavated area has been divided into a grid… [and a] confirmation sample will be collected from the excavation base at the approximate center of the grid area… Additionally, confirmation samples will be collected from the side walls of the excavation at intervals of approximately 50 lineal feet."

Soil samples analyzed during this supplemental sampling were primarily collected to achieve the objective of determining the limits of the excavation, prior to commencing excavation activities. This addendum distinguishes between confirmation samples, which will be used to define the final limits of the site excavation in accordance with WAC 173-340-410 and verification samples, which were collected to reevaluate the historical site data. Specifically, the supplemental sampling was performed to achieve the following objectives:

- Pre-establish the vertical extent of the remedial excavation in portions of the proposed excavation by performing confirmation sampling at a depth of 2 feet (ft) below ground

surface (BGS) at the approximate base sampling locations within the proposed 2-ft excavation contour shown on Figure 7 ("Approximate Confirmation Sampling Locations") of the CAWP.

- Pre-establish the horizontal extent of the remedial excavation by performing shallow confirmation sampling around the perimeter of the proposed excavation limits in the approximate sidewall confirmation sampling locations proposed in Figure 7 ("Approximate Confirmation Sampling Locations") of the CAWP.

- Verify certain results, which are over 15 years old, from the investigation conducted in 1993 by CH2MHill (CH2MHill 1993) which were driving the conceptual remedial excavation depth.

- Verify certain results, which are over 15 years old, from the 1993 investigation which were driving the necessity to perform confirmation sampling for herbicides.

Successful completion of these activities reduces the uncertainty in the vertical and horizontal limits of the final excavation and significantly reduces the number of confirmation samples (and constituents) that will be required during excavation and will thereby streamline the performance of the cleanup action.

SUPPLEMENTAL SAMPLING

On June 29 and 30, 2009, Landau Associates conducted a supplemental sampling that consisted of advancing soil borings using direct-push drilling methods at various locations around the perimeter and through the interior of the project area (identified on Figure 2) to collect and analyze soil samples to achieve the objectives stated in the section above. All sample locations were clearly flagged in the field, global positioning system (GPS) coordinates were collected, and detailed field notes were maintained indicating the location and depth of samples. This data will be used to accurately define site excavation limits.

Soil samples were collected and analyzed from the following boring locations:

- Borings advanced as representative pre-excavation "base" confirmation samples, B-1A, B-7A, B-1B, B-2B, B-3B, B-4B, B-5B, B-1C, and B-3C, were advanced to a depth of 2 ft at grid locations identified on Figure 7 of the CAWP, and samples were collected and analyzed for pesticides to define the vertical extent of the remedial excavation in areas around these borings.

- Borings advanced as representative pre-excavation "sidewall" confirmation samples, SW1 through SW14, were advanced around the perimeter of the known area of soil contamination and samples collected and analyzed for pesticides from a depth of approximately 0.5 to 2.0 ft BGS to define the horizontal extent of the remedial excavation.

- Borings DP16 through DP19 were advanced proximate to, and to similar depths as, former CH2MHill soil borings SB-3 through SB-5 and SB-11 respectively, to verify the presence or

absences of pesticide-contaminated soil at the depths where they were identified during the 1993 investigation. Soil boring logs for these borings are included in Appendix A.

- In addition to the pesticide sampling described in the bullets above, samples from boring locations B-1A, B-1B, SW1, SW2, SW10, SW11, DP-17, and DP-18 were also analyzed for herbicides to verify the presence or absence of herbicides previously identified in the 1993 investigation in the vicinity of soil borings SB-4 and SB-5.

Methods for conducting field activities, including sample collection procedures, conformed to those described in the project Sampling and Analysis Plan (SAP; Landau Associates 2009b).

Soil samples were analyzed by Analytical Resources, Inc., of Tukwila, Washington. All samples submitted for analysis were analyzed for organochlorine pesticides by U.S. Environmental Protection Agency (EPA) Method 8081B. Select samples (i.e., samples from borings B-1A, B-1B, DP-17, DP-18, SW1, SW2, SW10, and SW11) were also analyzed for chlorinated herbicides by EPA Method 8151A. Laboratory analytical reports and associated data are presented in Appendix B. Samples are identified by the boring location (i.e., DP-8) followed by the sample depth interval in feet BGS (i.e., DP-8:1.5-3).

DATA QUALITY REVIEW

Following receipt of the final analytical data packages, the analytical results and laboratory testing methods were reviewed by Landau Associates for quality assurance through a limited data validation process. The laboratory data validation process consisted of reviewing data for holding times, method blank results, field duplicate results, laboratory blank results, matrix spike recoveries, surrogate recoveries, laboratory control samples, and reporting limits. The data validation was performed using appropriate guidance from the EPA (EPA 1999) for the required indicator parameters.

All of the results for the samples collected and analyzed for the supplemental soil sampling were determined to be acceptable for project use without qualification with the following exceptions:

- Due to high recovery in the laboratory control sample (LCS) for the herbicide dinoseb, the dinoseb results for sample DP17:2-3 analyzed in conjunction with the LCS were qualified as estimated. The dinoseb results for sample DP17:2-3 were qualified with a J, as indicated in Table 1.

- Recovery of 2,4,5-T, dicamba, and dichloroprop in the matrix spike and matrix spike duplicate (MS/MSD) conducted on sample DP18:2-3 were low. 2,4,5-T, dicamba, and dalapon results for sample DP18:2-3 were non-detect; therefore, the reporting limits for this sample for these constituents were qualified as estimated (UJ), as indicated in Table 1.

- Recovery of the pesticide 4,4'-DDT in the MS/MSD conducted on sample DP17:2-3 were low for the MS and high for the MSD. The 4,4'-DDT results for sample DP17:2-3 were qualified with a J, as indicated in Table 1.

A summary of the analytical results and assigned data qualifiers is provided in Table 1. The laboratory data reports are provided in Appendix B.

INVESTIGATION RESULTS

Pesticides were detected above the Model Toxics Control Act (MTCA) Method B cleanup levels for soil established for the site (Landau Associates 2009c) in 6 of the 37 samples. The remaining samples were either below their respective cleanup level and/or below the laboratory reporting limit. Herbicides were not detected in any of the samples, with the exception of one sample as discussed below, for which they were analyzed. More specifically:

- **Pre-Excavation "Base" Confirmation Samples:** Samples from borings B-1A, B-7A, B-1B, B-2B, B-3B, B-4B, B-5B, B-1C, and B-3C, were collected and analyzed from a depth of approximately 2 ft BGS. Pesticide concentrations in samples from each of these sampling locations were below the laboratory reporting limit with the exception of one location (B-1A) where Endosulfan I was detected at a concentration [2.7 micrograms per kilogram (µg/kg)] slightly above the reporting limit, but well below the cleanup level (4,300 µg/kg).

- **Pre-Excavation "Sidewall" Confirmation Samples:** Samples from the "SW" locations were analyzed in two rounds of analysis. Samples from borings SW1 through SW13, which defined the initially estimated boundaries of shallow soil contamination, were analyzed first. Sample pesticide concentrations from each of these locations were below the site cleanup levels with the exception of samples from borings SW1, SW3, SW4, and SW13. Therefore, samples from borings SW14, SW16, SW17, and SW25 (which were advanced approximately 5 ft radially outward from the four borings with exceedances) were analyzed. Sample concentrations from each of these locations were below cleanup levels except for the sample from boring SW14, which contained Dieldrin at a concentration (15 µg/kg) slightly above the cleanup level (10 µg/kg).

- **Depth Verification Samples:** Samples from borings DP16 through DP19 were analyzed from various depth intervals to verify the 1993 results from similar areas and depths. Pesticides were detected above the reporting limit in the two sample intervals collected from DP16 (4.5 to 6 ft and 7.5 to 9 ft BGS) and from DP17 (2 to 3 ft and 4.5 to 6 ft BGS); however, the samples from the deeper interval in DP16, the two sample intervals from boring DP17, and the two sample intervals from DP18 (2 to 3 ft and 3 to 4 ft BGS) and DP19 (2 to 3 ft and 4.5 to 6 ft BGS) did not contain any pesticide concentrations above the site cleanup levels. The location and depth intervals of DP17 (2 to 3 ft BGS) and DP-18 (2 to 3 ft BGS) also make these two samples appropriate for use as confirmation samples and to assist in defining the horizontal and vertical limits of the excavation.

- **Herbicide Samples:** Samples from boring locations B-1A, B-1B, SW1, SW2, SW10, SW11, DP-17, and DP-18 that were analyzed for herbicides contained no herbicide concentrations above the laboratory reporting limit, with the exception of the sample collected from boring DP-17 at 2 to 3 ft BGS which contained dinoseb at a concentration of 1,000 µg/kg, which is below the cleanup level of 1,600 µg/kg.

Pertinent sampling results are summarized on Figures 3 and 4. The inferred approximate extent of soil contamination at the site, based on these results, is shown on Figure 5.

REVETMENT SAMPLING

In addition to the sampling described above, a sample (RVTComp:0.5-2) was collected from a nearby revetment at the airport to determine the suitability of that material for potential backfill material. Analyte concentrations were below reporting limits or at natural background levels (metals); however, the soil type and volume was determined to not be structurally suitable for use as backfill material. The results of the revetment sampling are included in Table 1 and in the analytical results in Appendix B.

CONCLUSIONS OF THE SUPPLEMENTAL SAMPLING AND APPLICABILITY OF THE RESULTS TO THE CLEANUP ACTION

The following conclusions pertaining to the cleanup action have been drawn based on the results of the supplemental sampling:

- Based on the results of the "B" series of pre-excavation confirmation samples, the vertical extent of the proposed remedial excavation has been defined at 2 ft BGS within each confirmation sampling grid where base samples were collected and analyzed (i.e., the remedial excavation will extend to no more than 2 ft BGS within grid locations A1, A7, B1 through B7, and C1).

- Based on the results of the "SW" series of pre-excavation confirmation samples, the horizontal extent of the proposed remedial excavation has been defined in all directions with the exception of the northwest corner near boring location SW-14. Therefore, the remedial excavation will extend horizontally (to a depth of 2 ft BGS) to each of the SW sampling locations where sample results were below the pesticide cleanup levels. The excavation will be extended radially approximately 5 ft beyond the area around SW-14, and at least one sidewall confirmation sample will be collected from this area to ensure that pesticide contaminated soils are adequately removed from this area.

- Based on the result of the samples collected from borings DP-16 through 19, it is concluded that the pesticide concentrations that were observed at deeper intervals in soil borings SB-3, SB-4, SB-5, and SB-11 in the 1993 investigation have declined (likely due to natural degradation) to concentrations below cleanup levels. Therefore, soils in the vicinity of SB-3, SB-4, SB-5, and SB-11 will be excavated to depths of no greater than 6 ft, 3 ft, 2 ft, and 2 ft, respectively, prior to confirmation sampling.

- Because herbicides were not identified above cleanup levels in samples from boring locations B-1A, B-1B, SW1, SW2, SW10, SW11, DP-17, and DP-18, it is concluded that the herbicide concentrations that were observed in samples from soil borings SB-4 and SB-5 in the 1993 investigation have declined (likely due to natural degradation) to concentrations below cleanup levels. Therefore, confirmation sampling for herbicides will not be conducted during the remedial excavation.

As indicated above, the results of the supplemental sampling are directly applicable to how the remedial excavation and confirmation sampling will be conducted, as originally outlined in the CAWP. Based on these results, specific items identified within the CAWP need to be amended to accurately reflect current site conditions and modifications to the cleanup approach. Specifically:

- Due to differences between the findings of the 1993 investigation and the current investigation, it is evident that the results from over 15 years ago no longer reflect current site conditions. Pesticide concentrations have evidently declined in deeper intervals and herbicides are no longer present at appreciable concentrations. Therefore, determination of excavation limits and volumes have been redefined using the recent (2009) data. The approximate area and depth of the proposed excavation are shown on Figure 6.

- Based on the results of the recent investigations and sampling events (the areas and depths of contaminated soils):
  - the remedial excavation will extend to depths between 2 ft and 6 ft BGS
  - the approximate area of excavation is 19,000 square feet (ft^2)
  - the estimated in-place volume of contaminated soil that will be excavated for disposal is 2,000 to 2,200 cubic yards (yd^3).

- Confirmation samples will be collected from each grid area (where pre-excavation confirmation samples have not already been collected and analyzed) upon completion of excavation of that grid (as practicable based on the configuration of the excavation of proximate areas) and submitted to the analytical laboratory for analysis as appropriate. The approximate locations of pre-excavation confirmation samples and the approximate location where additional post-excavation confirmation samples will be collected are shown on Figure 7.

- The final depth and horizontal limit of the excavation where pre-excavation confirmation samples have not yet been collected will be determined by the results of sidewall and base confirmation samples.

REMAINING SITE CONFIRMATION SAMPLING

The confirmation samples collected as part of this supplemental sampling define the limit of the 2-ft excavation (with the exception of SW-14 as described above). The remaining confirmation sampling to be conducted as part of the site excavation activities will be focused on defining the horizontal limit of the excavation in the area of SW-14 and defining the depth of the excavation greater than 2 ft as follows:

- An additional 2-ft excavation sidewall confirmation sample will be collected approximately 5 ft beyond (west/northwest) the area of SW-14.

- Additional base samples will be collected in the 2-ft, 3-ft, and 6-ft excavation areas as shown on Figure 7.

- Additional sidewall samples will be collected from each sidewall of the two 6-ft excavation areas as shown on Figure 7.

Based on the supplemental sampling results, the remaining confirmation sampling will be limited to pesticides (i.e., herbicide analysis will not be performed on any of the post-excavation confirmation samples).

SUMMARY

A supplemental investigation was conducted to reduce the uncertainty in the vertical and horizontal limits of the final excavation by collecting and analyzing pre-excavation confirmation samples. The investigation was also used to verify whether 1993 investigation results were still applicable to the site. The pre-excavation base confirmation sampling results have defined the vertical extent of the remedial excavation at 2 ft BGS throughout large portions of the excavation. The pre-excavation sidewall confirmation sampling results have successfully defined the horizontal limits of the shallow (2-ft) portion of the remedial excavation, except for a small area along the northwest boundary, where an additional confirmation sample(s) will be needed during the cleanup. Additional sampling locations and analyses have confirmed that the depth of pesticide contamination above cleanup levels has been reduced over the past 15 years (likely due to natural degradation) to the upper 6 ft or less of soil at the site; therefore, the remedial excavation will not extend as deep in certain areas of the site as previously indicated in the CAWP before confirmation samples are collected. Similarly, herbicide concentrations have been reduced to below cleanup levels across the site; therefore, herbicide analysis will not be necessary during cleanup activities.

The results and conclusions of this investigation better defines the limits (and estimated volumes) of soil excavation and significantly reduces the number of confirmation samples (and constituents) that will be required during the excavation. This will prove effective in streamlining the overall implementation and performance of the cleanup action.

USE OF THIS REPORT

This Cleanup Action Work Plan Addendum #1 has been prepared for the exclusive use of the City and County of Yakima, Washington for specific application to the Yakima Air Terminal, Richardson Airways Washdown Site. The reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of

care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

If you have any questions or comments regarding this report, please contact Beth Clark at 509-967-0704, or at eclark@landauinc.com.

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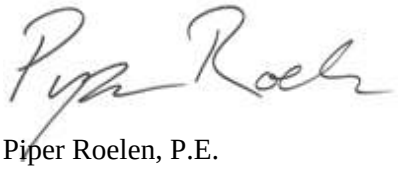
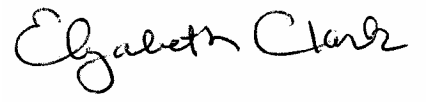


Piper Roelen, P.E.
Senior Engineer



Elizabeth Clark, P.E.
Associate Engineer

PMR/EC/kes

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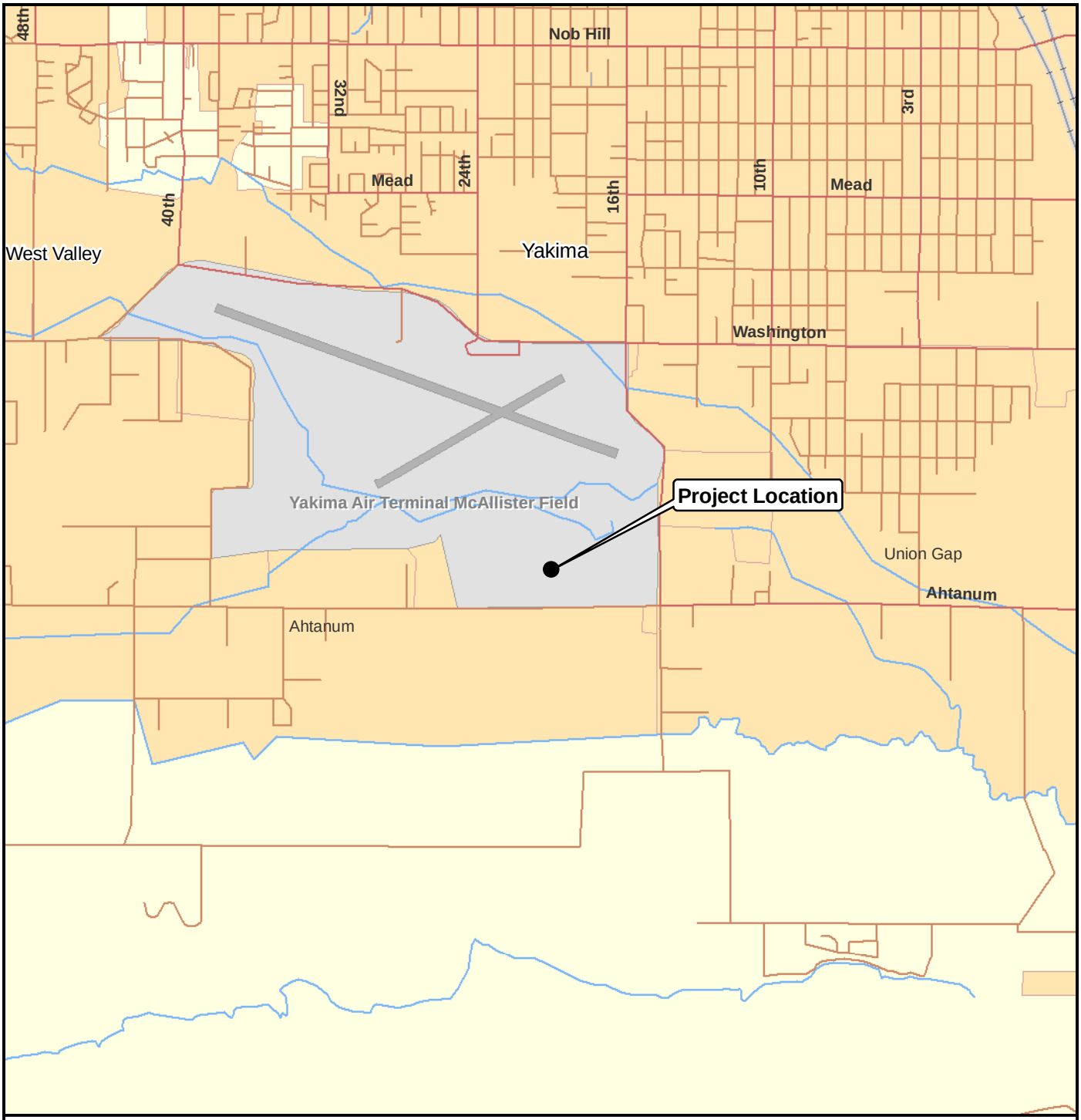

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Data Source: ESRI 2008

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington	**Vicinity Map**	Figure 1

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Legend

- ▲ SW1 Sidewall Confirmation Samples
- ■ B-3B Base Confirmation Samples (Grid Location)
- ● DP16 Deeper Verification Samples

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington	**Soil Sampling Location**	Figure 2

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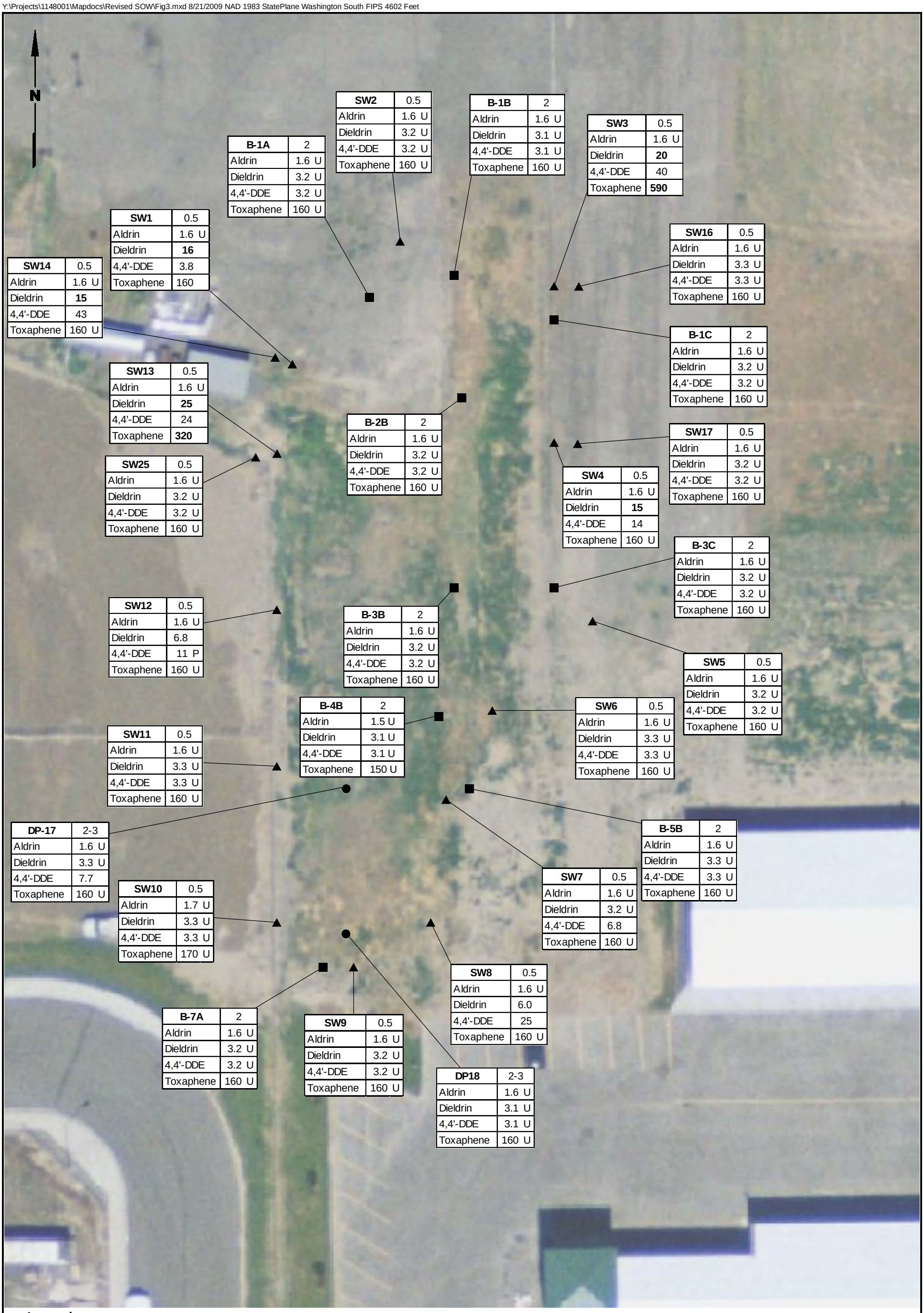

Legend

- ▲ Sidewall Confirmation Samples
- ■ Base Confirmation Samples (Grid Location)
- ● Verification Sample Interval (used as confirmation sample)

Note

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0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington	**Soil Sampling Results (Base and Sidewall Samples)**	Figure 3

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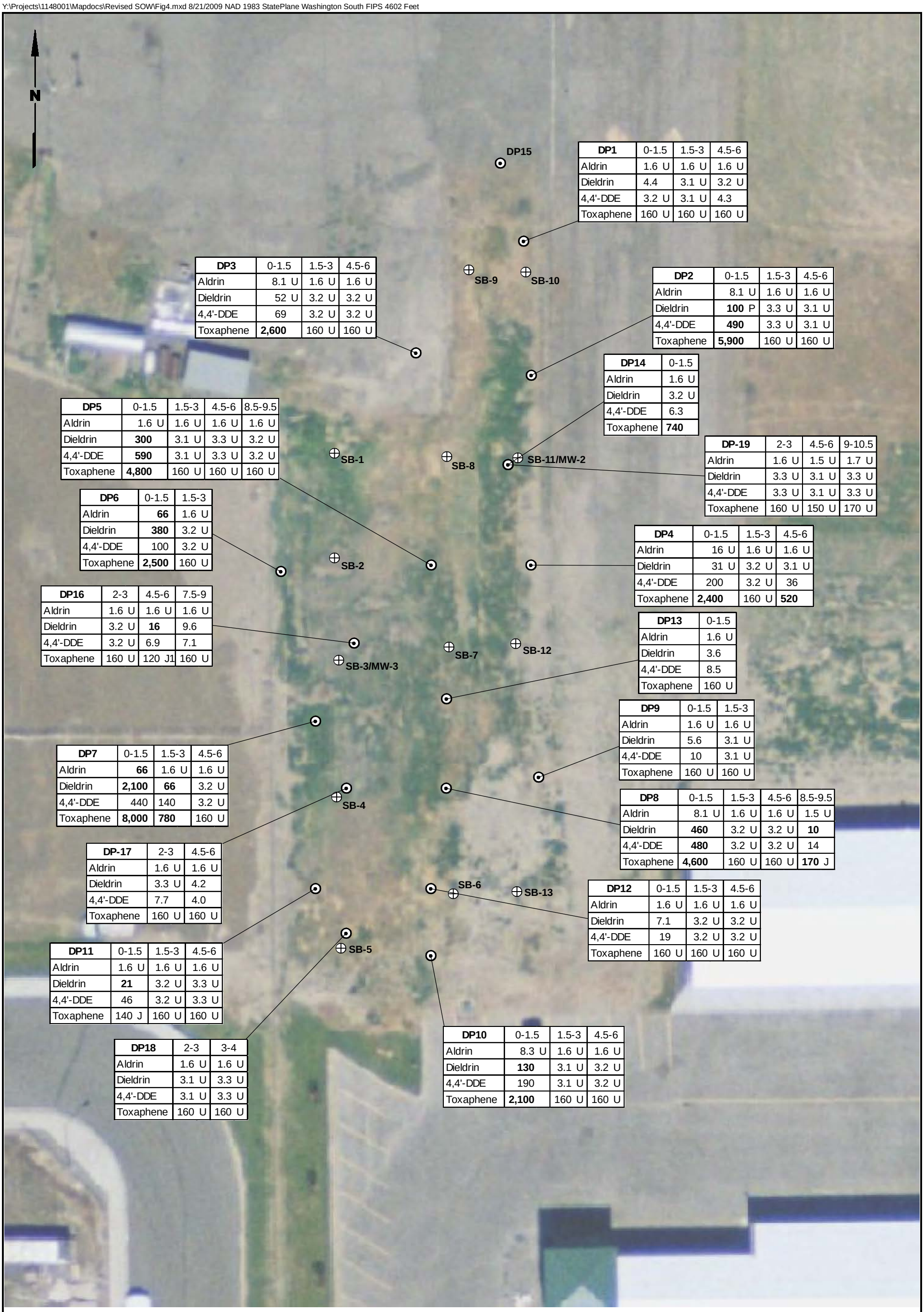

DP1	0-1.5	1.5-3	4.5-6
Aldrin	1.6 U	1.6 U	1.6 U
Dieldrin	4.4	3.1 U	3.2 U
4,4'-DDE	3.2 U	3.1 U	4.3
Toxaphene	160 U	160 U	160 U

DP3	0-1.5	1.5-3	4.5-6
Aldrin	8.1 U	1.6 U	1.6 U
Dieldrin	52 U	3.2 U	3.2 U
4,4'-DDE	69	3.2 U	3.2 U
Toxaphene	**2,600**	160 U	160 U

DP2	0-1.5	1.5-3	4.5-6
Aldrin	8.1 U	1.6 U	1.6 U
Dieldrin	**100** P	3.3 U	3.1 U
4,4'-DDE	**490**	3.3 U	3.1 U
Toxaphene	**5,900**	160 U	160 U

DP14	0-1.5
Aldrin	1.6 U
Dieldrin	3.2 U
4,4'-DDE	6.3
Toxaphene	**740**

DP5	0-1.5	1.5-3	4.5-6	8.5-9.5
Aldrin	1.6 U	1.6 U	1.6 U	1.6 U
Dieldrin	**300**	3.1 U	3.3 U	3.2 U
4,4'-DDE	**590**	3.1 U	3.3 U	3.2 U
Toxaphene	**4,800**	160 U	160 U	160 U

DP-19	2-3	4.5-6	9-10.5
Aldrin	1.6 U	1.5 U	1.7 U
Dieldrin	3.3 U	3.1 U	3.3 U
4,4'-DDE	3.3 U	3.1 U	3.3 U
Toxaphene	160 U	150 U	170 U

DP6	0-1.5	1.5-3
Aldrin	**66**	1.6 U
Dieldrin	**380**	3.2 U
4,4'-DDE	100	3.2 U
Toxaphene	**2,500**	160 U

DP4	0-1.5	1.5-3	4.5-6
Aldrin	16 U	1.6 U	1.6 U
Dieldrin	31 U	3.2 U	3.1 U
4,4'-DDE	200	3.2 U	36
Toxaphene	**2,400**	160 U	**520**

DP16	2-3	4.5-6	7.5-9
Aldrin	1.6 U	1.6 U	1.6 U
Dieldrin	3.2 U	**16**	9.6
4,4'-DDE	3.2 U	6.9	7.1
Toxaphene	160 U	120 J1	160 U

DP13	0-1.5
Aldrin	1.6 U
Dieldrin	3.6
4,4'-DDE	8.5
Toxaphene	160 U

DP9	0-1.5	1.5-3
Aldrin	1.6 U	1.6 U
Dieldrin	5.6	3.1 U
4,4'-DDE	10	3.1 U
Toxaphene	160 U	160 U

DP7	0-1.5	1.5-3	4.5-6
Aldrin	**66**	1.6 U	1.6 U
Dieldrin	**2,100**	**66**	3.2 U
4,4'-DDE	440	140	3.2 U
Toxaphene	**8,000**	**780**	160 U

DP8	0-1.5	1.5-3	4.5-6	8.5-9.5
Aldrin	8.1 U	1.6 U	1.6 U	1.5 U
Dieldrin	**460**	3.2 U	3.2 U	**10**
4,4'-DDE	**480**	3.2 U	3.2 U	14
Toxaphene	**4,600**	160 U	160 U	**170** J

DP-17	2-3	4.5-6
Aldrin	1.6 U	1.6 U
Dieldrin	3.3 U	4.2
4,4'-DDE	7.7	4.0
Toxaphene	160 U	160 U

DP12	0-1.5	1.5-3	4.5-6
Aldrin	1.6 U	1.6 U	1.6 U
Dieldrin	7.1	3.2 U	3.2 U
4,4'-DDE	19	3.2 U	3.2 U
Toxaphene	160 U	160 U	160 U

DP11	0-1.5	1.5-3	4.5-6
Aldrin	1.6 U	1.6 U	1.6 U
Dieldrin	**21**	3.2 U	3.3 U
4,4'-DDE	46	3.2 U	3.3 U
Toxaphene	140 J	160 U	160 U

DP18	2-3	3-4
Aldrin	1.6 U	1.6 U
Dieldrin	3.1 U	3.3 U
4,4'-DDE	3.1 U	3.3 U
Toxaphene	160 U	160 U

DP10	0-1.5	1.5-3	4.5-6
Aldrin	8.3 U	1.6 U	1.6 U
Dieldrin	**130**	3.1 U	3.2 U
4,4'-DDE	190	3.1 U	3.2 U
Toxaphene	**2,100**	160 U	160 U

Legend

⊕ 1993 Soil Boring/Monitoring Well Location (CH2MHill, RI/FS)

⊙ Deeper Verification Samples

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington

Soil Sampling Results (Depth Verification Samples)

Figure 4

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Legend

- Deeper Verification Samples
- Sidewall Confirmation Samples
- Catch Basin (Approximate Location)
- 1.5' Approximate Depth of Contamination

0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington	**Extent of Contaminated Soil**	Figure 5

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Legend

- Base Confirmation Samples
- Deeper Verification Samples
- Sidewall Confirmation Samples
- 2.0' Excavation Depth
- Catch Basin (Approximate Location)

0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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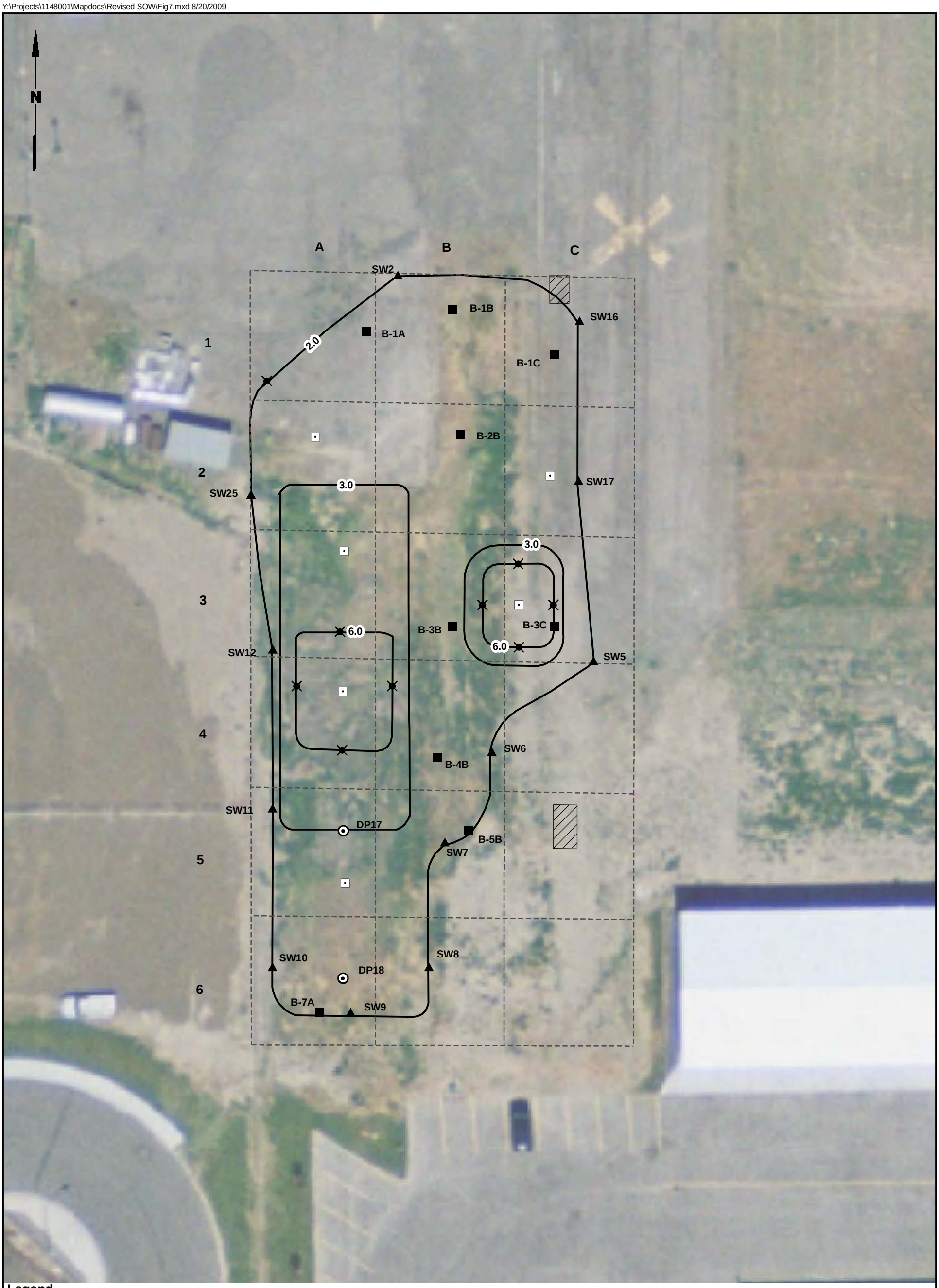
Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington	**Approximate Area and Depth of Excavation**	Figure 6

Y:\Projects\1148001\Mapdocs\Revised SOW\Fig7.mxd 8/20/2009



Legend

- Base Confirmation Samples (pre-excavation)
- Sidewall Confirmation Samples (pre-excavation)
- Verification Samples Used as Confirmation Samples (pre-excavation)
- Approximate Location of Sidewall Samples (post-excavation)
- Approximate Location of Base Samples (post-excavation)
- 2.0' Excavation Depth
- Catch Basin (Approximate Location)

0 30 60

Scale in Feet

Data Source: Yakima County Aerial Image

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Yakima Air Terminal - Richardson Airways Washdown Site Yakima, Washington

Approximate Confirmation Sampling Locations

Figure 7

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	B-1A-2	B-1B-2	B-1C-2	B-2B-2	Dup of B-2B-2 SW27-W-6.5	B-3B-2	B-4B-2	B-3C-2	B-5B-2
Lab ID:	PF48P	PF48R	PF48C	PF48D	PF47O	PF48E	PF48F	PF48G	PF48H
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
PESTICIDES (µg/kg)									
SW8081B									
alpha-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
beta-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
delta-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
gamma-BHC (Lindane)	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Heptachlor	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Aldrin	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Heptachlor Epoxide	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Endosulfan I	**2.7**	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Dieldrin	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
4,4'-DDE	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
Endrin	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
Endosulfan II	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
4,4'-DDD	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
Endosulfan Sulfate	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
4,4'-DDT	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
Methoxychlor	16 U	16 U	16 U	16 U	16 U	16 U	15 U	16 U	16 U
Endrin Ketone	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
Endrin Aldehyde	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U
gamma Chlordane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
alpha Chlordane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U
Toxaphene	160 U	160 U	160 U	160 U	160 U	160 U	150 U	160 U	160 U

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	B-1A-2	B-1B-2	B-1C-2	B-2B-2	Dup of B-2B-2 SW27-W-6.5	B-3B-2	B-4B-2	B-3C-2	B-5B-2
Lab ID:	PF48P	PF48R	PF48C	PF48D	PF47O	PF48E	PF48F	PF48G	PF48H
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
HERBICIDES (µg/kg)									
SW8151A									
2,4,5-TP (Silvex)	11 U	11 U	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	11 U	11 U	NA	NA	NA	NA	NA	NA	NA
Dinoseb	22 U	22 U	NA	NA	NA	NA	NA	NA	NA
Dicamba	22 U	22 U	NA	NA	NA	NA	NA	NA	NA
2,4-D	44 U	44 U	NA	NA	NA	NA	NA	NA	NA
2,4-DB	220 U	220 U	NA	NA	NA	NA	NA	NA	NA
Dalapon	44 U	44 U	NA	NA	NA	NA	NA	NA	NA
MCPA	11,000 U	11,000 U	NA	NA	NA	NA	NA	NA	NA
Dichloroprop	44 U	44 U	NA	NA	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS									
NWTPH-HCID (mg/kg)									
Gasoline Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg)									
SW6010B									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	B-7A-2	DP16:2-3	DP16:4.5-6	DP16:7.5-9	DP17:2-3	DP17:4.5-6	DP18:2-3	DP18:3-4	DP19:2-3
Lab ID:	PF48I	PH60A	PH60B	PF39C	PH60C	PF39F	PH60D	PF39I	PH60E
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
PESTICIDES (µg/kg)									
SW8081B									
alpha-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
beta-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
delta-BHC	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
gamma-BHC (Lindane)	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Aldrin	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor Epoxide	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Endosulfan I	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Dieldrin	3.2 U	3.2 U	**16**	**9.6**	3.3 U	**4.2**	3.1 U	3.3 U	3.3 U
4,4'-DDE	3.2 U	3.2 U	**6.9**	**7.1**	**7.7**	**4.0**	3.1 U	3.3 U	3.3 U
Endrin	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
Endosulfan II	3.2 U	3.2 U	**8.9** P	**8.8** P	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
4,4'-DDD	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
Endosulfan Sulfate	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
4,4'-DDT	3.2 U	3.2 U	**14** P	**12** P	**37** J	**15**	3.1 U	3.3 U	3.3 U
Methoxychlor	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U
Endrin Ketone	3.2 U	3.2 U	3.1 U	3.2 U	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
Endrin Aldehyde	3.2 U	3.2 U	3.1 U	7.5 U	3.3 U	3.1 U	3.1 U	3.3 U	3.3 U
gamma Chlordane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
alpha Chlordane	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Toxaphene	160 U	160 U	**120** J1	160 U	160 U	160 U	160 U	160 U	160 U

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	B-7A-2	DP16:2-3	DP16:4.5-6	DP16:7.5-9	DP17:2-3	DP17:4.5-6	DP18:2-3	DP18:3-4	DP19:2-3
Lab ID:	PF48I	PH60A	PH60B	PF39C	PH60C	PF39F	PH60D	PF39I	PH60E
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
HERBICIDES (µg/kg)									
SW8151A									
2,4,5-TP (Silvex)	NA	NA	NA	NA	10 U	10 U	12 U	12 U	NA
2,4,5-T	NA	NA	NA	NA	10 U	10 U	12 UJ	12 U	NA
Dinoseb	NA	NA	NA	NA	**1,000** J	21 U	23 U	23 U	NA
Dicamba	NA	NA	NA	NA	21 U	21 U	23 UJ	23 U	NA
2,4-D	NA	NA	NA	NA	42 U	42 U	46 U	46 U	NA
2,4-DB	NA	NA	NA	NA	210 U	210 U	230 U	230 U	NA
Dalapon	NA	NA	NA	NA	42 U	42 U	46 U	46 U	NA
MCPA	NA	NA	NA	NA	10,000 U	10,000 U	12,000 U	12,000 U	NA
Dichloroprop	NA	NA	NA	NA	42 U	42 U	46 UJ	46 U	NA
PETROLEUM HYDROCARBONS									
NWTPH-HCID (mg/kg)									
Gasoline Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg)									
SW6010B									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	DP19:4.5-6	DP19:9-10.5	SW1-NW-0.5	SW2-NW-0.5	SW3-NW-0.5	SW4-E-0.5	SW5-SE-0.5	SW6-E-0.5	SW7-SE-0.5
Lab ID:	PH60F	PF39M	PF48J	PF48K	PF48L	PF48M	PF48N	PF48O	PF47A
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
PESTICIDES (µg/kg)									
SW8081B									
alpha-BHC	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
beta-BHC	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
delta-BHC	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
gamma-BHC (Lindane)	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Aldrin	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor Epoxide	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Endosulfan I	1.5 U	1.7 U	**99**	1.6 U	**17** P	1.6 U	1.6 U	1.6 U	1.6 U
Dieldrin	3.1 U	3.3 U	**16**	3.2 U	**20**	**15**	3.2 U	3.3 U	3.2 U
4,4'-DDE	3.1 U	3.3 U	**3.8**	3.2 U	**40**	**14**	3.2 U	3.3 U	**6.8**
Endrin	3.1 U	3.3 U	**5.0**	3.2 U	3.2 U	3.2 U	3.2 U	3.3 U	3.2 U
Endosulfan II	3.1 U	3.3 U	**95**	**6.0**	**110**	**9.8** P	3.2 U	3.3 U	3.2 U
4,4'-DDD	3.1 U	3.3 U	3.2 U	3.2 U	14 U	3.2 U	3.2 U	3.3 U	3.2 U
Endosulfan Sulfate	3.1 U	3.3 U	**6.5**	**3.8**	**27**	3.2 U	3.2 U	3.3 U	3.2 U
4,4'-DDT	3.1 U	3.3 U	**16** P	3.2 U	**62** P	**21**	**4.5**	3.3 U	**3.0** J1
Methoxychlor	15 U	17 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U
Endrin Ketone	3.1 U	3.3 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.3 U	3.2 U
Endrin Aldehyde	3.1 U	3.3 U	3.2 U	3.2 U	**28** P	6.6 U	3.2 U	3.3 U	3.2 U
gamma Chlordane	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
alpha Chlordane	1.5 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Toxaphene	150 U	170 U	**160**	160 U	**590**	160 U	160 U	160 U	160 U

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	DP19:4.5-6	DP19:9-10.5	SW1-NW-0.5	SW2-NW-0.5	SW3-NW-0.5	SW4-E-0.5	SW5-SE-0.5	SW6-E-0.5	SW7-SE-0.5
Lab ID:	PH60F	PF39M	PF48J	PF48K	PF48L	PF48M	PF48N	PF48O	PF47A
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009
HERBICIDES (µg/kg)									
SW8151A									
2,4,5-TP (Silvex)	NA	NA	11 U	9.9 U	NA	NA	NA	NA	NA
2,4,5-T	NA	NA	11 U	9.9 U	NA	NA	NA	NA	NA
Dinoseb	NA	NA	22 U	20 U	NA	NA	NA	NA	NA
Dicamba	NA	NA	22 U	20 U	NA	NA	NA	NA	NA
2,4-D	NA	NA	59 U	40 U	NA	NA	NA	NA	NA
2,4-DB	NA	NA	220 U	200 U	NA	NA	NA	NA	NA
Dalapon	NA	NA	44 U	40 U	NA	NA	NA	NA	NA
MCPA	NA	NA	11,000 U	9,900 U	NA	NA	NA	NA	NA
Dichloroprop	NA	NA	44 U	40 U	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS									
NWTPH-HCID (mg/kg)									
Gasoline Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg)									
SW6010B									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	SW8-E-0.5	SW9-S-0.5	SW10-W-0.5	SW11-W-0.5	SW12-W-0.5	SW13-W-0.5	SW14-NW-0.5	SW16-NE-0.5	SW17-E-0.5
Lab ID:	PF47C	PF47E	PF47G	PF47I	PF47K	PF47M	PH60H	PH60I	PH60J
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	6/30/2009	6/30/2009
PESTICIDES (µg/kg)									
SW8081B									
alpha-BHC	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
beta-BHC	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
delta-BHC	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
gamma-BHC (Lindane)	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Aldrin	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor Epoxide	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Endosulfan I	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	**11**	1.6 U	1.6 U
Dieldrin	**6.0**	3.2 U	3.3 U	3.3 U	**6.8**	**25**	**15**	3.3 U	3.2 U
4,4'-DDE	**25**	3.2 U	3.3 U	3.3 U	**11** P	**24**	**43**	3.3 U	3.2 U
Endrin	3.1 U	3.2 U	3.3 U	3.3 U	3.3 U	3.2 U	3.2 U	3.3 U	3.2 U
Endosulfan II	3.1 U	3.2 U	3.3 U	3.3 U	3.3 U	12 U	**14**	3.3 U	3.2 U
4,4'-DDD	**4.7**	3.2 U	3.3 U	3.3 U	3.3 U	**8.0**	**8.9** P	3.3 U	3.2 U
Endosulfan Sulfate	3.1 U	3.2 U	3.3 U	3.3 U	3.3 U	7.2 U	3.2 U	3.3 U	3.2 U
4,4'-DDT	**30**	3.2 U	3.3 U	3.3 U	**15** P	**51** P	**120**	3.3 U	3.2 U
Methoxychlor	16 U	16 U	17 U	16 U	16 U	16 U	16 U	16 U	16 U
Endrin Ketone	3.1 U	3.2 U	3.3 U	3.3 U	3.3 U	3.2 U	3.2 U	3.3 U	3.2 U
Endrin Aldehyde	3.1 U	3.2 U	3.3 U	3.3 U	7.2 U	22 U	3.2 U	3.3 U	3.2 U
gamma Chlordane	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
alpha Chlordane	**2.7** P	1.6 U	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Toxaphene	160 U	160 U	170 U	160 U	160 U	**320**	160 U	160 U	160 U

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	SW8-E-0.5	SW9-S-0.5	SW10-W-0.5	SW11-W-0.5	SW12-W-0.5	SW13-W-0.5	SW14-NW-0.5	SW16-NE-0.5	SW17-E-0.5
Lab ID:	PF47C	PF47E	PF47G	PF47I	PF47K	PF47M	PH60H	PH60I	PH60J
Date Sampled:	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/29/2009	6/30/2009	6/30/2009	6/30/2009
HERBICIDES (µg/kg)									
SW8151A									
2,4,5-TP (Silvex)	NA	NA	10 U	10 U	NA	NA	NA	NA	NA
2,4,5-T	NA	NA	10 U	10 U	NA	NA	NA	NA	NA
Dinoseb	NA	NA	21 U	21 U	NA	NA	NA	NA	NA
Dicamba	NA	NA	21 U	21 U	NA	NA	NA	NA	NA
2,4-D	NA	NA	41 U	41 U	NA	NA	NA	NA	NA
2,4-DB	NA	NA	210 U	210 U	NA	NA	NA	NA	NA
Dalapon	NA	NA	41 U	41 U	NA	NA	NA	NA	NA
MCPA	NA	NA	10,000 U	10,000 U	NA	NA	NA	NA	NA
Dichloroprop	NA	NA	41 U	41 U	NA	NA	NA	NA	NA
PETROLEUM HYDROCARBONS									
NWTPH-HCID (mg/kg)									
Gasoline Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diesel Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lube Oil	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL METALS (mg/kg)									
SW6010B									
Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	SW25-W-0.5	RVTComp:0.5-2
Lab ID:	PH60G	PF47AL
Date Sampled:	6/30/2009	6/30/2009
PESTICIDES (µg/kg)		
SW8081B		
alpha-BHC	1.6 U	1.6 U
beta-BHC	1.6 U	1.6 U
delta-BHC	1.6 U	1.6 U
gamma-BHC (Lindane)	1.6 U	1.6 U
Heptachlor	1.6 U	1.6 U
Aldrin	1.6 U	1.6 U
Heptachlor Epoxide	1.6 U	1.6 U
Endosulfan I	1.6 U	1.6 U
Dieldrin	3.2 U	3.2 U
4,4'-DDE	3.2 U	3.2 U
Endrin	3.2 U	3.2 U
Endosulfan II	3.2 U	3.2 U
4,4'-DDD	3.2 U	3.2 U
Endosulfan Sulfate	3.2 U	3.2 U
4,4'-DDT	3.2 U	3.2 U
Methoxychlor	16 U	16 U
Endrin Ketone	3.2 U	3.2 U
Endrin Aldehyde	3.2 U	3.2 U
gamma Chlordane	1.6 U	1.6 U
alpha Chlordane	1.6 U	1.6 U
Toxaphene	160 U	160 U

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

Sample ID:	SW25-W-0.5	RVTComp:0.5-2
Lab ID:	PH60G	PF47AL
Date Sampled:	6/30/2009	6/30/2009
HERBICIDES (µg/kg)		
SW8151A		
2,4,5-TP (Silvex)	NA	9.3 U
2,4,5-T	NA	9.3 U
Dinoseb	NA	18 U
Dicamba	NA	18 U
2,4-D	NA	37 U
2,4-DB	NA	180 U
Dalapon	NA	37 U
MCPA	NA	9,300 U
Dichloroprop	NA	37 U
PETROLEUM HYDROCARBONS		
NWTPH-HCID (mg/kg)		
Gasoline Range Organics	NA	20 U
Diesel Range Organics	NA	50 U
Lube Oil	NA	100 U
TOTAL METALS (mg/kg)		
SW6010B		
Arsenic	NA	10 U
Lead	NA	**6**

TABLE 1
SOIL ANALYTICAL RESULTS
YAKIMA AIR TERMINAL
RICHARDSON AIRWAYS
YAKIMA, WASHINGTON

U = Indicates the compound was undetected at the reported concentration.

J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.

J1 = Reported detected result is less than the Reporting Limit but greater than the Method Detection Limit.

P = The analyte was detected on both chromatographic columns but the quantified values differ by 40% RPD with no obvious chromatographic interference. The higher of the two values is reported by the laboratory.

Bold = Detected compound.

Box = Exceedance of cleanup level.

APPENDIX A

Boring Logs

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50%	- "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50%	- "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30%	- "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15%	- "with gravel," "with sand," "with silt," etc.
	≤ 5%	- "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

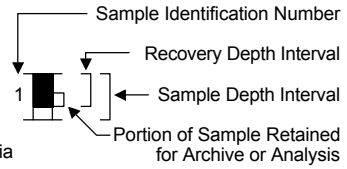
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽ Approximate water level at time of drilling (ATD)

▼ Approximate water level at time other than ATD

8/21/09 C:\DOCUME~1\KSCHULTZ\LOCALS~1\TEMPOR~1\OLK96\YAKIMA AIRPORT- RICHARDSON AIRWAYS.GPJ SOIL CLASS SHEET

LANDAU ASSOCIATES

Richardson Airways Washdown Area
Yakima, Washington

Soil Classification System and Key

Figure A-1

DP16

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Geoprobe™
Ground Elevation (ft): _____
Drilled By: Cascade Drilling Inc.

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ / △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						ML	Light brown, sandy SILT (dry).	
							Brown SILT (damp).	
2	DP16: 2-3	f3						
4								
	DP16: 4.5-6	f3					Dark brown SILT (moist).	
6								
8	DP16: 7.5-9	f3						▽
						GM	Dark brown, silty GRAVEL (wet).	
10	DP16: 9-10.5	f3						
12								
14								

Boring Completed 04/01/09
Total Depth of Boring = 12.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148001.01 8/21/09 C:\DOCUME~1\KSCHULTZ\LOCALS~1\TEMPOR~1\OLK96\YAKIMA AIRPORT- RICHARDSON AIRWAYS.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Richardson Airways Washdown Area
Yakima, Washington

Log of Boring DP16

Figure
A-2

DP17

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Geoprobe™
Ground Elevation (ft): _____
Drilled By: Cascade Drilling Inc.

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ / △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile	Groundwater
0						ML	Light grayish brown SILT (dry).	
2	DP17: 2-3	f3					Brown, sandy SILT (damp).	
4								
6	DP17: 4.5-6	f3						
8	DP17: 6-7.5	f3					Dark brown SILT (moist).	▽
10								
12								
14								

Boring Completed 04/01/09
Total Depth of Boring = 8.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148001.01 8/21/09 C:\DOCUME~1\KSCHULTZ\LOCALS~1\TEMPOR~1\OLK96\YAKIMA AIRPORT- RICHARDSON AIRWAYS.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Richardson Airways Washdown Area
Yakima, Washington

Log of Boring DP17

Figure
A-3

DP18

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Geoprobe™
Ground Elevation (ft): _____
Drilled By: Cascade Drilling Inc.

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ / △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Groundwater
0						ML	Gray SILT, (dry).
							Becomes brown mottled gray, (damp).
2	DP18: 2-3	f3					
	DP18: 3-4	f3					Dark brown (moist)
4							
	DP18: 4.5-6	f3					
6							
8							▽
10							
12							
14							

Boring Completed 04/01/09
Total Depth of Boring = 8.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148001.01 8/21/09 C:\DOCUME~1\KSCHULTZ\LOCALS~1\TEMPOR~1\OLK96\YAKIMA AIRPORT- RICHARDSON AIRWAYS.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Richardson Airways Washdown Area
Yakima, Washington

Log of Boring DP18

Figure
A-4

DP19

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Geoprobe™
Ground Elevation (ft): _____
Drilled By: Cascade Drilling Inc.

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ / △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile	Groundwater
0						ML	Grayish brown, sandy SILT (dry).	
2	DP19: 2-3	f3					Brown (damp)	
4							Dark brown (moist)	
6	DP19: 4.5-6	f3						
8							Becomes brown mottled red (moist)	▽
10	DP19: 9-10.5	f3				GM	Dark brown, silty GRAVEL (wet).	
12								
14								

Boring Completed 04/01/09
Total Depth of Boring = 12.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148001.01 8/21/09 C:\DOCUME~1\KSCHULTZ\LOCALS~1\TEMPOR~1\OLK96\YAKIMA AIRPORT- RICHARDSON AIRWAYS.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Richardson Airways Washdown Area
Yakima, Washington

Log of Boring DP19

Figure
A-5

APPENDIX B

Laboratory Data Sheets, Chain(s) of Custody

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 13, 2009

Ryan Reich
Landau Associates, Inc.
10 North Post St.
Peyton Building, Suite 218
Spokane, WA 99201

RE: Project No: 1148001.010.020
Project Name: Richardson Airways
ARI Job No: PF39

Dear Ryan:

Please find enclosed the original chain of custody (COC) record, sample receipt documentation, and the final results from the project referenced above. Analytical Resources, Inc. (ARI) accepted fourteen soil samples in good condition on July 1, 2009. Select samples were placed on hold pending further instructions. * Note all samples were frozen to protect holding times.

The samples were analyzed for Pesticides and Herbicides, as requested on the COC.

The herbicides LCS and LCSD RPD for Dinoseb is outside the +/- 30% control limits. All other QC is in control and no further corrective action was taken.

The pesticide LCS, LCSD does not contain Toxaphene spikes as Toxaphene contains over two hundred associated compounds.

There were no other anomalies associated with the samples.

A copy of this report and all corresponding raw data will remain on file electronically with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Enclosures

☐ **Seattle (Edmonds)** (425) 778-0907
☐ **Tacoma** (253) 926-2493
☑ **Spokane** (509) 327-9737
☐ **Portland (Tigard)** (503) 443-6010
☐ _____

PF39

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09

Page 1 of 1

Project Name Richardson Airways Project No. 114800.010.020

Project Location/Event Yakima Airport

Sampler's Name Ryan Reich

Project Contact Ryan Reich

Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides 8081B	Herbicides 8151	Observations/Comments
DP16: 2-3	6-29-09	10:20	Soil	1	X		HOLD, Freeze
DP16: 4.5-6		10:25			X		HOLD "
DP16: 7.5-9		10:30			X		
DP16: 9-10.5		10:35			X		HOLD "
DP17: 2-3		10:45			X	X	HOLD "
DP17: 4.5-6		10:50			X	X	
DP17: 6-7.5		10:55			X	X	HOLD "
DP18: 2-3		11:10			X	X	HOLD "
DP18: 3-4		11:15			X	X	
DP18: 4.5-6		11:20			X	X	HOLD "
DP19: 2-3		10:60			X		HOLD "
DP19: 4.5-6		10:05			X		HOLD "
DP19: 9-10.5		10:10			X		
DP19: 10.5-12		10:15			X		HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich	Signature: A. Volgardsen	Signature:	Signature:
Printed Name: Ryan Reich	Printed Name: ARI	Printed Name:	Printed Name:
Company: Landau Assc.	Company:	Company:	Company:
Date: 7-1-09 Time: 11:46	Date: 7/1/09 Time: 1146	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev. 6/02

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

Project Name: Richardson Airways

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: PF39

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	2.6	

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 487405

Cooler Accepted by: AV Date: 7/1/09 Time: 1146

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... (Bubble Wrap) (Wet Ice) Gel Packs Baggies Foam Block Paper Other: VOX			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO

Samples Logged by: AV Date: 7/1/09 Time: 1309

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles < 2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• • •	• • •	● ● ●

Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: DP16:7.5-9**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF39C
LIMS ID: 09-15672
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 18:40
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.2**	**9.6**
72-55-9	**4,4'-DDE**	**3.2**	**7.1**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	**Endosulfan II**	**3.2**	**8.8 P**
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	**4,4'-DDT**	**3.2**	**12 P**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	7.5	< 7.5 Y
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	83.0%
Tetrachlorometaxylene	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: DP17:4.5-6**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF39F
LIMS ID: 09-15675
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 19:01
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 20.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.1**	**4.2**
72-55-9	**4,4'-DDE**	**3.1**	**4.0**
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	**4,4'-DDT**	**3.1**	**15**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.5%
Tetrachlorometaxylene	69.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: DP18:3-4**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF39I
LIMS ID: 09-15678
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 19:21
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.3 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 28.1%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.8%
Tetrachlorometaxylene	60.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: DP19:9-10.5
SAMPLE

Lab Sample ID: PF39M
LIMS ID: 09-15682
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 19:42
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.1 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 24.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	73.8%
Tetrachlorometaxylene	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-070609**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-070609
LIMS ID: 09-15672
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: NA
Date Received: NA

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 17:38
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.0%
Tetrachlorometaxylene	61.5%

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020

Client ID	DCBP	TCMX	TOT OUT
MB-070609	79.0%	61.5%	0
LCS-070609	77.2%	56.5%	0
LCSD-070609	95.2%	70.5%	0
DP16:7.5-9	83.0%	68.5%	0
DP17:4.5-6	80.5%	69.5%	0
DP18:3-4	72.8%	60.8%	0
DP19:9-10.5	73.8%	64.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 09-15672 to 09-15682

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-070609**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-070609
LIMS ID: 09-15672
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/06/09

Sample Amount LCS: 12.0 g-dry-wt
LCSD: 12.0 g-dry-wt

Date Analyzed LCS: 07/08/09 17:59
LCSD: 07/08/09 18:19

Final Extract Volume LCS: 4.0 mL
LCSD: 4.0 mL

Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	5.00	6.67	75.0%	6.13	6.67	91.9%	20.3%
beta-BHC	5.30	6.67	79.5%	6.43	6.67	96.4%	19.3%
delta-BHC	5.53	6.67	82.9%	6.77	6.67	101%	20.2%
gamma-BHC (Lindane)	5.47	6.67	82.0%	6.70	6.67	100%	20.2%
Heptachlor	4.97	6.67	74.5%	6.07	6.67	91.0%	19.9%
Aldrin	5.07	6.67	76.0%	6.13	6.67	91.9%	18.9%
Heptachlor Epoxide	5.53	6.67	82.9%	6.73	6.67	101%	19.6%
Endosulfan I	5.03	6.67	75.4%	6.00	6.67	90.0%	17.6%
Dieldrin	11.3	13.3	85.0%	13.9	13.3	105%	20.6%
4,4'-DDE	13.4	13.3	101%	16.6	13.3	125%	21.3%
Endrin	11.1	13.3	83.5%	13.8	13.3	104%	21.7%
Endosulfan II	11.0	13.3	82.7%	13.6	13.3	102%	21.1%
4,4'-DDD	11.1	13.3	83.5%	13.8	13.3	104%	21.7%
Endosulfan Sulfate	10.0	13.3	75.2%	12.4	13.3	93.2%	21.4%
4,4'-DDT	11.1	13.3	83.5%	14.0	13.3	105%	23.1%
Methoxychlor	54.3	66.7	81.4%	67.0	66.7	100%	20.9%
Endrin Ketone	10.3	13.3	77.4%	12.7	13.3	95.5%	20.9%
Endrin Aldehyde	9.50	13.3	71.4%	11.8	13.3	88.7%	21.6%
gamma Chlordane	5.57	6.67	83.5%	6.77	6.67	101%	19.4%
alpha Chlordane	5.40	6.67	81.0%	6.57	6.67	98.5%	19.5%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	77.2%	95.2%
Tetrachlorometaxylene	56.5%	70.5%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: DP17:4.5-6
SAMPLE

Lab Sample ID: PF39F
LIMS ID: 09-15675
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 16:49
Instrument/Analyst: ECD1/AAR
Percent Moisture: 20.3%

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	10	< 10 U
93-76-5	2,4,5-T	10	< 10 U
88-85-7	Dinoseb	21	< 21 U
1918-00-9	Dicamba	21	< 21 U
94-75-7	2,4-D	42	< 42 U
94-82-6	2,4-DB	210	< 210 U
75-99-0	Dalapon	42	< 42 U
94-74-6	MCPA	10,000	< 10,000 U
120-36-5	Dichloroprop	42	< 42 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	42.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: DP18:3-4
SAMPLE

Lab Sample ID: PF39I
LIMS ID: 09-15678
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 17:25
Instrument/Analyst: ECD1/AAR
Percent Moisture: 28.1%

Sample Amount: 10.8 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	12	< 12 U
93-76-5	2,4,5-T	12	< 12 U
88-85-7	Dinoseb	23	< 23 U
1918-00-9	Dicamba	23	< 23 U
94-75-7	2,4-D	46	< 46 U
94-82-6	2,4-DB	230	< 230 U
75-99-0	Dalapon	46	< 46 U
94-74-6	MCPA	12,000	< 12,000 U
120-36-5	Dichloroprop	46	< 46 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	42.2%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE SOIL SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020

Client ID	DCPA	TOT OUT
MB-070809	43.7%	0
LCS-070809	51.8%	0
LCSD-070809	53.2%	0
DP17:4.5-6	42.7%	0
DP18:3-4	42.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(28-121)	(15-155)

Log Number Range: 09-15675 to 09-15678

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: MB-070809
METHOD BLANK

Lab Sample ID: MB-070809
LIMS ID: 09-15675
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: NA
Date Received: NA

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 14:59
Instrument/Analyst: ECD1/AAR
Percent Moisture: NA

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	8.3	< 8.3 U
93-76-5	2,4,5-T	8.3	< 8.3 U
88-85-7	Dinoseb	17	< 17 U
1918-00-9	Dicamba	17	< 17 U
94-75-7	2,4-D	33	< 33 U
94-82-6	2,4-DB	170	< 170 U
75-99-0	Dalapon	33	< 33 U
94-74-6	MCPA	8,300	< 8,300 U
120-36-5	Dichloroprop	33	< 33 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	43.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: LCS-070809
LCS/LCSD

Lab Sample ID: LCS-070809
LIMS ID: 09-15675
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF39-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/08/09

Date Analyzed LCS: 07/10/09 15:36
LCSD: 07/10/09 16:12
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 15.0 g-dry-wt
LCSD: 15.0 g-dry-wt
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	130	167	77.8%	132	167	79.0%	1.5%
2,4,5-T	79.6	83.3	95.6%	81.0	83.3	97.2%	1.7%
Dinoseb	50.7	167	30.4%	81.9	167	49.0%	47.1%
Dicamba	131	167	78.4%	133	167	79.6%	1.5%
2,4-D	104	333	31.2%	133	333	39.9%	24.5%
2,4-DB	1310	1670	78.4%	1310	1670	78.4%	0.0%
Dalapon	293	333	88.0%	270	333	81.1%	8.2%
MCPA	45000	83300	54.0%	49700	83300	59.7%	9.9%
Dichloroprop	189	333	56.8%	194	333	58.3%	2.6%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	51.8%	53.2%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 13, 2009

Ryan Reich
Landau Associates, Inc.
10 North Post St.
Peyton Building, Suite 218
Spokane, WA 99201

RE: Project No: 1148001.010
Project Name: Richardson Airways
ARI Job No: PF47

Dear Ryan:

Please find enclosed the original and a revised copy of chain of custody (COC) record, sample receipt documentation, and the final results from the project referenced above. Analytical Resources, Inc. (ARI) accepted seventy soil samples in good condition on July 1, 2009. The samples were logged under two different ARI SDGs (PF47 and PF48) based on sample volumes. Select samples were placed on hold pending further instructions. * Note all samples were frozen to protect holding times.

The samples were analyzed for Pesticides, HCID, Total Metals and Herbicides, as requested on the COC.

The herbicides LCS and LCSD RPD for Dinoseb is outside the +/- 30% control limits. All other QC is in control and no further corrective action was taken.

The pesticide LCS, LCSD, matrix spike and matrix spike duplicate does not contain Toxaphene spikes as Toxaphene contains over two hundred associated compounds

There were no other anomalies associated with the samples.

A copy of this report and all corresponding raw data will remain on file electronically with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Enclosures

LANDAU ASSOCIATES

- ☐ Seattle (Edmonds) (425) 778-0907
- ☐ Tacoma (253) 926-2493
- ☒ Spokane (509) 327-9737
- ☐ Portland (Tigard) (503) 443-6010
- ☐ ______

Date [illegible]

Page 1 of [illegible]

Chain-of-Custody Record

Project Name [illegible] Project No. [illegible]

Project Location/Event Yakima [illegible]

Sampler's Name Ryan Reich

Project Contact Ryan Reich

Send Results To ______

Testing Parameters

Turnaround Time
- ☒ Standard
- ☐ Accelerated
- ☐ ______

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters	Observations/Comments (RRR)
B-1A-0.5	[illegible]	11:15	Soil		X X	HOLD - Freeze
B-1A-2		11:20			X X analyze RRR 7-2-09	
B-1A-2		11:25			X X	
B-1B-0.5		11:40			X X	
B-1B-2		11:45			X X	HOLD - Freeze (RRR)
B-1B-3		11:50			X X analyze RRR 7-2-09	
B-1C-2		11:55			X	[illegible]
B-1C-3		12:00			X	
B-2B-2		12:05			X	[illegible]
B-2B-3		12:10			X	
B-2B-2		12:30			X	[illegible]
B-3B-2		12:35			X	
B-1B-2		12:40			X	[illegible]
B-1B-3		12:45			X	
B-3C-2		12:40			X	[illegible]
B-3C-3		12:45			X	HOLD

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature [illegible]	Signature	Signature	Signature
Printed Name Ryan Reich	Printed Name	Printed Name	Printed Name
Company LAI	Company	Company	Company
Date 7-1-09 Time [illegible]	Date Time	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☑ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09
Page 1 of 6

Project Name Richardson Airways Project No. 114800.010
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides 8081B	Herbicides 8151	Observations/Comments
B-1A-0.5	6-29-09	11:25	Soil	1	X	X	
B-1A-2		11:30			X	X	HOLD, Freeze
B-1A-3		11:35			X	X	HOLD, Freeze
B-1B-0.5		11:40			X	X	
B-1B-2		11:45			X	X	HOLD "
B-1B-3		11:50			X	X	HOLD "
B-1C-2		11:55			X		
B-1C-3		12:00			X		HOLD "
B-2B-2		12:05			X		
B-2B-3		12:10			X		HOLD "
B-3B-2		12:30			X		
B-3B-3		12:35			X		HOLD "
B-4B-2		12:50			X		
B-4B-3		12:55			X		HOLD "
B-3C-2		12:40			X		
B-3C-3		12:45			X		HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich	Signature: A. Volgardsen	Signature:	Signature:
Printed Name: Ryan Reich	Printed Name:	Printed Name:	Printed Name:
Company: LAI	Company: API	Company:	Company:
Date: 7-1-09 Time: 11:46	Date: 7/1/09 Time: 1146	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev. 6/02

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☑ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09

Page 2 of _____

Project Name Richardson Airways Project No. 114800.010

Project Location/Event Yakima Airport

Sampler's Name Ryan Reich

Project Contact Ryan Reich

Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides (8081B)	Herbicides 8151	Observations/Comments
B-5B-2	6-29-09	13:10	Soil	1	X		
B-5B-3		13:15			X		HOLD, Freeze
B-7A-2		13:20			X		
B-7A-3		13:25			X		HOLD "
SW1-NW-0.5		13:55			X	X	
SW1-NW-2		14:00			X	X	HOLD "
SW2-NW-0.5		14:05			X	X	
SW2-NW-2		14:10			X	X	HOLD "
SW3-NE-0.5		14:20			X		
SW3-NE-2		14:25			X		HOLD "
SW4-E-0.5		14:30			X		
SW4-E-2		14:35			X		HOLD "
SW5-SE-0.5		14:40			X		
SW5-SE-2		14:45			X		HOLD "
SW6-E-0.5		15:00			X		
SW6-E-2		15:05			X		HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature Ryan Reich	Signature A. Volgardsen	Signature	Signature
Printed Name Ryan Reich	Printed Name KRJ	Printed Name	Printed Name
Company Landau Assc	Company	Company	Company
Date 7-1-09 Time 11:46	Date 7/1/09 Time 1146	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev. 6/02

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☑ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09
Page 3 of _____

Project Name Richardson Airways Project No. 114800.010
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To _____

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: Pesticides (8081B)	Herbicides 8151	Observations/Comments
SW7-SE-0.5	6-29-09	15:10	Soil	1	X		
SW7-SE-2		15:15			X		HOLD
SW8-E-0.5		15:25			X		
SW8-E-2		15:30			X		HOLD
SW9-S-0.5		15:35			X		
SW9-S-2		15:40			X		HOLD
SW10-W-0.5		15:45			X	X	
SW10-W-2		15:50			X	X	HOLD
SW11-W-0.5		15:55			X	X	
SW11-W-2		16:00			X	X	HOLD
SW12-W-0.5		16:05			X		
SW12-W-2		16:10			X		HOLD
SW13-W-0.5		16:15			X		
SW13-W-2		16:20			X		HOLD
SW27-6.5	6-29-09	17:00			X		
					~~X~~		

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich	Signature:	Signature:	Signature:
Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
Company: LAI	Company: HRI	Company:	Company:
Date: 7-1-09 Time: 11:46	Date: 7/1/09 Time: 1146	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 6/02

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of	
ARI Client Company: Landau Assc	Phone: 509 327-9737	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 114800.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081B Pesticides	Analysis Requested: 8151 Herbicides	Notes/Comments
SW14-NW-0.5	6-30-09	8:15	Soil	1	X	X	HOLD, Freeze
SW14-NW-2		8:20			X	X	HOLD
SW15-NW-0.5		8:25			X	X	HOLD
SW15-NW-2		8:30			X	X	HOLD
SW16-NE-0.5		8:45			X		HOLD
SW16-NE-2		8:50			X		HOLD
SW17-E-0.5		8:55			X		HOLD
SW17-E-2		9:00			X		HOLD
SW19-E-0.5		10:00			X		HOLD
SW19-E-2		10:05			X		HOLD

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Landau Assc	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 5	of
ARI Client Company: Landau Associates	Phone:	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 114800.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081B Pesticides	Analysis Requested: 8151 Herbicides	Notes/Comments
SW20-SE-0.5	6-30-09	10:10	Soil	1	X		HOLD, FREEZE
SW20-SE-2		10:15			X		HOLD
SW21-E-0.5		10:20			X		HOLD
SW21-E-2		10:25			X		HOLD
SW22-W-0.5		10:50			X		HOLD
SW22-W-2		10:55			X		HOLD
SW23-W-0.5		11:00			X		HOLD
SW23-W-2		11:05			X		HOLD
SW24-W-0.5		11:20			X		HOLD
SW24-W-2		11:25			X		HOLD

Comments/Special Instructions	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
	Ryan Reich	Ryan Reich	LAI	7-1-09 11:46		A. Volgardsen	ARI	7/1/09 1146								

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 6 of	
ARI Client Company: Landau Assc	Phone: 509 327-9737	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 1148001.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081S Pesticides	8151 Herbicides	NWTPH-HCID	Total metals 6010 & Hg 7470 Only					Notes/Comments
SW25-W-0.5	6-30-09	11:30	Soil	1	X								Hold, Freeze
SW25-W-2	"	11:35	"	"	X								Hold "
RVT Comp: 0.5-2	"	14:30	"	2	X	X	X	X					

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: LAI	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

COC No(s): _____ NA

Assigned ARI Job No: PF47

Project Name: _____

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 0.8 2.4

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 487405

Cooler Accepted by: TV Date: 8/11/09 Time: 1146

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO

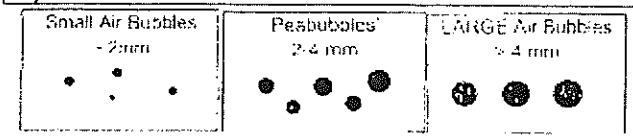
Samples Logged by: _____ Date: 8/11/09 Time: 1530

** ***Notify Project Manager of discrepancies or concerns*** **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: SW10-W-0.5
SAMPLE

Lab Sample ID: PF47G
LIMS ID: 09-15705
Matrix: Soil
Data Release Authorized: VR
Reported: 07/11/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 18:02
Instrument/Analyst: ECD1/AAR
Percent Moisture: 19.6%

Sample Amount: 12.2 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	10	< 10 U
93-76-5	2,4,5-T	10	< 10 U
88-85-7	Dinoseb	21	< 21 U
1918-00-9	Dicamba	21	< 21 U
94-75-7	2,4-D	41	< 41 U
94-82-6	2,4-DB	210	< 210 U
75-99-0	Dalapon	41	< 41 U
94-74-6	MCPA	10,000	< 10,000 U
120-36-5	Dichloroprop	41	< 41 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	35.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: SW11-W-0.5
SAMPLE

Lab Sample ID: PF47I
LIMS ID: 09-15707
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 18:38
Instrument/Analyst: ECD1/AAR
Percent Moisture: 19.4%

Sample Amount: 12.1 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	10	< 10 U
93-76-5	2,4,5-T	10	< 10 U
88-85-7	Dinoseb	21	< 21 U
1918-00-9	Dicamba	21	< 21 U
94-75-7	2,4-D	41	< 41 U
94-82-6	2,4-DB	210	< 210 U
75-99-0	Dalapon	41	< 41 U
94-74-6	MCPA	10,000	< 10,000 U
120-36-5	Dichloroprop	41	< 41 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	37.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: RVTComp:0.5-2
SAMPLE

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 19:15
Instrument/Analyst: ECD1/AAR
Percent Moisture: 10.0%

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	9.3	< 9.3 U
93-76-5	2,4,5-T	9.3	< 9.3 U
88-85-7	Dinoseb	18	< 18 U
1918-00-9	Dicamba	18	< 18 U
94-75-7	2,4-D	37	< 37 U
94-82-6	2,4-DB	180	< 180 U
75-99-0	Dalapon	37	< 37 U
94-74-6	MCPA	9,300	< 9,300 U
120-36-5	Dichloroprop	37	< 37 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	54.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: MB-070809
METHOD BLANK

Lab Sample ID: MB-070809
LIMS ID: 09-15707
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: NA
Date Received: NA

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 14:59
Instrument/Analyst: ECD1/AAR
Percent Moisture: NA

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	8.3	< 8.3 U
93-76-5	2,4,5-T	8.3	< 8.3 U
88-85-7	Dinoseb	17	< 17 U
1918-00-9	Dicamba	17	< 17 U
94-75-7	2,4-D	33	< 33 U
94-82-6	2,4-DB	170	< 170 U
75-99-0	Dalapon	33	< 33 U
94-74-6	MCPA	8,300	< 8,300 U
120-36-5	Dichloroprop	33	< 33 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	43.7%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE SOIL SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010

Client ID	DCPA	TOT OUT
SW10-W-0.5	35.0%	0
MB-070809	43.7%	0
LCS-070809	51.8%	0
LCSD-070809	53.2%	0
SW11-W-0.5	37.7%	0
RVTComp:0.5-2	54.1%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(28-121)	(15-155)

Log Number Range: 09-15705 to 09-15736

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: LCS-070809
LCS/LCSD

Lab Sample ID: LCS-070809
LIMS ID: 09-15707
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/11/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/08/09

Date Analyzed LCS: 07/10/09 15:36
LCSD: 07/10/09 16:12
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 15.0 g-dry-wt
LCSD: 15.0 g-dry-wt
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	130	167	77.8%	132	167	79.0%	1.5%
2,4,5-T	79.6	83.3	95.6%	81.0	83.3	97.2%	1.7%
Dinoseb	50.7	167	30.4%	81.9	167	49.0%	47.1%
Dicamba	131	167	78.4%	133	167	79.6%	1.5%
2,4-D	104	333	31.2%	133	333	39.9%	24.5%
2,4-DB	1310	1670	78.4%	1310	1670	78.4%	0.0%
Dalapon	293	333	88.0%	270	333	81.1%	8.2%
MCPA	45000	83300	54.0%	49700	83300	59.7%	9.9%
Dichloroprop	189	333	56.8%	194	333	58.3%	2.6%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	51.8%	53.2%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW7-SE-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47A
LIMS ID: 09-15699
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 20:03
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.3 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 12.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	**4,4'-DDE**	**3.2**	**6.8**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	**4,4'-DDT**	**3.2**	**3.0 J**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	74.5%
Tetrachlorometaxylene	60.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW8-E-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47C
LIMS ID: 09-15701
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 20:23
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 14.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.1**	**6.0**
72-55-9	**4,4'-DDE**	**3.1**	**25**
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	**4,4'-DDD**	**3.1**	**4.7**
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	**4,4'-DDT**	**3.1**	**30**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	**alpha Chlordane**	**1.6**	**2.7 P**
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.8%
Tetrachlorometaxylene	61.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW9-S-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47E
LIMS ID: 09-15703
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 20:44
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	69.0%
Tetrachlorometaxylene	56.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW10-W-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47G
LIMS ID: 09-15705
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 14:11
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.1 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	64.8%
Tetrachlorometaxylene	57.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW11-W-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47I
LIMS ID: 09-15707
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 14:31
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.1 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	69.0%
Tetrachlorometaxylene	55.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW12-W-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47K
LIMS ID: 09-15709
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 14:56
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.2 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.3**	**6.8**
72-55-9	**4,4'-DDE**	**3.3**	**11 P**
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	**4,4'-DDT**	**3.3**	**15 P**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	7.2	< 7.2 Y
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	92.8%
Tetrachlorometaxylene	71.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW13-W-0.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47M
LIMS ID: 09-15711
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 15:17
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.3 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 23.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.2**	**25**
72-55-9	**4,4'-DDE**	**3.2**	**24**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	12	< 12 Y
72-54-8	**4,4'-DDD**	**3.2**	**8.0**
1031-07-8	Endosulfan Sulfate	7.2	< 7.2 Y
50-29-3	**4,4'-DDT**	**3.2**	**51 P**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	22	< 22 Y
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	**Toxaphene**	**160**	**320**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	66.0%
Tetrachlorometaxylene	53.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: SW27-W-6.5**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47O
LIMS ID: 09-15713
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 15:37
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.8%
Tetrachlorometaxylene	68.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: RVTComp:0.5-2**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VT
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 15:58
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 10.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	93.8%
Tetrachlorometaxylene	71.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: RVTComp:0.5-2**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 16:19
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 10.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.0%
Tetrachlorometaxylene	61.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: RVTComp:0.5-2**
Page 1 of 1 **MATRIX SPIKE DUP**

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VT
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/06/09
Date Analyzed: 07/09/09 16:39
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 10.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.5%
Tetrachlorometaxylene	70.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-070609**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-070609
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VT
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: NA
Date Received: NA

Date Extracted: 07/06/09
Date Analyzed: 07/08/09 17:38
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.0%
Tetrachlorometaxylene	61.5%

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010

Client ID	DCBP	TCMX	TOT OUT
SW7-SE-0.5	74.5%	60.5%	0
SW8-E-0.5	71.8%	61.0%	0
SW9-S-0.5	69.0%	56.2%	0
SW10-W-0.5	64.8%	57.2%	0
SW11-W-0.5	69.0%	55.2%	0
SW12-W-0.5	92.8%	71.2%	0
SW13-W-0.5	66.0%	53.5%	0
SW27-W-6.5	80.8%	68.0%	0
MB-070609	79.0%	61.5%	0
LCS-070609	77.2%	56.5%	0
LCSD-070609	95.2%	70.5%	0
RVTComp:0.5-2	93.8%	71.8%	0
RVTComp:0.5-2 MS	80.0%	61.0%	0
RVTComp:0.5-2 MSD	88.5%	70.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 09-15699 to 09-15736

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-070609**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-070609
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VTB
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/06/09

Date Analyzed LCS: 07/08/09 17:59
LCSD: 07/08/09 18:19
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.0 g-dry-wt
LCSD: 12.0 g-dry-wt
Final Extract Volume LCS: 4.0 mL
LCSD: 4.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	5.00	6.67	75.0%	6.13	6.67	91.9%	20.3%
beta-BHC	5.30	6.67	79.5%	6.43	6.67	96.4%	19.3%
delta-BHC	5.53	6.67	82.9%	6.77	6.67	101%	20.2%
gamma-BHC (Lindane)	5.47	6.67	82.0%	6.70	6.67	100%	20.2%
Heptachlor	4.97	6.67	74.5%	6.07	6.67	91.0%	19.9%
Aldrin	5.07	6.67	76.0%	6.13	6.67	91.9%	18.9%
Heptachlor Epoxide	5.53	6.67	82.9%	6.73	6.67	101%	19.6%
Endosulfan I	5.03	6.67	75.4%	6.00	6.67	90.0%	17.6%
Dieldrin	11.3	13.3	85.0%	13.9	13.3	105%	20.6%
4,4'-DDE	13.4	13.3	101%	16.6	13.3	125%	21.3%
Endrin	11.1	13.3	83.5%	13.8	13.3	104%	21.7%
Endosulfan II	11.0	13.3	82.7%	13.6	13.3	102%	21.1%
4,4'-DDD	11.1	13.3	83.5%	13.8	13.3	104%	21.7%
Endosulfan Sulfate	10.0	13.3	75.2%	12.4	13.3	93.2%	21.4%
4,4'-DDT	11.1	13.3	83.5%	14.0	13.3	105%	23.1%
Methoxychlor	54.3	66.7	81.4%	67.0	66.7	100%	20.9%
Endrin Ketone	10.3	13.3	77.4%	12.7	13.3	95.5%	20.9%
Endrin Aldehyde	9.50	13.3	71.4%	11.8	13.3	88.7%	21.6%
gamma Chlordane	5.57	6.67	83.5%	6.77	6.67	101%	19.4%
alpha Chlordane	5.40	6.67	81.0%	6.57	6.67	98.5%	19.5%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	77.2%	95.2%
Tetrachlorometaxylene	56.5%	70.5%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: RVTComp:0.5-2**
Page 1 of 1 **MS/MSD**

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized: VTS
Reported: 07/10/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted MS/MSD: 07/06/09

Date Analyzed MS: 07/09/09 16:19
MSD: 07/09/09 16:39
Instrument/Analyst MS: ECD7/AAR
MSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.6 g-dry-wt
Final Extract Volume MS: 4.0 mL
MSD: 4.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 10.0%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 1.59	4.41	6.34	69.6%	5.25	6.33	82.9%	17.4%
beta-BHC	< 1.59	4.85	6.34	76.5%	5.73	6.33	90.5%	16.6%
delta-BHC	< 1.59	4.85	6.34	76.5%	5.85	6.33	92.4%	18.7%
gamma-BHC (Lindane)	< 1.59	4.76	6.34	75.1%	5.70	6.33	90.0%	18.0%
Heptachlor	< 1.59	4.44	6.34	70.0%	5.25	6.33	82.9%	16.7%
Aldrin	< 1.59	4.69	6.34	74.0%	5.57	6.33	88.0%	17.2%
Heptachlor Epoxide	< 1.59	4.69	6.34	74.0%	5.63	6.33	88.9%	18.2%
Endosulfan I	< 1.59	4.31	6.34	68.0%	5.13	6.33	81.0%	17.4%
Dieldrin	< 3.17	9.52	12.7	75.0%	11.6	12.7	91.3%	19.7%
4,4'-DDE	< 3.17	11.8	12.7	92.9%	14.3	12.7	113%	19.2%
Endrin	< 3.17	9.23	12.7	72.7%	11.4	12.7	89.8%	21.0%
Endosulfan II	< 3.17	9.10	12.7	71.7%	11.2	12.7	88.2%	20.7%
4,4'-DDD	< 3.17	9.36	12.7	73.7%	11.6	12.7	91.3%	21.4%
Endosulfan Sulfate	< 3.17	8.72	12.7	68.7%	10.5	12.7	82.7%	18.5%
4,4'-DDT	< 3.17	9.45	12.7	74.4%	11.6	12.7	91.3%	20.4%
Methoxychlor	< 15.9	46.0	63.4	72.6%	55.4	63.3	87.5%	18.5%
Endrin Ketone	< 3.17	8.60	12.7	67.7%	10.3	12.7	81.1%	18.0%
Endrin Aldehyde	< 3.17	8.09	12.7	63.7%	9.62	12.7	75.7%	17.3%
gamma Chlordane	< 1.59	4.63	6.34	73.0%	5.63	6.33	88.9%	19.5%
alpha Chlordane	< 1.59	4.66	6.34	73.5%	5.51	6.33	87.0%	16.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPH-HCID Method by GC/FID
Page 1 of 1
Matrix: Soil

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010

Data Release Authorized:
Reported: 07/02/09

ARI ID	Sample ID	Extraction Date	Analysis Date	DL	Range	Result
MB-070209	Method Blank	07/02/09	07/02/09	1.0	Gas	< 20 U
09-15736					Diesel	< 50 U
					Oil	< 100 U
					o-Terphenyl	100%
PF47AL	RVTComp:0.5-2	07/02/09	07/02/09	1.0	Gas	< 20 U
09-15736	HC ID: ---				Diesel	< 50 U
					Oil	< 100 U
					o-Terphenyl	98.0%

Reported in mg/kg (ppm)

Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

ANALYTICAL RESOURCES INCORPORATED

HCID SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010

Client ID	O-TER	TOT OUT
070209MB	100%	0
RVTComp:0.5-2	98.0%	0

	LCS/MB LIMITS	QC LIMITS
(O-TER) = o-Terphenyl	(68-122)	(50-150)

Prep Method: SW3550B
Log Number Range: 09-15736 to 09-15736

ANALYTICAL RESOURCES INCORPORATED

TOTAL HCID RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: PF47
Matrix: Soil Project: RICHARDSON AIRWAYS
Date Received: 07/01/09 1148001.010

ARI ID	Client ID	Sample Amt	Final Vol	Basis	Prep Date
09-15736-070209MB	Method Blank	10.0 g	5.00 mL	-	07/02/09
09-15736-PF47AL	RVTComp:0.5-2	9.01 g	5.00 mL	D	07/02/09

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: RVTComp:0.5-2
SAMPLE

Lab Sample ID: PF47AL
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized:
Reported: 07/08/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: 06/30/09
Date Received: 07/01/09

Percent Total Solids: 89.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/06/09	6010B	07/07/09	7440-38-2	Arsenic	10	10	U
3050B	07/06/09	6010B	07/07/09	7439-92-1	Lead	5	6	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: PF47MB
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized:
Reported: 07/08/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	07/06/09	6010B	07/07/09	7440-38-2	Arsenic	5	5	U
3050B	07/06/09	6010B	07/07/09	7439-92-1	Lead	2	2	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: PF47LCS
LIMS ID: 09-15736
Matrix: Soil
Data Release Authorized:
Reported: 07/08/09

QC Report No: PF47-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	215	200	108%	
Lead	6010B	203	200	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 13, 2009

Ryan Reich
Landau Associates, Inc.
10 North Post St.
Peyton Building, Suite 218
Spokane, WA 99201

RE: Project No: 1148001.010
Project Name: Richardson Airways
ARI Job No: PF48

Dear Ryan:

Please find enclosed the original and a revised copy of chain of custody (COC) record, e-mail documentation, sample receipt documentation, and the final results from the project referenced above. Analytical Resources, Inc. (ARI) accepted seventy soil samples in good condition on July 1, 2009. The samples were logged under two different ARI SDGs (PF47 and PF48) based on sample volumes. Select samples were placed on hold pending further instructions. * Note all samples were frozen to protect holding times.

The samples were analyzed for Pesticides and Herbicides, as requested on the COC.

The herbicides LCS and LCSD RPD for Dinoseb is outside the +/- 30% control limits. All other QC is in control and no further corrective action was taken.

The herbicides matrix spike on sample **SW2-NW-0.5** is out of control low for several analytes with RPDs outside of the +/- 30% control limits. The matrix spike duplicate and all other QC is in control, therefore no further corrective action was taken.

The pesticide LCS, LCSD, matrix spike and matrix spike duplicate does not contain Toxaphene spikes as Toxaphene contains over two hundred associated compounds

There were no other anomalies associated with the samples.

A copy of this report and all corresponding raw data will remain on file electronically with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Enclosures

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☑ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date _____

Page 1 of 1

Project Name _____ Project No. _____

Project Location/Event _____

Sampler's Name _____

Project Contact _____

Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Observations/Comments

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name
Company	Company	Company	Company
Date Time	Date Time	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Subject: Richardson samples
From: "Ryan Reich" <rreich@landauinc.com>
Date: Thu, 2 Jul 2009 09:41:35 -0700
To: "Kelly Bottem" <kellyb@arilabs.com>

Kelly,

Please see two changes on the attached COCs.

Hold B-1A-0.5 and analyze B-1A-2

And

Hold B-1B-0.5 and analyze B-1B-2

Thank you

Ryan Reich
Landau Associates, Inc.
10 N Post Street, Suite 218, Spokane, WA 99201
509.327.9737 * fax 509.327.9691 * cell 509.995.1665
rreich@landauinc.com * www.landauinc.com

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LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09
Page 1 of 6

Project Name Richardson Airways Project No. 114800.010
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides 8081B	Herbicides 8151	Observations/Comments
B-1A-05	6-29-09	11:25	Soil	1	X	X	
B-1A-2		11:30		1	X	X	HOLD, Freeze
B-1A-3		11:35			X	X	HOLD, Freeze
B-1B-0.5		11:40			X	X	
B-1B-2		11:45			X	X	HOLD "
B-1B-3		11:50			X	X	HOLD "
B-1C-2		11:55			X		
B-1C-3		12:00			X		HOLD "
B-2B-2		12:05			X		
B-2B-3		12:10			X		HOLD "
B-3B-2		12:30			X		
B-3B-3		12:35			X		HOLD "
B-4B-2		12:50			X		
B-4B-3		12:55			X		HOLD "
B-3C-2		12:40			X		
B-3C-3		12:45			X		HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich	Signature: A. Volgardsen	Signature:	Signature:
Printed Name: Ryan Reich	Printed Name: APJ	Printed Name:	Printed Name:
Company: LAI	Company:	Company:	Company:
Date: 7-1-09 Time: 11:46	Date: 7/1/09 Time: 1146	Date: Time:	Date: Time:

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Rev. 6/02

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LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09
Page 2 of _____

Project Name Richardson Airways Project No. 114800.010
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides (8081B)	Herbicides 8151	Observations/Comments
B-SB-2	6-29-09	13:10	Soil	1	X		
B-SB-3		13:15			X		HOLD, Freeze
B-7A-2		13:20			X		
B-7A-3		13:25			X		HOLD "
SW1-NW-0.5		13:55			X	X	
SW1-NW-2		14:00			X	X	HOLD "
SW2-NW-0.5		14:05			X	X	
SW2-NW-2		14:10			X	X	HOLD "
SW3-NE-0.5		14:20			X		
SW3-NE-2		14:25			X		HOLD "
SW4-E-0.5		14:30			X		
SW4-E-2		14:35			X		HOLD "
SW5-SE-0.5		14:40			X		
SW5-SE-2		14:45			X		HOLD "
SW6-E-0.5		15:00			X		
SW6-E-2		15:05			X		HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature Ryan Reich	Signature A. Volgardsen	Signature	Signature
Printed Name Ryan Reich	Printed Name KRI	Printed Name	Printed Name
Company Landau Assc	Company	Company	Company
Date 7-1-09 Time 11:46	Date 7/1/09 Time 1144	Date Time	Date Time

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☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 6-29-09
Page 3 of _____

Project Name Richardson Airways Project No. 114800.010
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To _____

Testing Parameters

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Pesticides (8081B)	Herbicides 8151	Observations/Comments
SW7-SE-0.5	6-29-09	15:10	Soil	1	X		
SW7-SE-2		15:15			X		HOLD
SW8-E-0.5		15:25			X		
SW8-E-2		15:30			X		HOLD
SW9-S-0.5		15:35			X		
SW9-S-2		15:40			X		HOLD
SW10-W-0.5		15:45			X	X	
SW10-W-2		15:50			X	X	HOLD
SW11-W-0.5		15:55			X	X	
SW11-W-2		16:00			X	X	HOLD
SW12-W-0.5		16:05			X		
SW12-W-2		16:10			X		HOLD
SW13-W-0.5		16:15			X		
SW13-W-2		16:20			X		HOLD
SW27-6.5	6-29-09	17:00			X		
					~~X~~		

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich	Signature: _____	Signature: _____	Signature: _____
Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name: _____	Printed Name: _____
Company: LAI	Company: AEI	Company: _____	Company: _____
Date: 7-1-09 Time: 11:46	Date: 7/1/09 Time: 1146	Date: _____ Time: _____	Date: _____ Time: _____

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Rev. 6/02

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of	
ARI Client Company: Landau Assoc	Phone: 509 327-9737	Date: 6/30/09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 114800.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081B Pesticides	Analysis Requested: 8151 Herbicides	Notes/Comments
SW14-NW-0.5	6-30-09	8:15	Soil	1	X	X	HOLD, Freeze
SW14-NW-2		8:20			X	X	HOLD
SW15-NW-0.5		8:25			X	X	HOLD
SW15-NW-2		8:30			X	X	HOLD
SW16-NE-0.5		8:45			X		HOLD
SW16-NE-2		8:50			X		HOLD
SW17-E-0.5		8:55			X		HOLD
SW17-E-2		9:00			X		HOLD
SW19-E-0.5		10:00			X		HOLD
SW19-E-2		10:05			X		HOLD

Comments/Special Instructions	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
	Ryan Reich	Ryan Reich	Landau Assoc	7-1-09 1146		A. Volgardsen	ARI	7/1/09 1146								

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 5	of
ARI Client Company: Landau Associates	Phone:	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 114800.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081B Pesticides	Analysis Requested: 8151 Herbicides	Notes/Comments
SW20-SE-0.5	6-30-09	10:00	Soil	1	X		HOLD, Freeze
SW20-SE-2		10:15			X		HOLD
SW21-E-0.5		10:20			X		HOLD
SW21-E-2		10:25			X		HOLD
SW22-W-0.5		10:50			X		HOLD
SW22-W-2		10:55			X		HOLD
SW23-W-0.5		11:00			X		HOLD
SW23-W-2		11:05			X		HOLD
SW24-W-0.5		11:20			X		HOLD
SW24-W-2		11:25			X		HOLD

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: LAI	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:
Turn-around Requested: Standard
Page: 6 of
ARI Client Company: Landau Assc
Phone: 509 327-9737
Date: 6-30-09
Ice Present?
Client Contact: Ryan Reich
No. of Coolers:
Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport
Client Project #: 1148001.010
Samplers: Ryan Reich

Sample ID	Date	Time	Matrix	No. Containers	8081B Pesticides	8151 Herbicides	NWTPH-HCID	Total metals 6010 Pb only				Notes/Comments
SW25-W-0.5	6-30-09	11:30	Soil	1	X							HOLD, Freeze
SW25-W-2	"	11:35	"	"	X							HOLD "
RVT Comp: 0.5-2	"	14:20	"	2	X	X	X	X				

Comments/Special Instructions

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature) Ryan Reich	(Signature) [signature]	(Signature)	(Signature)
Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
Company: LAI	Company: ARI	Company:	Company:
Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

Project Name: Richardson Airways

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: PF48

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 0.8 2.4 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 487405

Cooler Accepted by: KV Date: 7/1/09 Time: 1146

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: box			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	(NO)
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO

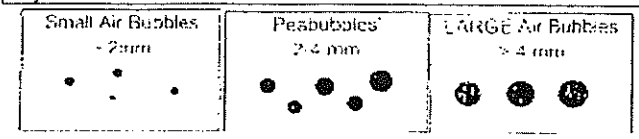
Samples Logged by: JH Date: 7/1/09 Time: 14:28

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-1C-2
SAMPLE

Lab Sample ID: PF48C
LIMS ID: 09-15739
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 20:06
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.3 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	92.0%
Tetrachlorometaxylene	65.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-2B-2
SAMPLE

Lab Sample ID: PF48D
LIMS ID: 09-15740
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 20:26
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 27.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	59.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-3B-2
SAMPLE

Lab Sample ID: PF48E
LIMS ID: 09-15741
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 20:47
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	87.0%
Tetrachlorometaxylene	61.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: B-4B-2
SAMPLE

Lab Sample ID: PF48F
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 21:08
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.5	< 1.5 U
319-85-7	beta-BHC	1.5	< 1.5 U
319-86-8	delta-BHC	1.5	< 1.5 U
58-89-9	gamma-BHC (Lindane)	1.5	< 1.5 U
76-44-8	Heptachlor	1.5	< 1.5 U
309-00-2	Aldrin	1.5	< 1.5 U
1024-57-3	Heptachlor Epoxide	1.5	< 1.5 U
959-98-8	Endosulfan I	1.5	< 1.5 U
60-57-1	Dieldrin	3.1	< 3.1 U
72-55-9	4,4'-DDE	3.1	< 3.1 U
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	4,4'-DDT	3.1	< 3.1 U
72-43-5	Methoxychlor	15	< 15 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.5	< 1.5 U
5103-71-9	alpha Chlordane	1.5	< 1.5 U
8001-35-2	Toxaphene	150	< 150 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.8%
Tetrachlorometaxylene	59.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-4B-2
MATRIX SPIKE

Lab Sample ID: PF48F
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 21:28
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.5%
Tetrachlorometaxylene	56.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-4B-2
MATRIX SPIKE DUP

Lab Sample ID: PF48F
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 21:49
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 15.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.8%
Tetrachlorometaxylene	60.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-3C-2
SAMPLE

Lab Sample ID: PF48G
LIMS ID: 09-15743
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 22:10
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 26.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.8%
Tetrachlorometaxylene	56.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-5B-2
SAMPLE

Lab Sample ID: PF48H
LIMS ID: 09-15744
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 00:34
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.2 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 32.1%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	86.0%
Tetrachlorometaxylene	63.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-7A-2
SAMPLE

Lab Sample ID: PF48I
LIMS ID: 09-15745
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 00:55
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	83.0%
Tetrachlorometaxylene	56.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW1-NW-0.5
SAMPLE

Lab Sample ID: PF48J
LIMS ID: 09-15746
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 01:16
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 25.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	**Endosulfan I**	**1.6**	**88 E**
60-57-1	**Dieldrin**	**3.2**	**16**
72-55-9	**4,4'-DDE**	**3.2**	**3.8**
72-20-8	**Endrin**	**3.2**	**5.0**
33213-65-9	**Endosulfan II**	**3.2**	**92 E**
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	**Endosulfan Sulfate**	**3.2**	**6.5**
50-29-3	**4,4'-DDT**	**3.2**	**16 P**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	**Toxaphene**	**160**	**160**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.2%
Tetrachlorometaxylene	61.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW1-NW-0.5
DILUTION

Lab Sample ID: PF48J
LIMS ID: 09-15746
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 17:29
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 25.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	16	< 16 U
319-85-7	beta-BHC	16	< 16 U
319-86-8	delta-BHC	16	< 16 U
58-89-9	gamma-BHC (Lindane)	16	< 16 U
76-44-8	Heptachlor	16	< 16 U
309-00-2	Aldrin	16	< 16 U
1024-57-3	Heptachlor Epoxide	16	< 16 U
959-98-8	**Endosulfan I**	**16**	**99**
60-57-1	Dieldrin	32	< 32 U
72-55-9	4,4'-DDE	32	< 32 U
72-20-8	Endrin	32	< 32 U
33213-65-9	**Endosulfan II**	**32**	**95**
72-54-8	4,4'-DDD	32	< 32 U
1031-07-8	Endosulfan Sulfate	32	< 32 U
50-29-3	4,4'-DDT	32	< 32 U
72-43-5	Methoxychlor	160	< 160 U
53494-70-5	Endrin Ketone	32	< 32 U
7421-93-4	Endrin Aldehyde	32	< 32 U
5103-74-2	gamma Chlordane	16	< 16 U
5103-71-9	alpha Chlordane	16	< 16 U
8001-35-2	Toxaphene	1,600	< 1,600 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	99.8%
Tetrachlorometaxylene	76.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW2-NW-0.5
SAMPLE

Lab Sample ID: PF48K
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 01:36
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 16.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	**Endosulfan II**	**3.2**	**6.0**
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	**Endosulfan Sulfate**	**3.2**	**3.8**
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	82.8%
Tetrachlorometaxylene	60.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW3-NW-0.5
SAMPLE

Lab Sample ID: PF48L
LIMS ID: 09-15748
Matrix: Soil
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 01:57
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	**Endosulfan I**	**1.6**	**17 P**
60-57-1	**Dieldrin**	**3.2**	**20**
72-55-9	**4,4'-DDE**	**3.2**	**40**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	**Endosulfan II**	**3.2**	**110 EP**
72-54-8	4,4'-DDD	14	< 14 Y
1031-07-8	**Endosulfan Sulfate**	**3.2**	**27**
50-29-3	**4,4'-DDT**	**3.2**	**67 EP**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	**Endrin Aldehyde**	**3.2**	**28 P**
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	**Toxaphene**	**160**	**590**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	87.2%
Tetrachlorometaxylene	70.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW3-NW-0.5
DILUTION

Lab Sample ID: PF48L
LIMS ID: 09-15748
Matrix: Soil
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 18:11
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 11.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	8.0	< 8.0 U
319-85-7	beta-BHC	8.0	< 8.0 U
319-86-8	delta-BHC	8.0	< 8.0 U
58-89-9	gamma-BHC (Lindane)	8.0	< 8.0 U
76-44-8	Heptachlor	8.0	< 8.0 U
309-00-2	Aldrin	8.0	< 8.0 U
1024-57-3	Heptachlor Epoxide	8.0	< 8.0 U
959-98-8	**Endosulfan I**	**8.0**	**19 P**
60-57-1	**Dieldrin**	**16**	**21**
72-55-9	**4,4'-DDE**	**16**	**35**
72-20-8	Endrin	16	< 16 U
33213-65-9	**Endosulfan II**	**16**	**110**
72-54-8	4,4'-DDD	16	< 16 U
1031-07-8	**Endosulfan Sulfate**	**16**	**25**
50-29-3	**4,4'-DDT**	**16**	**62 P**
72-43-5	Methoxychlor	80	< 80 U
53494-70-5	Endrin Ketone	16	< 16 U
7421-93-4	Endrin Aldehyde	34	< 34 Y
5103-74-2	gamma Chlordane	8.0	< 8.0 U
5103-71-9	alpha Chlordane	8.0	< 8.0 U
8001-35-2	Toxaphene	800	< 800 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	97.5%
Tetrachlorometaxylene	85.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW4-E-0.5
SAMPLE

Lab Sample ID: PF48M
LIMS ID: 09-15749
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 02:18
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.2**	**15**
72-55-9	**4,4'-DDE**	**3.2**	**14**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	**Endosulfan II**	**3.2**	**9.8 P**
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	**4,4'-DDT**	**3.2**	**21**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	6.6	< 6.6 Y
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.0%
Tetrachlorometaxylene	65.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW5-SE-0.5
SAMPLE

Lab Sample ID: PF48N
LIMS ID: 09-15750
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 02:38
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.1%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	**4,4'-DDT**	**3.2**	**4.5**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW6-E-0.5
SAMPLE

Lab Sample ID: PF480
LIMS ID: 09-15751
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 02:59
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.1 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.5%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.2%
Tetrachlorometaxylene	56.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: B-1A-2
SAMPLE

Lab Sample ID: PF48P
LIMS ID: 09-15752
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 03:20
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 24.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	**Endosulfan I**	**1.6**	**2.7**
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	60.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-1B-2
SAMPLE

Lab Sample ID: PF48R
LIMS ID: 09-15754
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/07/09
Date Analyzed: 07/10/09 03:40
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 25.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.1	< 3.1 U
72-55-9	4,4'-DDE	3.1	< 3.1 U
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	4,4'-DDT	3.1	< 3.1 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	86.0%
Tetrachlorometaxylene	58.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: MB-070709
METHOD BLANK

Lab Sample ID: MB-070709
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: NA
Date Received: NA

Date Extracted: 07/07/09
Date Analyzed: 07/09/09 19:04
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	92.8%
Tetrachlorometaxylene	71.5%

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010

Client ID	DCBP	TCMX	TOT OUT
B-1C-2	92.0%	65.5%	0
B-2B-2	85.2%	59.5%	0
B-3B-2	87.0%	61.8%	0
MB-070709	92.8%	71.5%	0
LCS-070709	97.8%	62.0%	0
LCSD-070709	97.8%	64.5%	0
B-4B-2	88.8%	59.0%	0
B-4B-2 MS	84.5%	56.5%	0
B-4B-2 MSD	84.8%	60.2%	0
B-3C-2	88.8%	56.5%	0
B-5B-2	86.0%	63.8%	0
B-7A-2	83.0%	56.2%	0
SW1-NW-0.5	84.2%	61.8%	0
SW1-NW-0.5 DL	99.8%	76.0%	0
SW2-NW-0.5	82.8%	60.2%	0
SW3-NW-0.5	87.2%	70.5%	0
SW3-NW-0.5 DL	97.5%	85.5%	0
SW4-E-0.5	84.0%	65.0%	0
SW5-SE-0.5	85.2%	73.2%	0
SW6-E-0.5	77.2%	56.8%	0
B-1A-2	85.0%	60.5%	0
B-1B-2	86.0%	58.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 09-15739 to 09-15754

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: B-4B-2
MS/MSD

Lab Sample ID: PF48F
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted MS/MSD: 07/07/09

Date Analyzed MS: 07/09/09 21:28
MSD: 07/09/09 21:49
Instrument/Analyst MS: ECD7/AAR
MSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.6 g-dry-wt
Final Extract Volume MS: 4.0 mL
MSD: 4.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 15.7%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 1.54	4.75	6.33	75.0%	5.03	6.33	79.5%	5.7%
beta-BHC	< 1.54	5.16	6.33	81.5%	5.22	6.33	82.5%	1.2%
delta-BHC	< 1.54	5.16	6.33	81.5%	5.16	6.33	81.5%	0.0%
gamma-BHC (Lindane)	< 1.54	5.25	6.33	82.9%	5.57	6.33	88.0%	5.9%
Heptachlor	< 1.54	4.72	6.33	74.6%	5.03	6.33	79.5%	6.4%
Aldrin	< 1.54	4.78	6.33	75.5%	5.06	6.33	79.9%	5.7%
Heptachlor Epoxide	< 1.54	5.54	6.33	87.5%	5.82	6.33	91.9%	4.9%
Endosulfan I	< 1.54	5.03	6.33	79.5%	5.16	6.33	81.5%	2.6%
Dieldrin	< 3.09	11.4	12.7	89.8%	12.1	12.7	95.3%	6.0%
4,4'-DDE	< 3.09	14.1	12.7	111%	14.3	12.7	113%	1.4%
Endrin	< 3.09	11.4	12.7	89.8%	11.7	12.7	92.1%	2.6%
Endosulfan II	< 3.09	10.9	12.7	85.8%	10.9	12.7	85.8%	0.0%
4,4'-DDD	< 3.09	11.3	12.7	89.0%	11.3	12.7	89.0%	0.0%
Endosulfan Sulfate	< 3.09	8.99	12.7	70.8%	9.02	12.7	71.0%	0.3%
4,4'-DDT	< 3.09	12.0	12.7	94.5%	12.2	12.7	96.1%	1.7%
Methoxychlor	< 15.4	58.2	63.3	91.9%	58.5	63.3	92.4%	0.5%
Endrin Ketone	< 3.09	9.87	12.7	77.7%	9.84	12.7	77.5%	0.3%
Endrin Aldehyde	< 3.09	6.08	12.7	47.9%	6.20	12.7	48.8%	2.0%
gamma Chlordane	< 1.54	5.60	6.33	88.5%	5.85	6.33	92.4%	4.4%
alpha Chlordane	< 1.54	5.44	6.33	85.9%	5.73	6.33	90.5%	5.2%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: LCS-070709
LCS/LCSD

Lab Sample ID: LCS-070709
LIMS ID: 09-15742
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/07/09

Date Analyzed LCS: 07/09/09 19:25
LCSD: 07/09/09 19:45
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.0 g-dry-wt
LCSD: 12.0 g-dry-wt
Final Extract Volume LCS: 4.0 mL
LCSD: 4.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	5.90	6.67	88.5%	6.10	6.67	91.5%	3.3%
beta-BHC	6.40	6.67	96.0%	6.50	6.67	97.5%	1.6%
delta-BHC	6.80	6.67	102%	6.77	6.67	101%	0.4%
gamma-BHC (Lindane)	6.63	6.67	99.4%	6.77	6.67	101%	2.1%
Heptachlor	5.83	6.67	87.4%	6.07	6.67	91.0%	4.0%
Aldrin	6.00	6.67	90.0%	6.07	6.67	91.0%	1.2%
Heptachlor Epoxide	6.97	6.67	104%	6.97	6.67	104%	0.0%
Endosulfan I	6.07	6.67	91.0%	6.13	6.67	91.9%	1.0%
Dieldrin	14.3	13.3	108%	14.3	13.3	108%	0.0%
4,4'-DDE	17.1	13.3	129%	17.2	13.3	129%	0.6%
Endrin	14.3	13.3	108%	14.3	13.3	108%	0.0%
Endosulfan II	13.9	13.3	105%	13.9	13.3	105%	0.0%
4,4'-DDD	14.0	13.3	105%	13.9	13.3	105%	0.7%
Endosulfan Sulfate	12.8	13.3	96.2%	12.6	13.3	94.7%	1.6%
4,4'-DDT	14.8	13.3	111%	14.9	13.3	112%	0.7%
Methoxychlor	70.0	66.7	105%	70.3	66.7	105%	0.4%
Endrin Ketone	13.1	13.3	98.5%	13.1	13.3	98.5%	0.0%
Endrin Aldehyde	7.90	13.3	59.4%	8.10	13.3	60.9%	2.5%
gamma Chlordane	6.90	6.67	103%	7.00	6.67	105%	1.4%
alpha Chlordane	6.70	6.67	100%	6.77	6.67	101%	1.0%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	97.8%	97.8%
Tetrachlorometaxylene	62.0%	64.5%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: SW1-NW-0.5
SAMPLE

Lab Sample ID: PF48J
LIMS ID: 09-15746
Matrix: Soil
Data Release Authorized: MW
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 21:41
Instrument/Analyst: ECD1/AAR
Percent Moisture: 25.0%

Sample Amount: 11.4 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	11	< 11 U
93-76-5	2,4,5-T	11	< 11 U
88-85-7	Dinoseb	22	< 22 U
1918-00-9	Dicamba	22	< 22 U
94-75-7	2,4-D	59	< 59 Y
94-82-6	2,4-DB	220	< 220 U
75-99-0	Dalapon	44	< 44 U
94-74-6	MCPA	11,000	< 11,000 U
120-36-5	Dichloroprop	44	< 44 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	45.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: SW2-NW-0.5
SAMPLE

Lab Sample ID: PF48K
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 22:18
Instrument/Analyst: ECD1/AAR
Percent Moisture: 16.9%

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	9.9	< 9.9 U
93-76-5	2,4,5-T	9.9	< 9.9 U
88-85-7	Dinoseb	20	< 20 U
1918-00-9	Dicamba	20	< 20 U
94-75-7	2,4-D	40	< 40 U
94-82-6	2,4-DB	200	< 200 U
75-99-0	Dalapon	40	< 40 U
94-74-6	MCPA	9,900	< 9,900 U
120-36-5	Dichloroprop	40	< 40 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	41.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: SW2-NW-0.5
MATRIX SPIKE

Lab Sample ID: PF48K
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 22:54
Instrument/Analyst: ECD1/AAR
Percent Moisture: 16.9%

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	9.9	---
93-76-5	2,4,5-T	9.9	---
88-85-7	Dinoseb	20	---
1918-00-9	Dicamba	20	---
94-75-7	2,4-D	40	---
94-82-6	2,4-DB	200	---
75-99-0	Dalapon	40	---
94-74-6	MCPA	9,900	---
120-36-5	Dichloroprop	40	---

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	27.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: SW2-NW-0.5
MATRIX SPIKE DUP

Lab Sample ID: PF48K
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 23:31
Instrument/Analyst: ECD1/AAR
Percent Moisture: 16.9%

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	10	---
93-76-5	2,4,5-T	10	---
88-85-7	Dinoseb	20	---
1918-00-9	Dicamba	20	---
94-75-7	2,4-D	40	---
94-82-6	2,4-DB	200	---
75-99-0	Dalapon	40	---
94-74-6	MCPA	10,000	---
120-36-5	Dichloroprop	40	---

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	50.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: B-1A-2
SAMPLE

Lab Sample ID: PF48P
LIMS ID: 09-15752
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/11/09 00:07
Instrument/Analyst: ECD1/AAR
Percent Moisture: 24.4%

Sample Amount: 11.4 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	11	< 11 U
93-76-5	2,4,5-T	11	< 11 U
88-85-7	Dinoseb	22	< 22 U
1918-00-9	Dicamba	22	< 22 U
94-75-7	2,4-D	44	< 44 U
94-82-6	2,4-DB	220	< 220 U
75-99-0	Dalapon	44	< 44 U
94-74-6	MCPA	11,000	< 11,000 U
120-36-5	Dichloroprop	44	< 44 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	54.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: B-1B-2
SAMPLE

Lab Sample ID: PF48R
LIMS ID: 09-15754
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/08/09
Date Analyzed: 07/11/09 00:44
Instrument/Analyst: ECD1/AAR
Percent Moisture: 25.6%

Sample Amount: 11.3 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	11	< 11 U
93-76-5	2,4,5-T	11	< 11 U
88-85-7	Dinoseb	22	< 22 U
1918-00-9	Dicamba	22	< 22 U
94-75-7	2,4-D	44	< 44 U
94-82-6	2,4-DB	220	< 220 U
75-99-0	Dalapon	44	< 44 U
94-74-6	MCPA	11,000	< 11,000 U
120-36-5	Dichloroprop	44	< 44 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	40.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: MB-070809
METHOD BLANK

Lab Sample ID: MB-070809
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: NA
Date Received: NA

Date Extracted: 07/08/09
Date Analyzed: 07/10/09 14:59
Instrument/Analyst: ECD1/AAR
Percent Moisture: NA

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	8.3	< 8.3 U
93-76-5	2,4,5-T	8.3	< 8.3 U
88-85-7	Dinoseb	17	< 17 U
1918-00-9	Dicamba	17	< 17 U
94-75-7	2,4-D	33	< 33 U
94-82-6	2,4-DB	170	< 170 U
75-99-0	Dalapon	33	< 33 U
94-74-6	MCPA	8,300	< 8,300 U
120-36-5	Dichloroprop	33	< 33 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	43.7%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE SOIL SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010

Client ID	DCPA	TOT OUT
SW1-NW-0.5	45.0%	0
MB-070809	43.7%	0
LCS-070809	51.8%	0
LCSD-070809	53.2%	0
SW2-NW-0.5	41.9%	0
SW2-NW-0.5 MS	27.0%	0
SW2-NW-0.5 MSD	50.8%	0
B-1A-2	54.4%	0
B-1B-2	40.9%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(28-121)	(15-155)

Log Number Range: 09-15746 to 09-15754

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: LCS-070809
LCS/LCSD

Lab Sample ID: LCS-070809
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/08/09

Date Analyzed LCS: 07/10/09 15:36
LCSD: 07/10/09 16:12
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 15.0 g-dry-wt
LCSD: 15.0 g-dry-wt
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	130	167	77.8%	132	167	79.0%	1.5%
2,4,5-T	79.6	83.3	95.6%	81.0	83.3	97.2%	1.7%
Dinoseb	50.7	167	30.4%	81.9	167	49.0%	47.1%
Dicamba	131	167	78.4%	133	167	79.6%	1.5%
2,4-D	104	333	31.2%	133	333	39.9%	24.5%
2,4-DB	1310	1670	78.4%	1310	1670	78.4%	0.0%
Dalapon	293	333	88.0%	270	333	81.1%	8.2%
MCPA	45000	83300	54.0%	49700	83300	59.7%	9.9%
Dichloroprop	189	333	56.8%	194	333	58.3%	2.6%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	51.8%	53.2%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: SW2-NW-0.5
MS/MSD

Lab Sample ID: PF48K
LIMS ID: 09-15747
Matrix: Soil
Data Release Authorized:
Reported: 07/13/09

QC Report No: PF48-Landau Associates, Inc.
Project: Richardson Airways
1148001.010
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted MS/MSD: 07/08/09

Date Analyzed MS: 07/10/09 22:54
MSD: 07/10/09 23:31
Instrument/Analyst MS: ECD1/AAR
MSD: ECD1/AAR
Percent Moisture: 16.9%

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.5 g-dry-wt
Final Extract Volume MS: 50 mL
MSD: 50 mL
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
2,4,5-TP (Silvex)	< 9.94	73.3	198	37.0%	132	200	66.0%	57.2%
2,4,5-T	< 9.94	44.7	99.2	45.1%	74.5	100	74.5%	50.0%
Dinoseb	< 19.9	19.6	198	9.9%	31.2	200	15.6%	45.7%
Dicamba	< 19.9	45.7	198	23.1%	97.6	200	48.8%	72.4%
2,4-D	< 39.8	71.7	397	18.1%	204	400	51.0%	96.0%
2,4-DB	< 199	833	1980	42.1%	1550	2000	77.5%	60.2%
Dalapon	< 39.8	107	397	27.0%	137	400	34.2%	24.6%
MCPA	< 9940	27200	99200	27.4%	54900	100000	54.9%	67.5%
Dichloroprop	< 39.8	106	397	26.7%	223	400	55.8%	71.1%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 3, 2009

Ryan Reich
Landau Associates, Inc.
10 North Post St.
Peyton Building, Suite 218
Spokane, WA 99201

RE: Project No: 1148001.010
Project Name: Richardson Airways
ARI Job No: PH60

Dear Ryan:

Please find enclosed the original and a revised copy of chain of custody (COC) record, sample receipt documentation, and the final results from the project referenced above. Analytical Resources, Inc. (ARI) accepted several soil samples in good condition on July 1, 2009. The samples were logged under two different ARI SDGs (PF39 and PF47) based on sample volumes. Select samples were placed on hold pending further instructions. * Note all samples were frozen to protect holding times.

On July 21, 2009 at the request of Landau Associates, select samples were removed from hold and analyzed for Herbicides and Pesticides.

The herbicides matrix spike and/ or the matrix spike duplicate are out of control low for several analytes with RPDs outside of control limits for sample **DP18: 2-3.** All other QC is in control and no further corrective action was taken.

The pesticide LCS, LCSD, matrix spike and matrix spike duplicate does not contain Toxaphene spikes as Toxaphene contains over two hundred associated compounds

The pesticides matrix spike duplicate is out of control high for 4,4'-DDE for sample **DP17:2-3**. All other QC is in control and no further corrective action was taken.

There were no other anomalies associated with the samples.

A copy of this report and all corresponding raw data will remain on file electronically with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Landau Associates

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☑ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

Date 7-22-09
Page 1 of 1

Chain-of-Custody Record

Project Name Richardson Airways Project No. 114.001.010.0002
Project Location/Event Yakima Airport
Sampler's Name Ryan Reed
Project Contact Ryan Reed
Send Results To _____

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters	Observations/Comments
DP16: 2-2	7-22-09	10:10	Soil	1	8260 Analyze RRR 7-21-09	
DP16: 4.5-5		10:12			8260 Analyze "	
DP16: 7.5-8		10:20				
DP11: 4-10.5		10:25				
DP17: 2-3		10:45			8260 Analyze RRR 7-21-09	Hold
DP17: 4.5-5		10:50				
DP17: 6.75		10:55				
DP18: 2-3		11:05			8260 Analyze RRR 7-21-09	
DP18: 3-4		11:10				
DP18: 4.5-5		11:20				
DP19: 2-3		11:30				
DP19: 4.5-5		11:35			8260 Analyze RRR 7-21-09	
DP19: 9-10.5		11:45			8260 Analyze "	
DP19: 14.5-15		11:50				Hold

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature Ryan Reed	Signature	Signature	Signature
Printed Name Ryan Reed	Printed Name	Printed Name	Printed Name
Company Landau Assoc.	Company	Company	Company
Date 7-22-09 Time 11:45	Date Time	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 9/08

Page 2 of 2

LANDAU ASSOCIATES

☐ **Seattle (Edmonds)** (425) 778-0907
☐ **Tacoma** (253) 926-2493
☑ **Spokane** (509) 327-9737
☐ **Portland (Tigard)** (503) 443-6010
☐ ______

PF39

Chain-of-Custody Record

Date 6-29-09
Page 1 of 1

Project Name Richardson Airways Project No. 1148001.010.020
Project Location/Event Yakima Airport
Sampler's Name Ryan Reich
Project Contact Ryan Reich
Send Results To ______

Turnaround Time
☑ Standard
☐ Accelerated
☐ ______

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: Pesticides 8081B	Herbicides 8151										Observations/Comments
DP16: 2-3	6-29-09	10:20	Soil	1	X											HOLD, Freeze
DP16: 4.5-6		10:25			X											HOLD "
DP16: 7.5-9		10:30			X											
DP16: 9-10.5		10:35			X											HOLD "
DP17: 2-3		10:45			X	X										HOLD "
DP17: 4.5-6		10:50			X	X										
DP17: 6-7.5		10:55			X	X										HOLD "
DP18: 2-3		11:10			X	X										HOLD "
DP18: 3-4		11:15			X	X										
DP18: 4.5-6		11:20			X	X										HOLD "
DP19: 2-3		10:00			X											HOLD "
DP19: 4.5-6		10:05			X											HOLD "
DP19: 9-10.5		10:10			X											
DP19: 10.5-12	↓	10:15	↓	↓	X											HOLD "

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Ryan Reich (signature)	Signature: A. Volgardsen (signature)	Signature	Signature
Printed Name: Ryan Reich	Printed Name:	Printed Name	Printed Name
Company: Landau Assc.	Company: ARI	Company	Company
Date 7-1-09 Time 11:46	Date 7/1/09 Time 11:46	Date ____ Time ____	Date ____ Time ____

WHITE COPY - Project File **YELLOW COPY - Laboratory** **PINK COPY - Client Representative**

Rev. 6/02

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

COC No(s): _____ (NA)

Assigned ARI Job No: PF39

Project Name: Richardson Airways

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.6		
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#: 487405	

Cooler Accepted by: AV Date: 7/1/09 Time: 1146

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... (Bubble Wrap) (Wet Ice) Gel Packs Baggies Foam Block Paper Other: VOX			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO

Samples Logged by: AV Date: 7/1/09 Time: 1309

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of	
ARI Client Company: Landau Assoc	Phone: 509 235-9337	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airwales - Yakima Airport			
Client Project #: 11078.0010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	8081B Pesticides	8151A Herbicides	Analysis Requested						Notes/Comments
SW14-NW-0.5	6-30-09	8:15	Soil	1	(X)	NO	Analyze	RJR	7-21-09				Hold Pending
SW14-NW-2	"	8:20	"	"	X	X							Hold
SW15-NW-0.5	"	8:25	"	"	X	X							Hold
SW15-NW-2	"	8:30	"	"	X	X							Hold
SW16-NE-0.5	"	8:45	"	"	(X)		Analyze	RJR	7-21-09				Hold
SW16-NE-2	"	8:50	"	"	X								Hold
SW17-E-0.5	"	8:55	"	"	(X)		Analyze	RJR	7-21-09				Hold
SW17-E-2	"	9:00	"	"	X								Hold
SW19-E-0.5	"	10:00	"	"	X								Hold
SW19-E-2	"	10:05	"	"	X								Hold

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ryan Reich	Printed Name: A Volgardson	Printed Name:	Printed Name:
	Company: Landau Assoc	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 4 of	
ARI Client Company: Landau Assc	Phone: 509 327-9737	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 114800.010	Samplers: Ryan Reich		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: 8081B Pesticides	Analysis Requested: 8151 Herbicides	Notes/Comments
SW14-NW-0.5	6-30-09	8:15	Soil	1	X	X	HOLD, Freeze
SW14-NW-2		8:20			X	X	HOLD
SW15-NW-0.5		8:25			X	X	HOLD
SW15-NW-2		8:30			X	X	HOLD
SW16-NE-0.5		8:45			X		HOLD
SW16-NE-2		8:50			X		HOLD
SW17-E-0.5		8:55			X		HOLD
SW17-E-2		9:00			X		HOLD
SW19-E-0.5		10:00			X		HOLD
SW19-E-2		10:05			X		HOLD

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Landau Assc	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: Standard	Page: 6 of	
ARI Client Company: Landau Assc	Phone: 509 327-9737	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 1148001.010	Samplers: Ryan Reich		

Sample ID	Date	Time	Matrix	No. Containers	8081 Pesticides	8151 Herbicides	NWTPH-HCID	Total Metals 6010					Notes/Comments
SW25-W-0.5	6-30-09	11:30	Soil	1	(X)	Analyze RAR 7-21-09							~~Hold~~ Freeze
SW25-W-2	"	11:35	"	"	X								HOLD "
RYT Comp: 0.5-2	"	14:30	"	2	X	X	X	X					

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: LAI	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: Standard	Page: 6 of	
ARI Client Company: Landau Assc	Phone: 509 327-9737	Date: 6-30-09	Ice Present?
Client Contact: Ryan Reich		No. of Coolers:	Cooler Temps:
Client Project Name: Richardson Airways - Yakima Airport			
Client Project #: 1148001.010	Samplers: Ryan Reich		

Sample ID	Date	Time	Matrix	No. Containers	8081B Pesticides	8151 Herbicides	NWTPH-HCID	Total metals 6010 As, Pb only				Notes/Comments
SW25-W-0.5	6-30-09	11:30	Soil	1	X							HOLD, Freeze
SW25-W-2	"	11:35	"	"	X							HOLD "
RVT Comp: 0.5-2	"	14:20	"	2	X	X	X	X				

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Ryan Reich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Ryan Reich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: LAI	Company: ARI	Company:	Company:
	Date & Time: 7-1-09 11:46	Date & Time: 7/1/09 1146	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau

COC No(s): _____ NA

Assigned ARI Job No: PF47

Project Name: _____

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 0.8 2.4 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 487405

Cooler Accepted by: AV Date: 8/1/09 Time: 1146

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO

Samples Logged by: _____ Date: 8/11/09 Time: 1630

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles < 2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• • •	• • •	● ● ●

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD **Sample ID: DP17:2-3**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 20:34
Instrument/Analyst: ECD1/AAR
Percent Moisture: 19.8%

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	10	< 10 U
93-76-5	2,4,5-T	10	< 10 U
88-85-7	**Dinoseb**	**21**	**1,000**
1918-00-9	Dicamba	21	< 21 U
94-75-7	2,4-D	42	< 42 U
94-82-6	2,4-DB	210	< 210 U
75-99-0	Dalapon	42	< 42 U
94-74-6	MCPA	10,000	< 10,000 U
120-36-5	Dichloroprop	42	< 42 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	56.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: DP17:2-3
DILUTION

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/30/09 16:01
Instrument/Analyst: ECD1/AAR
Percent Moisture: 19.8%

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 5.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	52	< 52 U
93-76-5	2,4,5-T	52	< 52 U
88-85-7	**Dinoseb**	**100**	**1,100**
1918-00-9	Dicamba	100	< 100 U
94-75-7	2,4-D	210	< 210 U
94-82-6	2,4-DB	1,000	< 1,000 U
75-99-0	Dalapon	210	< 210 U
94-74-6	MCPA	52,000	< 52,000 U
120-36-5	Dichloroprop	210	< 210 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	68.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: DP18:2-3
SAMPLE

Lab Sample ID: PH60D
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 21:11
Instrument/Analyst: ECD1/AAR
Percent Moisture: 27.4%

Sample Amount: 10.9 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	12	< 12 U
93-76-5	2,4,5-T	12	< 12 U
88-85-7	Dinoseb	23	< 23 U
1918-00-9	Dicamba	23	< 23 U
94-75-7	2,4-D	46	< 46 U
94-82-6	2,4-DB	230	< 230 U
75-99-0	Dalapon	46	< 46 U
94-74-6	MCPA	12,000	< 12,000 U
120-36-5	Dichloroprop	46	< 46 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	38.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: DP18:2-3
MATRIX SPIKE

Lab Sample ID: PH60D
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 21:48
Instrument/Analyst: ECD1/AAR
Percent Moisture: 27.4%

Sample Amount: 10.9 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	12	---
93-76-5	2,4,5-T	12	---
88-85-7	Dinoseb	23	---
1918-00-9	Dicamba	23	---
94-75-7	2,4-D	46	---
94-82-6	2,4-DB	230	---
75-99-0	Dalapon	46	---
94-74-6	MCPA	12,000	---
120-36-5	Dichloroprop	46	---

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	41.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: DP18:2-3
MATRIX SPIKE DUP

Lab Sample ID: PH60D
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 22:25
Instrument/Analyst: ECD1/AAR
Percent Moisture: 27.4%

Sample Amount: 10.9 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	12	---
93-76-5	2,4,5-T	12	---
88-85-7	Dinoseb	23	---
1918-00-9	Dicamba	23	---
94-75-7	2,4-D	46	---
94-82-6	2,4-DB	230	---
75-99-0	Dalapon	46	---
94-74-6	MCPA	12,000	---
120-36-5	Dichloroprop	46	---

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery	
2,4-Dichlorophenylacetic Acid	63.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD

Sample ID: MB-072309
METHOD BLANK

Lab Sample ID: MB-072309
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: NA
Date Received: NA

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 17:29
Instrument/Analyst: ECD1/AAR
Percent Moisture: NA

Sample Amount: 15.0 g-dry-wt
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
93-72-1	2,4,5-TP (Silvex)	8.3	< 8.3 U
93-76-5	2,4,5-T	8.3	< 8.3 U
88-85-7	Dinoseb	17	< 17 U
1918-00-9	Dicamba	17	< 17 U
94-75-7	2,4-D	33	< 33 U
94-82-6	2,4-DB	170	< 170 U
75-99-0	Dalapon	33	< 33 U
94-74-6	MCPA	8,300	< 8,300 U
120-36-5	Dichloroprop	33	< 33 U

Reported in µg/kg (ppb)

Herbicide Surrogate Recovery

2,4-Dichlorophenylacetic Acid	61.8%

ANALYTICAL RESOURCES INCORPORATED

SW8151A/HERBICIDE SOIL SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020

Client ID	DCPA	TOT OUT
DP17:2-3	56.6%	0
DP17:2-3 DL	68.9%	0
MB-072309	61.8%	0
LCS-072309	63.1%	0
LCSD-072309	50.9%	0
DP18:2-3	38.9%	0
DP18:2-3 MS	41.0%	0
DP18:2-3 MSD	63.9%	0

	LCS/MB LIMITS	QC LIMITS
(DCPA) = 2,4-Dichlorophenylacetic Acid	(28-121)	(15-155)

Log Number Range: 09-17243 to 09-17244

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: LCS-072309
LCS/LCSD

Lab Sample ID: LCS-072309
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/23/09

Date Analyzed LCS: 07/28/09 19:20
LCSD: 07/28/09 19:57
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

Sample Amount LCS: 15.0 g-dry-wt
LCSD: 15.0 g-dry-wt
Final Extract Volume LCS: 50 mL
LCSD: 50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4,5-TP (Silvex)	132	167	79.0%	111	167	66.5%	17.3%
2,4,5-T	75.5	83.3	90.6%	59.4	83.3	71.3%	23.9%
Dinoseb	64.4	167	38.6%	45.9	167	27.5%	33.5%
Dicamba	156	167	93.4%	105	167	62.9%	39.1%
2,4-D	247	333	74.2%	229	333	68.8%	7.6%
2,4-DB	1490	1670	89.2%	1170	1670	70.1%	24.1%
Dalapon	276	333	82.9%	102	333	30.6%	92.1%
MCPA	54400	83300	65.3%	48400	83300	58.1%	11.7%
Dichloroprop	213	333	64.0%	183	333	55.0%	15.2%

Herbicide Surrogate Recovery

	LCS	LCSD
2,4-Dichlorophenylacetic	63.1%	50.9%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Herbicides by SW8151A GC/ECD
Page 1 of 1

Sample ID: DP18:2-3
MS/MSD

Lab Sample ID: PH60D
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/31/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted MS/MSD: 07/23/09

Date Analyzed MS: 07/28/09 21:48
MSD: 07/28/09 22:25
Instrument/Analyst MS: ECD1/AAR
MSD: ECD1/AAR
Percent Moisture: 27.4%

Sample Amount MS: 10.9 g-dry-wt
MSD: 10.9 g-dry-wt
Final Extract Volume MS: 50 mL
MSD: 50 mL
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
2,4,5-TP (Silvex)	< 11.5	88.1	229	38.5%	101	229	44.1%	13.6%
2,4,5-T	< 11.5	29.9	115	26.0%	37.5	115	32.6%	22.6%
Dinoseb	< 22.9	110	229	48.0%	121	229	52.8%	9.5%
Dicamba	< 22.9	17.9	229	7.8%	24.4	229	10.7%	30.7%
2,4-D	< 45.9	233	459	50.8%	292	459	63.6%	22.5%
2,4-DB	< 229	1710	2290	74.7%	1990	2290	86.9%	15.1%
Dalapon	< 45.9	106	459	23.1%	118	459	25.7%	10.7%
MCPA	< 11500	33200	115000	28.9%	42600	115000	37.0%	24.8%
Dichloroprop	< 45.9	130	459	28.3%	181	459	39.4%	32.8%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP16:2-3
SAMPLE

Lab Sample ID: PH60A
LIMS ID: 09-17241
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 16:34
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 26.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	75.2%
Tetrachlorometaxylene	62.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP16:4.5-6
SAMPLE

Lab Sample ID: PH60B
LIMS ID: 09-17242
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 16:55
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 23.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	**Dieldrin**	**3.1**	**16**
72-55-9	**4,4'-DDE**	**3.1**	**6.9**
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	**Endosulfan II**	**3.1**	**8.9 P**
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	**4,4'-DDT**	**3.1**	**14 P**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	**Toxaphene**	**160**	**120 J**

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	72.0%
Tetrachlorometaxylene	63.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP17:2-3
SAMPLE

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 17:16
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.2 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	**4,4'-DDE**	**3.3**	**7.7**
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	**4,4'-DDT**	**3.3**	**37**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.8%
Tetrachlorometaxylene	71.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP17:2-3
MATRIX SPIKE

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 17:37
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	80.0%
Tetrachlorometaxylene	75.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: DP17:2-3
MATRIX SPIKE DUP

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 17:57
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	---
319-85-7	beta-BHC	1.6	---
319-86-8	delta-BHC	1.6	---
58-89-9	gamma-BHC (Lindane)	1.6	---
76-44-8	Heptachlor	1.6	---
309-00-2	Aldrin	1.6	---
1024-57-3	Heptachlor Epoxide	1.6	---
959-98-8	Endosulfan I	1.6	---
60-57-1	Dieldrin	3.2	---
72-55-9	4,4'-DDE	3.2	---
72-20-8	Endrin	3.2	---
33213-65-9	Endosulfan II	3.2	---
72-54-8	4,4'-DDD	3.2	---
1031-07-8	Endosulfan Sulfate	3.2	---
50-29-3	4,4'-DDT	3.2	---
72-43-5	Methoxychlor	16	---
53494-70-5	Endrin Ketone	3.2	---
7421-93-4	Endrin Aldehyde	3.2	---
5103-74-2	gamma Chlordane	1.6	---
5103-71-9	alpha Chlordane	1.6	---
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	78.2%
Tetrachlorometaxylene	69.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP18:2-3
SAMPLE

Lab Sample ID: PH60D
LIMS ID: 09-17244
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 18:18
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.1	< 3.1 U
72-55-9	4,4'-DDE	3.1	< 3.1 U
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	4,4'-DDT	3.1	< 3.1 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.5%
Tetrachlorometaxylene	69.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: DP19:2-3**
Page 1 of 1 **SAMPLE**

Lab Sample ID: PH60E
LIMS ID: 09-17245
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 18:39
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.3 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 28.2%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	67.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: DP19:4.5-6
SAMPLE

Lab Sample ID: PH60F
LIMS ID: 09-17246
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 21:04
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 29.7%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.5	< 1.5 U
319-85-7	beta-BHC	1.5	< 1.5 U
319-86-8	delta-BHC	1.5	< 1.5 U
58-89-9	gamma-BHC (Lindane)	1.5	< 1.5 U
76-44-8	Heptachlor	1.5	< 1.5 U
309-00-2	Aldrin	1.5	< 1.5 U
1024-57-3	Heptachlor Epoxide	1.5	< 1.5 U
959-98-8	Endosulfan I	1.5	< 1.5 U
60-57-1	Dieldrin	3.1	< 3.1 U
72-55-9	4,4'-DDE	3.1	< 3.1 U
72-20-8	Endrin	3.1	< 3.1 U
33213-65-9	Endosulfan II	3.1	< 3.1 U
72-54-8	4,4'-DDD	3.1	< 3.1 U
1031-07-8	Endosulfan Sulfate	3.1	< 3.1 U
50-29-3	4,4'-DDT	3.1	< 3.1 U
72-43-5	Methoxychlor	15	< 15 U
53494-70-5	Endrin Ketone	3.1	< 3.1 U
7421-93-4	Endrin Aldehyde	3.1	< 3.1 U
5103-74-2	gamma Chlordane	1.5	< 1.5 U
5103-71-9	alpha Chlordane	1.5	< 1.5 U
8001-35-2	Toxaphene	150	< 150 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	77.8%
Tetrachlorometaxylene	68.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B

Sample ID: SW25-W-0.5
SAMPLE

Lab Sample ID: PH60G
LIMS ID: 09-17247
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 21:25
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.4%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	70.2%
Tetrachlorometaxylene	63.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: SW14-NW-0.5
SAMPLE

Lab Sample ID: PH60H
LIMS ID: 09-17248
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 21:46
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	**Endosulfan I**	**1.6**	**11**
60-57-1	**Dieldrin**	**3.2**	**15**
72-55-9	**4,4'-DDE**	**3.2**	**57 EP**
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	**Endosulfan II**	**3.2**	**14**
72-54-8	**4,4'-DDD**	**3.2**	**8.9 P**
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	**4,4'-DDT**	**3.2**	**150 E**
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	66.8%
Tetrachlorometaxylene	67.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: SW14-NW-0.5
DILUTION

Lab Sample ID: PH60H
LIMS ID: 09-17248
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/28/09 16:52
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.4 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	16	< 16 U
319-85-7	beta-BHC	16	< 16 U
319-86-8	delta-BHC	16	< 16 U
58-89-9	gamma-BHC (Lindane)	16	< 16 U
76-44-8	Heptachlor	16	< 16 U
309-00-2	Aldrin	16	< 16 U
1024-57-3	Heptachlor Epoxide	16	< 16 U
959-98-8	Endosulfan I	16	< 16 U
60-57-1	Dieldrin	32	< 32 U
72-55-9	**4,4'-DDE**	**32**	**43**
72-20-8	Endrin	32	< 32 U
33213-65-9	Endosulfan II	32	< 32 U
72-54-8	4,4'-DDD	32	< 32 U
1031-07-8	Endosulfan Sulfate	32	< 32 U
50-29-3	**4,4'-DDT**	**32**	**120**
72-43-5	Methoxychlor	160	< 160 U
53494-70-5	Endrin Ketone	32	< 32 U
7421-93-4	Endrin Aldehyde	32	< 32 U
5103-74-2	gamma Chlordane	16	< 16 U
5103-71-9	alpha Chlordane	16	< 16 U
8001-35-2	Toxaphene	1,600	< 1,600 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	95.0%
Tetrachlorometaxylene	89.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: SW16-NE-0.5
SAMPLE

Lab Sample ID: PH60I
LIMS ID: 09-17249
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 22:06
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.2 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 24.3%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	69.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: SW17-E-0.5
SAMPLE

Lab Sample ID: PH60J
LIMS ID: 09-17250
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/30/09
Date Received: 07/01/09

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 22:27
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 22.6%

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.6	< 1.6 U
319-85-7	beta-BHC	1.6	< 1.6 U
319-86-8	delta-BHC	1.6	< 1.6 U
58-89-9	gamma-BHC (Lindane)	1.6	< 1.6 U
76-44-8	Heptachlor	1.6	< 1.6 U
309-00-2	Aldrin	1.6	< 1.6 U
1024-57-3	Heptachlor Epoxide	1.6	< 1.6 U
959-98-8	Endosulfan I	1.6	< 1.6 U
60-57-1	Dieldrin	3.2	< 3.2 U
72-55-9	4,4'-DDE	3.2	< 3.2 U
72-20-8	Endrin	3.2	< 3.2 U
33213-65-9	Endosulfan II	3.2	< 3.2 U
72-54-8	4,4'-DDD	3.2	< 3.2 U
1031-07-8	Endosulfan Sulfate	3.2	< 3.2 U
50-29-3	4,4'-DDT	3.2	< 3.2 U
72-43-5	Methoxychlor	16	< 16 U
53494-70-5	Endrin Ketone	3.2	< 3.2 U
7421-93-4	Endrin Aldehyde	3.2	< 3.2 U
5103-74-2	gamma Chlordane	1.6	< 1.6 U
5103-71-9	alpha Chlordane	1.6	< 1.6 U
8001-35-2	Toxaphene	160	< 160 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	82.2%
Tetrachlorometaxylene	70.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: MB-072309
METHOD BLANK

Lab Sample ID: MB-072309
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: NA
Date Received: NA

Date Extracted: 07/23/09
Date Analyzed: 07/27/09 15:32
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.0 g-dry-wt
Final Extract Volume: 4.0 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
319-84-6	alpha-BHC	1.7	< 1.7 U
319-85-7	beta-BHC	1.7	< 1.7 U
319-86-8	delta-BHC	1.7	< 1.7 U
58-89-9	gamma-BHC (Lindane)	1.7	< 1.7 U
76-44-8	Heptachlor	1.7	< 1.7 U
309-00-2	Aldrin	1.7	< 1.7 U
1024-57-3	Heptachlor Epoxide	1.7	< 1.7 U
959-98-8	Endosulfan I	1.7	< 1.7 U
60-57-1	Dieldrin	3.3	< 3.3 U
72-55-9	4,4'-DDE	3.3	< 3.3 U
72-20-8	Endrin	3.3	< 3.3 U
33213-65-9	Endosulfan II	3.3	< 3.3 U
72-54-8	4,4'-DDD	3.3	< 3.3 U
1031-07-8	Endosulfan Sulfate	3.3	< 3.3 U
50-29-3	4,4'-DDT	3.3	< 3.3 U
72-43-5	Methoxychlor	17	< 17 U
53494-70-5	Endrin Ketone	3.3	< 3.3 U
7421-93-4	Endrin Aldehyde	3.3	< 3.3 U
5103-74-2	gamma Chlordane	1.7	< 1.7 U
5103-71-9	alpha Chlordane	1.7	< 1.7 U
8001-35-2	Toxaphene	170	< 170 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	90.2%
Tetrachlorometaxylene	81.0%

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020

Client ID	DCBP	TCMX	TOT OUT
DP16:2-3	75.2%	62.8%	0
DP16:4.5-6	72.0%	63.0%	0
MB-072309	90.2%	81.0%	0
LCS-072309	83.8%	69.8%	0
LCSD-072309	86.5%	72.2%	0
DP17:2-3	80.8%	71.0%	0
DP17:2-3 MS	80.0%	75.5%	0
DP17:2-3 MSD	78.2%	69.8%	0
DP18:2-3	77.5%	69.0%	0
DP19:2-3	78.8%	67.2%	0
DP19:4.5-6	77.8%	68.2%	0
SW25-W-0.5	70.2%	63.8%	0
SW14-NW-0.5	66.8%	67.0%	0
SW14-NW-0.5 DL	95.0%	89.0%	0
SW16-NE-0.5	79.2%	69.2%	0
SW17-E-0.5	82.2%	70.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 09-17241 to 09-17250

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-072309**
Page 1 of 1 LCS/LCSD

Lab Sample ID: LCS-072309
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted LCS/LCSD: 07/23/09
Date Analyzed LCS: 07/27/09 15:53
LCSD: 07/27/09 16:13
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.0 g-dry-wt
LCSD: 12.0 g-dry-wt
Final Extract Volume LCS: 4.0 mL
LCSD: 4.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	6.00	6.67	90.0%	6.33	6.67	94.9%	5.4%
beta-BHC	6.27	6.67	94.0%	6.53	6.67	97.9%	4.1%
delta-BHC	6.40	6.67	96.0%	6.93	6.67	104%	8.0%
gamma-BHC (Lindane)	6.70	6.67	100%	6.97	6.67	104%	4.0%
Heptachlor	5.70	6.67	85.5%	5.97	6.67	89.5%	4.6%
Aldrin	6.00	6.67	90.0%	6.30	6.67	94.5%	4.9%
Heptachlor Epoxide	6.37	6.67	95.5%	6.63	6.67	99.4%	4.0%
Endosulfan I	6.50	6.67	97.5%	6.73	6.67	101%	3.5%
Dieldrin	13.9	13.3	105%	14.5	13.3	109%	4.2%
4,4'-DDE	17.6	13.3	132%	18.4	13.3	138%	4.4%
Endrin	13.7	13.3	103%	13.9	13.3	105%	1.4%
Endosulfan II	13.8	13.3	104%	14.1	13.3	106%	2.2%
4,4'-DDD	14.4	13.3	108%	15.0	13.3	113%	4.1%
Endosulfan Sulfate	12.1	13.3	91.0%	12.5	13.3	94.0%	3.3%
4,4'-DDT	13.7	13.3	103%	13.8	13.3	104%	0.7%
Methoxychlor	64.7	66.7	97.0%	65.0	66.7	97.5%	0.5%
Endrin Ketone	13.2	13.3	99.2%	13.6	13.3	102%	3.0%
Endrin Aldehyde	10.1	13.3	75.9%	10.2	13.3	76.7%	1.0%
gamma Chlordane	6.73	6.67	101%	7.17	6.67	107%	6.3%
alpha Chlordane	6.63	6.67	99.4%	7.03	6.67	105%	5.9%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	83.8%	86.5%
Tetrachlorometaxylene	69.8%	72.2%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B
Page 1 of 1

Sample ID: DP17:2-3
MS/MSD

Lab Sample ID: PH60C
LIMS ID: 09-17243
Matrix: Soil
Data Release Authorized:
Reported: 07/29/09

QC Report No: PH60-Landau Associates, Inc.
Project: RICHARDSON AIRWAYS
1148001.010.020
Date Sampled: 06/29/09
Date Received: 07/01/09

Date Extracted MS/MSD: 07/23/09

Date Analyzed MS: 07/27/09 17:37
MSD: 07/27/09 17:57
Instrument/Analyst MS: ECD7/AAR
MSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.4 g-dry-wt
MSD: 12.4 g-dry-wt
Final Extract Volume MS: 4.0 mL
MSD: 4.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 19.8%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 1.64	5.72	6.46	88.5%	5.36	6.46	83.0%	6.5%
beta-BHC	< 1.64	5.46	6.46	84.5%	5.23	6.46	81.0%	4.3%
delta-BHC	< 1.64	7.59	6.46	117%	7.85	6.46	122%	3.4%
gamma-BHC (Lindane)	< 1.64	6.30	6.46	97.5%	6.11	6.46	94.6%	3.1%
Heptachlor	< 1.64	8.63	6.46	134%	9.24	6.46	143%	6.8%
Aldrin	< 1.64	5.91	6.46	91.5%	5.72	6.46	88.5%	3.3%
Heptachlor Epoxide	< 1.64	6.04	6.46	93.5%	6.04	6.46	93.5%	0.0%
Endosulfan I	< 1.64	6.14	6.46	95.0%	5.88	6.46	91.0%	4.3%
Dieldrin	< 3.27	15.1	12.9	117%	14.8	12.9	115%	2.0%
4,4'-DDE	7.72	25.5	12.9	138%	28.7	12.9	163%	11.8%
Endrin	< 3.27	13.1	12.9	102%	12.7	12.9	98.4%	3.1%
Endosulfan II	< 3.27	12.9	12.9	100%	12.4	12.9	96.1%	4.0%
4,4'-DDD	< 3.27	14.8	12.9	115%	15.5	12.9	120%	4.6%
Endosulfan Sulfate	< 3.27	10.1	12.9	78.3%	10.0	12.9	77.5%	1.0%
4,4'-DDT	36.6	41.4	12.9	37.2%	54.3	12.9	137%	27.0%
Methoxychlor	< 16.4	58.8	64.6	91.0%	59.1	64.6	91.5%	0.5%
Endrin Ketone	< 3.27	12.2	12.9	94.6%	12.1	12.9	93.8%	0.8%
Endrin Aldehyde	< 3.27	8.92	12.9	69.1%	10.5	12.9	81.4%	16.3%
gamma Chlordane	< 1.64	6.30	6.46	97.5%	6.30	6.46	97.5%	0.0%
alpha Chlordane	< 1.64	6.59	6.46	102%	6.69	6.46	104%	1.5%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.