

APPENDIX E-2

**SOIL AND GROUNDWATER
SAMPLING REPORT (GEOCON, 2013)**

SOIL AND GROUNDWATER SAMPLING REPORT



PREPARED FOR:
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GEOCON PROJECT NO. E8690-02-01

JULY 2013

Project No. E8690-02-01
July 23, 2013

Mr. Brett Williams
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3074 Gold Canal Drive
Rancho Cordova, California 95670-6116

Subject: SOIL AND GROUNDWATER SAMPLING REPORT
CHELSEA WETLANDS
HERCULES, CALIFORNIA

Dear Mr. Williams:

Geocon has prepared this *Soil and Groundwater Sampling Report* for the proposed Chelsea Wetlands site. The report contains details of field services and laboratory analytical results.

Please contact the undersigned if you have any questions or comments.

Sincerely,

GEOCON CONSULTANTS, INC.

John Love, PG
Senior Project Geologist

Richard Day, CEG, CHG
Principal / Senior Geologist

(3) Addressee

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SOIL AND GROUNDWATER SAMPLING REPORT

1.0 INTRODUCTION

On June 13, 2013, we collected soil and grab groundwater samples at the approximate 15-acre open space area located in Hercules, California (see Figure 1).

Sixteen (16) soil borings were advanced for the purpose of collecting environmental soil and groundwater samples in conjunction with the development of the site as a wetland.

1.1 Background

The site currently exists as undeveloped land owned by the City of Hercules and Chelsea by the Bay Homeowners Association. The site is a small portion of the former 1,300-acre Hercules Powder Company plant that produced trinitrotoluene (TNT) and nitrogen fertilizer from 1913 until 1976. Valley Nitrogen Producers (VNP) purchased the site in 1976 and continued the production of nitrogen fertilizer until 1979 when VNP declared bankruptcy.

In 2008, ENGEO, Inc. conducted a Phase I environmental site assessment (ESA) that identified several potential recognized environmental concerns (RECs) at the 15-acre site. The potential RECs include:

- A Kinder Morgan pipeline located within 70 feet of the northern site boundary;
- Approximately 50,000 cubic yards of undocumented fill located at the site; and
- Potential impacts to soil and groundwater resulting from past activities at former site buildings.

In March 2013, Ducks Unlimited, Inc. (DU) solicited bids to conduct a Phase II ESA to address the RECs identified in ENGEO's Phase I ESA. The Phase II ESA was requested to assess potential contaminants in soil and groundwater based on the past land use as well as potential future development as a wetland.

On April 9, 2013, in response to DU's bid solicitation, we conducted a site inspection and determined that the Kinder Morgan pipeline is not an environmental concern. The pipeline is located approximately 70 feet northeast from the proposed wetlands area within existing marsh lands. A significant leak from this pipeline would likely be discovered rather quickly since the petroleum product would expectedly surface due to the shallow groundwater in this area. The pipeline is also separated from the proposed wetlands area to the southeast by an approximately 60-foot-wide earthen berm. The San Francisco Bay Trail is located atop the berm.

The 50,000 cubic yards of undocumented fill material was likely spread throughout the site to raise the grade above the 50-year flood plain. This would have resulted in an average fill thickness of approximately 2 feet across the site.

The site's past land use is relatively unknown. Information presented in the 2008 Phase I ESA indicates that residential and commercial/industrial structures previously occupied the site, and that a wood crate manufacturing plant associated with the Hercules Powder Company, was located on the northeastern portion of the property. However, information pertaining to chemical use, storage, and handling at these individual buildings is unknown.

In June 2013, DU retained the services of Geocon to conduct a Phase II ESA. The Phase II ESA was developed to assess potential impacts to soil and groundwater resulting from historical land use and placement of undocumented fill soil. Additionally, data gathered from the Phase II ESA will be used to aid DU in wetlands design and fill material reuse and disposal options.

The field investigation consisted of advancing 16 temporary borings throughout the 15-acre site as shown on Figure 2, and analyzing soil and groundwater samples for contaminants discovered on other portions of the 1,300-acre former Hercules Powder Company property.

1.1 Pre-Field Activities

On June 7, 2013, we located the 16 borings in the field by marking them with wooden stakes and surveying their locations using Differential Global Positioning System (DGPS) equipment. The boring coordinates are presented in Table 1.

A business license was obtained from the City of Hercules and a soil boring permit was obtained from the Contra Costa County Environmental Health Department prior to completing the field investigation. A copy of the soil boring permit is provided as Appendix A.

A utility survey was conducted by notifying Underground Services Alert six days prior to the scheduled field sampling.

2.0 SOIL AND GRAB-GROUNDWATER SAMPLING

Three general soil zones were targeted for sample analysis. The first zone was surface soils located from 0 to 0.5 foot below ground, the second zone was potential fill soils situated from 1 to 3 feet below ground, and the third zone were native soils situated from 4.5 to 9.5 feet below grade which will represent wetlands surface / foundation material once the site is graded . The soil sample depths and corresponding approximate elevations are provided in Table 2.

Soil samples were composited in the laboratory to form one soil sample from each of the targeted soil zones. For instance, soil samples from borings B1A, B1B, B1C, and B1D were collected from each of these borings from surface, fill- and native cut-depth soils, and then composited together to form one soil sample for laboratory analysis from each of these soil zones.

In addition to collecting soil samples at each boring location, one grab groundwater sample was also collected from one of the borings within each composite group. Thus, one grab groundwater sample was collected from the boring groups B1, B2, B3, and B4.

The 16 borings were advanced using a Rhino track-mounted Geoprobe direct-push sample rig operated by Gregg Drilling and Testing, Inc. personnel. Soil samples were collected from each location by hydraulically advancing a four-foot-long core barrel sampler lined with an acetate sample tube into undisturbed soil at four-foot intervals. Soil samples were collected from the target sample depths by cutting an approximately six-inch-long section of the acetate sample tube, capping the ends with Teflon tape and plastic end caps, and placing the sample tube in a chest cooled with ice for storage and transport to the analytical laboratory.

Grab-groundwater samples were collected from borings B1B, B2D, B4C, and B3B by inserting a temporary ¾-inch-diameter PVC well casing into the open borehole, and removing groundwater from the casing using a small diameter stainless steel bailer. Groundwater was transferred into 40-milliliter (ml) glass vials preserved with hydrochloric acid (HCl) and 1-liter non-preserved glass amber jars. California Assessment Manual (CAM) 17 metals samples were collected by decanting the groundwater collected in one of the 1-liter glass amber jars into a 500-ml polyethylene container preserved with nitric acid after sediment in the 1-liter glass jar had a chance to settle out.

Upon sample collection, the groundwater samples were placed in a chest cooled with ice for temporary storage. All samples were transported under chain-of-custody protocol to Advanced Technology Laboratories (ATL), a State of California-certified laboratory located in Signal Hill, California.

All soil and groundwater sampling equipment was cleaned between sample locations using a non-phosphate detergent and deionized water rinse.

2.1 Soil and Groundwater Conditions

Soft to firm, predominantly dark brown to black, silty and sandy clay was encountered in every borehole at depths starting at ground surface in boring B2D and at 5 feet in boring B1A. The clay extended to 12 feet at boring B2D, the maximum depth explored during this investigation.

Overlying the clay was dry sandy silt and silty sand with varying amounts of interbedded gravel. It is unknown what portion of this material represents actual fill soil; however, soils encountered at B2C,

B2D, B3A, and B4A did contain brick fragments, indicating that fill soils do exist in these areas of the proposed wetlands site.

Groundwater was encountered in B1A, B1B, B2D, B3B, and B4C. Groundwater was measured at these sample locations in open boreholes after soil sampling was complete and the sample equipment was removed from the ground. In most instances, each borehole stayed open to at least 7 feet. The only borehole where the actual depth to first groundwater could be identified was B1A. Saturated soils were encountered at 5 feet below ground surface in this sample location.

Copies of the soil boring logs are provided as Appendix B.

2.2 Sample Analysis

2.2.1 Surface Soil Samples

Surface soil samples were analyzed for the following:

- Polychlorinated biphenyls (PCBs) following EPA Test Method 8082
- CAM 17 metals following EPA Test Method 6010/7471
- pH following EPA Test Method 9045C.

2.2.2 Fill-Depth and Native Cut-Depth Soil Samples

Fill- and native cut-depth soil samples were analyzed for the following:

- volatile organic compounds (VOCs) following EPA Test Method 8260
- semi-volatile organic compounds (SVOCs) following EPA Test Method 8270C
- total petroleum hydrocarbons as gasoline (TPHg) following EPA Test Method 8015B
- total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo) following EPA Test Method 8015B with silica gel cleanup
- organochlorine pesticides following EPA Test Method 8081
- herbicides following EPA Test Method 8151A; PCBs following EPA Test Method 8082
- CAM 17 metals following EPA Test Method 6010/7471
- pH following EPA Test Method 9045C

Additionally, fill-depth soils from boring B1 and B2 composite samples were analyzed for explosives following EPA Test Method 8330A.

2.2.3 Grab-Groundwater Samples

Grab groundwater samples were analyzed for:

- TPHg following EPA Test Method 8015B
- VOCs following EPA Test Method 8260
- CAM 17 metals following EPA Test Method 6010/7471.

2.3 Sample Results

2.3.1 Surface Soil Samples

The composite surface soil samples from boring groups B1, B2, B3, and B4 were reported as non-detect for PCBs.

Arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were all detected at concentrations above their respective reporting limits in each of the composite surface samples, with mercury also being detected in the B4 composite surface soil sample.

pH was reported at values ranging from 7.0 in the B2 soil sample group to 7.7 in the B3 sample group.

Analytical laboratory results for PCBs, CAM 17 metals, and pH are provided in Tables 3 and 4, and copies of the chain-of-custody and analytical laboratory report is provided as Appendix C.

2.3.2 Fill-Depth and Native Cut-Depth Soil Samples

VOCs, SVOCs, TPHg, organochlorine pesticides, herbicides, and PCBs were reported as non-detect in the fill- and native cut-depth composite soil samples.

Explosives were reported as non-detect in the B1 and B2 fill-depth composite soil samples.

TPHd and TPHmo were reported in all composite soil samples. The TPHd concentrations ranged from 9.1 milligrams per kilogram (mg/kg) in the native cut-depth soil sample analyzed for the B2 composite group to 49 mg/kg in fill-depth soil sample analyzed for the B4 composite group.

TPHmo concentrations ranged from 9.0 mg/kg in the native cut-depth soil sample analyzed for the B4 composite group to 150 mg/kg in the fill-depth composite soil sample collected from the same boring group (B4).

Arsenic, barium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected at concentrations above their respective reporting limits in each of the composite fill- and native cut-depth soil samples.

Cadmium was reported in the fill- and native cut-depth soil samples analyzed for the B2 composite group and it was detected in the cut-depth composite soil samples analyzed for the B1 and B3 composite groups. Cadmium was reported as non-detect in the fill- and native cut-depth composite samples analyzed for the B4 composite group and the native cut-depth soil sample analyzed for the B3 composite group.

pH was reported at values ranging from 7.2 in the B1 and B3 fill-depth soil sample groups to 8.3 in the B4 fill-depth sample group.

Analytical laboratory results for VOCs, SVOCs, TPHg, TPHd, organochlorine pesticides, herbicides, PCBs, CAM 17 metals, pH, and explosives are provided in Tables 3 to 5, and copies of the chain-of-custody and analytical laboratory report are provided as Appendix C.

2.3.2 Grab-Groundwater Samples

TPHg and VOCs were reported as non-detect in the grab groundwater samples collected from borings B1B, B2D, B3B, and B4C.

Antimony, copper, lead, mercury, silver, and thallium were reported as non-detect in the four grab groundwater samples.

Arsenic, barium, beryllium, cadmium, chromium, cobalt, molybdenum, nickel, selenium, vanadium, and zinc were detected in one or more groundwater samples.

Analytical laboratory results for TPHg, VOCs, and CAM 17 metals are provided in Tables 6 and 7, and copies of the chain-of-custody and analytical laboratory report is provided as Appendix D.

2.4 Quality Assurance / Quality Control

Field quality assurance / quality control (QA/QC) consisted of collecting trip blank and equipment rinse blank samples. The trip blank was analyzed for TPHg and VOCs, and the equipment rinse blank was analyzed for TPHg, VOCs, and CAM 17 metals.

The trip blank accompanied the samples in the chest cooled with ice to assess whether volatile analytes reported in field samples may have originated from sample handling and transport processes. Equipment rinse blank samples were collected to assess the adequacy of the reusable soil and

groundwater sampling equipment decontamination process. Equipment rinse blank results are measured against environmental sample results to assess whether equipment decontamination processes influenced environmental sample results due to cross contamination between sample locations.

TPHg and VOCs were reported as non-detect in the trip and equipment blank samples. Several metals were reported in the equipment blank samples at low concentrations; however, the environmental soil and groundwater sample results were either non-detect for these same metals, or if detected, the reported equipment rinse blank concentrations did not influence the environmental sample results compared with the environmental screening levels (ESLs) for each of these metals.

Laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix; whichever was more frequent, with spike made at ten times the detection limit or at the analyte level.

Prior to submitting the samples to the laboratory, the COC documentation was reviewed for accuracy and completeness.

The surrogate recoveries on several soil samples analyzed for VOCs were outside the laboratory acceptance range; however, no VOCs were reported in any of the soil samples.

One laboratory QC soil matrix spike and matrix duplicate recovery was outside the acceptance limit; however, the analytical batch was validated by the laboratory control sample.

One SVOC laboratory QC soil matrix spike duplicate was diluted due to high non-target analyte concentration.

The metals analyses for groundwater samples B2D, B4C, and B3B were flagged by the laboratory as being diluted due to high non-target analyte concentrations.

Copies of the chain-of-Custody and Analytical Laboratory Reports are provided as Appendices C and D.

3.0 SUMMARY AND RECOMMENDATIONS

The purpose of the soil and groundwater sampling was to assess soil and groundwater conditions based on future development as a wetland.

Other than TPHd and TPHmo in soil and individual CAM 17 metals in soil and groundwater, all other target analytes were reported as non-detect during this investigation.

The reported TPHd and TPHmo concentrations in soil did not exceed the established ESLs for residential and commercial sites, or those established for construction workers should they come into direct contact with soils containing TPHd and TPHmo (see Table 4).

Cadmium and lead were reported in surface and fill-depth soil samples at concentrations exceeding the screening criteria for beneficial reuse of dredged material as wetland surface material. The cadmium and lead concentrations do not exceed the RWQCB residential, commercial, or construction worker ESLs (see Table 3).

Cadmium was reported at a concentration of 1.0 mg/kg in the native cut-depth soil sample analyzed for the B2 composite group. This concentration exceeds the screening criteria for beneficial reuse of dredged material as wetland surface material; however, it does not exceed the RWQCB residential, commercial, or construction worker ESLs.

Several CAM 17 metals were reported in grab groundwater samples at concentrations exceeding the RWQCB ESLs for discharge to freshwater, marine, and estuarine surface waters (see Table 7). However, the reported concentrations are consistent with detections in other site borings and appear to represent naturally occurring metals concentrations in groundwater beneath the proposed wetlands area.

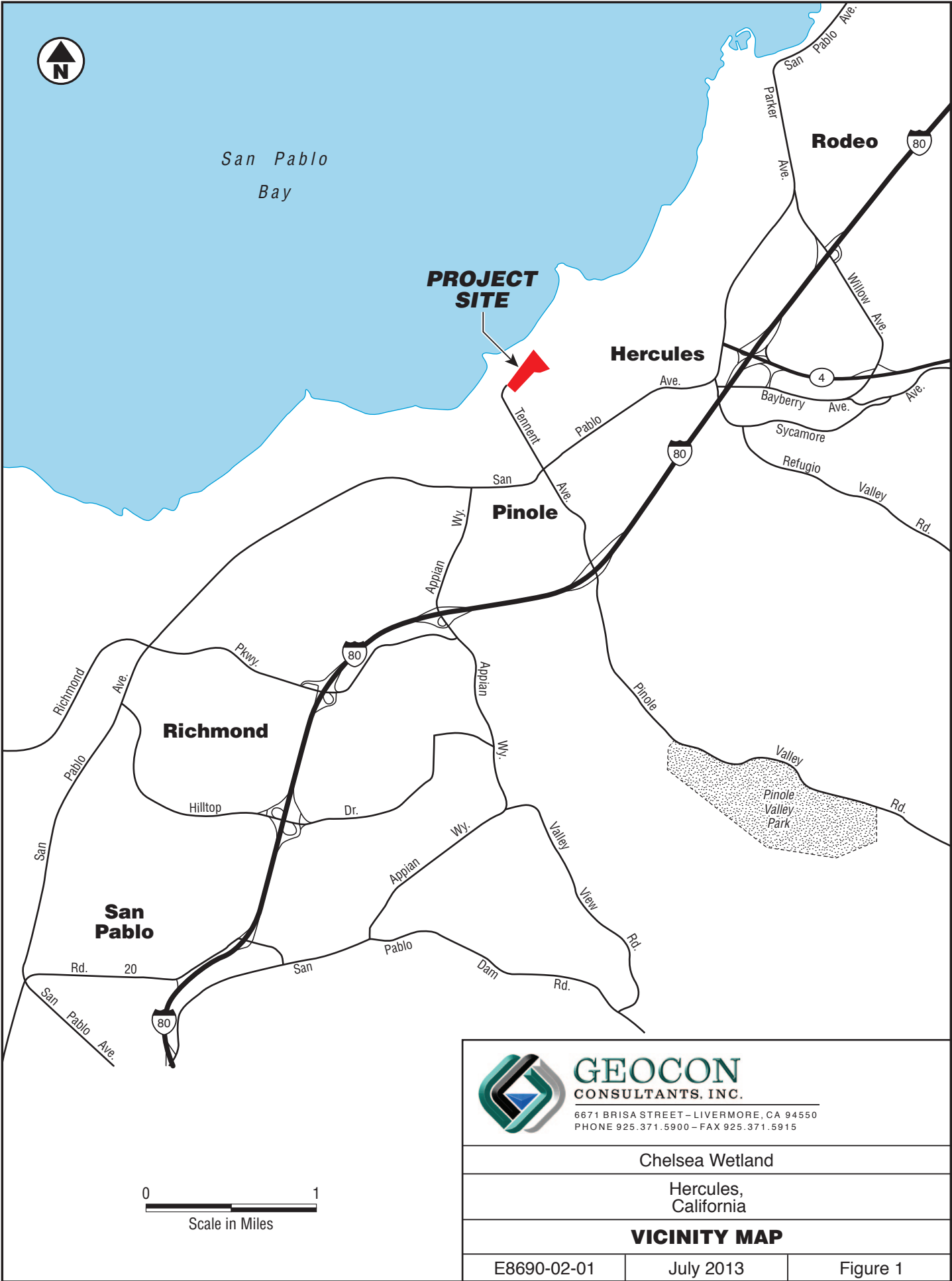
Based on the soil and groundwater sample results, we recommend placing soils graded during the wetlands construction project at an elevation above the wetlands high surface water elevation. This should limit the exposure of wetlands tidal water to surface and fill-depth soils containing cadmium and lead at concentrations exceeding the screening criteria for beneficial reuse of dredged material as wetland surface material.

4.0 LIMITATIONS

This report has been prepared exclusively for Ducks Unlimited, Inc. (Client). The information contained herein is only valid as of the date of the report, and will require an update to reflect additional information obtained.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence or consultation either expressed or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



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Chelsea Wetland

Hercules,
 California

VICINITY MAP

E8690-02-01

July 2013

Figure 1



LEGEND:
 ● Boring Location

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Chelsea Wetland	
Hercules, California	SAMPLE LOCATION MAP
GEOCON Proj. No. E8690-02-01	
EA No.	July 2013

TABLE 1
Boring Coordinates and Approximate Elevations
Chelsea Wetland
Hercules, California

Boring	Latitude	Longitude	Approximate Elevation (ft, NAVD88)
B1A	38.014764433	-122.292275470	10.3
B1B	38.015136406	-122.291918972	10.6
B1C	38.014906141	-122.291638605	11.1
B1D	38.014461076	-122.291603968	11.4
B2A	38.014498903	-122.292130224	11.0
B2B	38.014202273	-122.292119715	11.1
B2C	38.014322709	-122.292502099	10.0
B2D	38.014211235	-122.292811358	7.0
B3A	38.013782997	-122.292580840	9.3
B3B	38.013780313	-122.292955280	9.2
B3C	38.013436531	-122.292862238	10.0
B3D	38.013711149	-122.293321597	10.2
B4A	38.013243635	-122.293772325	10.0
B4B	38.012885199	-122.294088520	9.3
B4C	38.012900669	-122.293542299	9.1
B4D	38.012688726	-122.294226792	11.2

TABLE 2
Soil Sample Depths and Approximate Elevations
Chelsea Wetland
Hercules, California

Sample ID	Sample Depth (ft)	Approximate Sample Elevation (ft, NAVD88)
B1A/0'	0 to 0.5	10.3 to 9.8
B1A/1.5'	1.5 to 2	8.8 to 8.3
B1A/4.5'	4.5 to 5	5.8 to 5.3
B1B/0'	0 to 0.5	10.6 to 10.1
B1B/2.5'	2.5 to 3	8.1 to 7.6
B1B/5.5'	5.5 to 6	5.1 to 4.6
B1C/0'	0 to 0.5	11.1 to 10.6
B1C/2.5'	2.5 to 3	8.6 to 8.1
B1C/8.5'	8.5 to 9	2.6 to 2.1
B1D/0'	0 to 0.5	11.4 to 10.9
B1D/2.0'	2 to 2.5	9.4 to 8.9
B1D/9.0'	9 to 9.5	2.4 to 1.9
Comp B1A/0', B1B/0', B1C/0', B1D/0'	0 to 0.5	11.4 to 9.8
Comp B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'	1.5 to 3	9.4 to 7.6
Comp B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'	4.5 to 9.5	5.8 to 1.9
B2A/0'	0 to 0.5	11 to 10.5
B2A/1.0'	1 to 1.5	10 to 9.5
B2A/8.0'	8 to 8.5	3 to 2.5
B2B/0'	0 to 0.5	11.1 to 10.6
B2B/1.5'	1.5 to 2	9.6 to 9.1
B2B/5.5'	5.5 to 6	5.6 to 5.1
B2C/0'	0 to 0.5	10 to 9.5
B2C/2.0'	2 to 2.5	8 to 7.5
B2C/7.5'	7.5 to 8	2.5 to 2
B2D/0'	0 to 0.5	7 to 6.5
B2D/1.5'	1.5 to 2	5.5 to 5
B2D/4.5'	4.5 to 5	2.5 to 2
Comp B2A/0', B2B/0', B2C/0', B2D/0'	0 to 0.5	11.1 to 6.5
Comp B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'	1 to 2.5	10 to 5
Comp B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'	4.5 to 8.5	5.6 to 2

TABLE 2
Soil Sample Depths and Approximate Elevations
Chelsea Wetland
Hercules, California

Sample ID	Sample Depth (ft)	Approximate Sample Elevation (ft, NAVD88)
B3A/0'	0 to 0.5	9.3 to 8.8
B3A/2.0'	2 to 2.5	7.3 to 6.8
B3A/7.0'	7 to 7.5	2.3 to 1.8
B3B/0'	0 to 0.5	9.2 to 8.7
B3B/1.0'	1 to 1.5	8.2 to 7.7
B3B/4.5'	4.5 to 5	4.7 to 4.2
B3C/0'	0 to 0.5	10 to 9.5
B3C/1.5'	1.5 to 2	8.5 to 8
B3C/4.5'	4.5 to 5	5.5 to 5
B3D/0'	0 to 0.5	10.2 to 9.7
B3D/1.5'	1.5 to 2	8.7 to 8.2
B3D/4.5'	4.5 to 5	5.7 to 5.2
Comp B3A/0', B3B/0', B3C/0', B3D/0'	0 to 0.5	10.2 to 8.7
Comp B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'	1 to 2.5	8.7 to 6.8
Comp B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'	4.5 to 7.5	5.7 to 1.8
B4A/0'	0 to 0.5	10 to 9.5
B4A/1.5'	1.5 to 2	8.5 to 8
B4A/4.5'	4.5 to 5	5.5 to 5
B4B/0'	0 to 0.5	9.3 to 8.8
B4B/1.5'	1.5 to 2	7.8 to 7.3
B4B/6.0'	6 to 6.5	3.3 to 2.8
B4C/0'	0 to 0.5	9.1 to 8.6
B4C/1.0'	1 to 1.5	8.1 to 7.6
B4C/4.5'	4.5 to 5	4.6 to 4.1
B4D/0'	0 to 0.5	11.2 to 10.7
B4D/2.0'	2 to 2.5	9.2 to 8.7
B4D/9.0'	9 to 9.5	2.2 to 1.7
Comp B4A/0', B4B/0', B4C/0', B4D/0'	0 to 0.5	11.2 to 8.6
Comp B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'	1 to 2.5	9.2 to 7.3
Comp B4A/4.5', B4B/6.0', B4C/4.5', B4D/9.0'	4.5 to 9.5	5.5 to 1.7

TABLE 3
Summary of CAM 17 Metals and pH Results - Soil
Chelsea Wetland
Hercules, California

Composite Sample ID	Sample Depths (ft)	Antimony [EPA 6010B]	Arsenic [EPA 6010B]	Barium [EPA 6010B]	Beryllium [EPA 6010B]	Cadmium [EPA 6010B]	Chromium [EPA 6010B]	Cobalt [EPA 6010B]	Copper [EPA 6010B]	Lead [EPA 6010B]	Mercury [EPA 7471]	Molybdenum [EPA 6010B]	Nickel [EPA 6010B]	Selenium [EPA 6010B]	Silver [EPA 6010B]	Thallium [EPA 6010B]	Vanadium [EPA 6010B]	Zinc [EPA 6010B]	pH [EPA 9045C]
B1A/0', B1B/0', B1C/0', B1D/0'	0 to 0.5	<2.0	7.3	120	<1.0	2.1	15	7.2	11	52	<0.10	<1.0	19	<1.0	<1.0	<1.0	18	110	7.3
B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'	1.5 to 3	<2.0	14	160	<1.0	11	32	10	17	18	<0.10	<1.0	31	<1.0	<1.0	<1.0	28	79	7.2
B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'	4.5 to 9.5	<2.0	2.2	89	<1.0	<1.0	17	3.9	9.8	6.9	<0.10	<1.0	19	<1.0	<1.0	<1.0	17	32	7.7
B2A/0', B2B/0', B2C/0', B2D/0'	0 to 0.5	<2.0	4.8	96	<1.0	3.3	15	3.6	12	27	<0.10	<1.0	17	<1.0	<1.0	<1.0	15	50	7.0
B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'	1 to 2.5	<2.0	4.5	93	<1.0	2.6	17	3.8	11	9.5	<0.10	<1.0	19	<1.0	<1.0	<1.0	17	39	7.7
B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'	4.5 to 8.5	<2.0	2.9	110	<1.0	1.0	16	4.3	9.9	9.0	<0.10	<1.0	18	<1.0	<1.0	<1.0	17	34	7.8
B3A/0', B3B/0', B3C/0', B3D/0'	0 to 0.5	<2.0	8.0	130	<1.0	1.3	15	8.0	12	16	<0.10	<1.0	21	<1.0	<1.0	<1.0	21	44	7.7
B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'	1 to 2.5	<2.0	6.2	130	<1.0	1.5	14	6.6	12	67	<0.10	<1.0	17	<1.0	<1.0	<1.0	18	49	7.2
B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'	4.5 to 7.5	<2.0	3.6	130	<1.0	<1.0	13	3.0	6.2	3.5	<0.10	<1.0	11	<1.0	<1.0	<1.0	14	24	7.5
B4A/0', B4B/0', B4C/0', B4D/0'	0 to 0.5	<2.0	4.1	110	<1.0	1.3	15	5.3	19	68	0.33	<1.0	18	<1.0	<1.0	<1.0	18	120	7.2
B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'	1 to 2.5	<2.0	3.0	100	<1.0	<1.0	12	3.4	7.5	4.9	<0.10	<1.0	12	<1.0	<1.0	<1.0	14	24	8.3
B4A/4.5', B4B/6.0', B4C/4.5', B4D/9.0'	4.5 to 9.5	<2.0	3.7	89	<1.0	<1.0	16	3.2	10	3.6	<0.10	<1.0	17	<1.0	<1.0	<1.0	18	32	7.4
Screening Criteria for Beneficial Reuse of Dredged Material (from Draft Staff Report, Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines [SFRWQCB, May 2000])																			
	Wetland Surface	---	15.3	---	---	0.33	112	68.1	---	43.2	0.43	---	112	0.64	0.58	---	---	158	---
	Wetland Foundation	---	70	---	---	9.6	370	270	---	218	0.7	---	120	---	3.7	---	---	410	---
ESLs																			
	Residential Land Use	20	0.39	750	4.0	12	750	23	230	80	6.7	40	150	10	20	0.78	200	600	---
	Commercial/Industrial Land Use	40	0.96	1,500	8.0	12	750	80	230	320	10	40	150	10	40	10	200	600	---
	Construction Worker Exposure	120	10	61,000	180	110	460,000	49	12,000	320	27	1,500	6,100	1,500	1,500	3.1	1,500	93,000	---
Hazardous Waste Criteria																			
	TTL (mg/kg)	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	5,000
	STLC (mg/l)	15	5.0	100	0.75	1.0	5.0	80	25	5.0	0.2	350	20	1.0	5.0	7.0	24	250	250
	TCLP (mg/l)	---	5.0	100	---	1.0	6.0	---	---	5.0	0.2	---	---	1.0	5.0	---	---	---	---

Notes:

Results are shown in milligrams per kilogram (mg/kg).
 ESL, TTL, and STLC values listed for chromium are for Chromium III, as there is no standard for total chromium.
 < = Not detected at laboratory reporting limit
 ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, Revised May 2013.
 TTL = total threshold limit concentration
 STLC = soluble threshold limit concentration
 TCLP = toxicity characteristic leaching procedure
 --- = no standard exists for this compound

TABLE 4
Summary of TPH Results - Soil
Chelsea Wetland
Hercules, California

Composite Sample ID	Sample Depths (ft)	TPHg [EPA 8015B]	TPHd [EPA 8015B SGT]	TPHmo [EPA 8015B SGT]
B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'	1.5 to 3	<1.0	9.3	11
B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'	4.5 to 9.5	<1.0	12	16
B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'	1 to 2.5	<1.0	13	22
B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'	4.5 to 8.5	<1.0	9.1	9.3
B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'	1 to 2.5	<1.0	12	15
B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'	4.5 to 7.5	<1.0	25	32
B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'	1 to 2.5	<1.0	49	150
B4A/4.5', B4B/6.0', B4C/4.5', B4D/9.0'	4.5 to 9.5	<1.0	10	9.0
ESLs				
	Residential Land Use	100	100	500
	Commercial/Industrial Land Use	500	500	2,500
	Construction Worker Exposure	1,800	900	28,000

Notes:

- Results shown in milligrams per kilogram (mg/kg)
- TPHg = Total petroleum hydrocarbons as gasoline
- TPHd = Total petroleum hydrocarbons as diesel
- TPHmo = Total petroleum hydrocarbons as motor oil
- < = Not detected at laboratory reporting limit
- ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, Revised May 2013.

TABLE 5
Summary of Organics Results - Soil
Chelsea Wetland
Hercules, California

Composite Sample ID	Sample Depths (ft)	Pesticides [EPA 8081]	PCBs [EPA 8082]	Herbicides [EPA 8151A]	VOCs [EPA 8260]	SVOCs [EPA 8270C]	Explosives [EPA 8330A]
B1A/0', B1B/0', B1C/0', B1D/0'	0 to 0.5	---	ND	---	---	---	---
B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'	1.5 to 3	ND	ND	ND	ND	ND	ND
B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'	4.5 to 9.5	ND	ND	ND	ND	ND	---
B2A/0', B2B/0', B2C/0', B2D/0'	0 to 0.5	---	ND	---	---	---	---
B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'	1 to 2.5	ND	ND	ND	ND	ND	ND
B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'	4.5 to 8.5	ND	ND	ND	ND	ND	---
B3A/0', B3B/0', B3C/0', B3D/0'	0 to 0.5	---	ND	---	---	---	---
B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'	1 to 2.5	ND	ND	ND	ND	ND	---
B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'	4.5 to 7.5	ND	ND	ND	ND	ND	---
B4A/0', B4B/0', B4C/0', B4D/0'	0 to 0.5	---	ND	---	---	---	---
B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'	1 to 2.5	ND	ND	ND	ND	ND	---
B4A/4.5', B4B/6.0', B4C/4.5', B4D/9.0'	4.5 to 9.5	ND	ND	ND	ND	ND	---

Notes:
 Results shown in micrograms per kilogram ($\mu\text{g}/\text{kg}$)
 PCBs = Polychlorinated biphenyls
 VOCs = Volatile organic compounds
 SVOCs = Semivolatile organic compounds
 ND = None detected at or above laboratory reporting limits
 --- = Not analyzed

TABLE 6
Summary of TPHg and VOCs Results - Groundwater
Chelsea Wetland
Hercules, California

Sample ID	TPHg (mg/l) [EPA 8015B]	VOCs (µg/l) [EPA 8260]
B1B	<0.05	ND
B2D	<0.05	ND
B3B	<0.05	ND
B4C	<0.05	ND
Equipment Blank	<0.05	ND
Trip Blank	<0.05	ND
ESLs		
GW is current/potential source	0.10	---
GW not current/potential source	0.50	---
Surface Water - Freshwater	0.10	---
Surface Water - Marine	3.70	---
Surface Water - Estuarine	0.50	---

Notes:

mg/l = milligrams per liter
µg/l = micrograms per liter
TPHg = Total petroleum hydrocarbons as gasoline
VOCs = Volatile Organic Compounds
< = Not detected above the stated laboratory reporting limit
ND = None detected
ESLs = Environmental Screening Levels, Tables F-1a, F-1b, F-2a, F-2b, and F-2c SFRWQCB, May 2013.

TABLE 7
Summary of CAM 17 Metals Results - Groundwater
Chelsea Wetland
Hercules, California

Sample ID	Antimony [EPA 6010B]	Arsenic [EPA 6010B]	Barium [EPA 6010B]	Beryllium [EPA 6010B]	Cadmium [EPA 6010B]	Chromium [EPA 6010B]	Cobalt [EPA 6010B]	Copper [EPA 6010B]	Lead [EPA 6010B]	Mercury [EPA 7470]	Molybdenum [EPA 6010B]	Nickel [EPA 6010B]	Selenium [EPA 6010B]	Silver [EPA 6010B]	Thallium [EPA 6010B]	Vanadium [EPA 6010B]	Zinc [EPA 6010B]
B1B	<0.0050	<0.010	0.18	<0.003	<0.003	0.003	0.013	<0.0050	<0.0050	<0.00020	0.029	0.014	0.015	<0.003	<0.015	0.012	0.029
B2D	<0.10	<0.20	0.083	<0.060	0.073	<0.060	<0.060	<0.10	<0.10	<0.00020	0.21	<0.10	<0.20	<0.060	<0.30	0.2	<0.20
B3B	<0.10	<0.20	<0.060	<0.060	<0.060	<0.060	0.11	<0.10	<0.10	<0.00020	<0.10	0.18	<0.20	<0.060	<0.30	0.17	<0.20
B4C	<0.10	<0.20	0.28	<0.060	<0.060	<0.060	<0.060	<0.10	<0.10	<0.00020	0.33	<0.10	<0.20	<0.060	<0.30	0.18	<0.20
Equipment Blank	<0.0050	<0.010	0.031	<0.003	<0.003	0.012	<0.003	0.0078	0.0099	<0.00020	<0.0050	0.0055	<0.010	<0.003	<0.015	0.0037	0.023

ESLs																	
GW is current/potential source	0.006	0.010	1.0	0.00053	0.00025	0.05	0.0030	0.0031	0.0025	0.000025	0.18	0.0082	0.0050	0.00019	0.0020	0.015	0.081
GW not current/potential source	0.030	0.036	1.0	0.00053	0.00025	0.18	0.0030	0.0031	0.0025	0.000025	0.24	0.0082	0.0050	0.00019	0.0040	0.019	0.081
Surface Water - Freshwater	0.006	0.00014	1.0	0.0027	0.00025	0.05	0.0030	0.0090	0.0025	0.000025	0.18	0.052	0.0050	0.00034	0.0020	0.015	0.12
Surface Water - Marine	0.50	0.00014	1.0	0.00053	0.0093	0.18	0.0030	0.0031	0.0081	0.000025	0.24	0.0082	0.071	0.00019	0.0040	0.019	0.081
Surface Water - Estuarine	0.030	0.00014	1.0	0.00053	0.00025	0.18	0.0030	0.0031	0.0025	0.000025	0.24	0.0082	0.005	0.00019	0.0040	0.019	0.081

Notes:

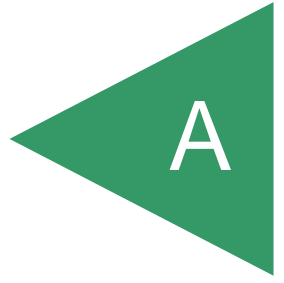
Data are shown in milligrams per liter (mg/l).

< = Not detected above the stated laboratory reporting limit

ESLs = Environmental Screening Levels, Tables F-1a, F-1b, F-2a, F-2b, and F-2c SFRWQCB, May 2013.

APPENDIX

A





CITY OF HERCULES

111 Civic Drive Hercules, CA 94547 (510) 799-8200

BUSINESS LICENSE TAX CERTIFICATE

**GEOCON CONSULTANTS, INC.
DOING BUSINESS IN
HERCULES CA 94547**

**Business License Number
13-00007289**

**Issued for the Period
04/13-06/13**

Certified by: *Alexandra M. M. M.*
Finance Director

July 3, 2013
Date

Payment of the Business License Tax does not sanction any business activity or use of premises which are in violation of Federal, State or local laws.

POST IN A CONSPICUOUS PLACE

**GEOCON CONSULTANTS, INC.
6671 BRISA ST.
LIVERMORE CA 94550**



**CONTRA COSTA
ENVIRONMENTAL HEALTH DIVISION**
2120 DIAMOND BOULEVARD, SUITE 200
CONCORD, CA 94520
(925) 692-2500
www.cocoeh.org



Well Permit

PR Number: 60092 PE Number: 4301
Date Received: 07 JUNE 2013 Permit Number: 13B 1224

Permit Approved/Issued by: *Jald m. 06* Date Issued: 11 JUNE 2013 Date Expires: 12 NOV 2013
Environmental Health Specialist

NEW WELL	(18) SOIL BORINGS	WELL ABANDONMENT	REPAIR
----------	---------------------	------------------	--------

The issuance of this permit by Contra Costa County Environmental Health Division does not guarantee a satisfactory and an indefinite operation of any well. Permit expires in 180 calendar days from date of approval. Permits are non-transferable, and can be suspended or revoked. If more time is required for the project, a time extension may be granted if reasons warrant it in writing.

PROJECT SITE INFORMATION

Site Address: RAILROAD AVE & SANTA FE AVE, HERCULES (CHELSEA WETLANDS)
APN: 404 020 049 Lot/Parcel #:
Subdivision #: Minor Subdivision #:

DRILLER / CONSULTANT INFORMATION

Driller: GREGG DRILLING & TESTING Contact Person: CHRISTOPHER PRUNER
Phone #: 925 313-5800 FAX#: 925 313-0302
Consultant: GEOCON CONSULTANTS Contact Person: JOHN LOVE
Phone #: 925 371-5900 FAX#: 925 371-5915

LEGAL OWNER INFORMATION

Property Owner CITY OF HERCULES Responsible Party: SAME AS OWNER
Owner Address: 111 CIVIC DR Address:
City/State/Zip: HERCULES, CA 94547 City/State/Zip:
Phone #: 510 245-6525 Phone#

Prior to any drilling construction or destruction of a well, requests for inspection appointment must be received 48 hours in advance (excluding weekends, holidays and Mandatory County Furlough Days) by faxing your written request to (925) 692-2504 or email to ehlu@hsd.cccounty.us. Voice mail messages are not acceptable.

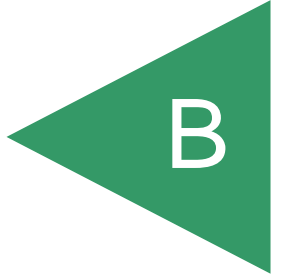
Well drillers must possess a valid C-57 license and must have on file a performance bond of \$5,000.00 with Contra Costa County before commencing with any well construction, destruction or repairs.












WELL PERMIT CONDITIONS:

1. Proper annular seals and surface construction features are to be installed and required water analyses completed within 30 days of commencing drilling.
2. Monitoring well/soil boring shall be destroyed pursuant to County regulations within 30 days of completing monitoring activities.
3. OTHER: _____

Final Approval by: _____ Date: _____

APPENDIX



DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B1A		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) <u>5.0'</u>		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B1A 0-0.5		Firm, dry, light to dark brown, Sandy SILT/Silty SAND, some gravel		ML-SM	
2		B1A 1.5-2		Firm, dry, yellowish brown, Sandy SILT		ML	
3				Firm to soft, moist, dark brown to black, Silty CLAY, low plasticity		CL	
4							
5		B1A 4.5-5.0		 - saturated			
6							
7							
8							
9							
10							
				BORING TERMINATED AT 10 FEET			

BORING ELEVATION: 10.3'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B1B		SOIL (USCS)	HEADSPACE (PPM)	
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) <u>4.5'</u>			
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____				
SOIL DESCRIPTION								
1		B1B 0-0.5		Firm, dry, light to dark brown, Sandy SILT/Silty SAND, some gravel		ML-SM		
2								
3		B1B 2.5-3		Dense, dry, yellowish brown, Sandy SILT, some gravel		ML		
4								
5								
6		B1B 5.5-6		Soft, very moist, dark brown, Silty CLAY, low plasticity, some organics - no recovery, very soft		CL		
7								
8								
9								
10				BORING TERMINATED AT 10 FEET				

BORING ELEVATION: 10.6'	ENGINEER/GEOLOGIST: JOHN LOVE
--------------------------------	--------------------------------------

PROJECT NO. **E8690-02-01 Ducks Unlimited**

DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B1C		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B1C 0-0.5	█		Dense, dry, yellowish brown, Sandy SILT, some gravel	ML	
2							
3		B1C 2.5-3	█				
4							
5							
6							
7							
8			█		Soft to firm, dark brown, Silty CLAY, low to medium plasticity - hole stayed open to 8' after completion; no water	CL	
9		B1C 8.5-9	█				
10							
BORING TERMINATED AT 10 FEET							

Boring B1C, page 1 of 1








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BORING ELEVATION: 11.1'	ENGINEER/GEOLOGIST: JOHN LOVE
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
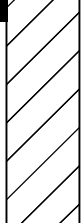
NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B1D		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B1D 0-0.5	█	Dense, slightly moist, dark to light brown, fine Sandy SILT, some gravel		ML	
2		B1D 2-2.5	█				
3							
4							
5			▨	Firm, moist, light green, Sandy CLAY, low to medium plasticity, some organics		CL	
6			▨	- softer and increased moisture with depth			
7			▨				
8			▨				
9		B1D 9-9.5	█	- hole stayed open to 8' after completion; no water			
10				BORING TERMINATED AT 10 FEET			



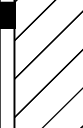
BORING ELEVATION: 11.4'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B2A		SOIL (USCS)	HEADSPACE (PPM)	
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____			
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____				
SOIL DESCRIPTION								
1		B2A 0-0.5		Dense, dry, light brown, Sandy SILT, some gravel		ML		
2		B2A 1-1.5						
3								
4				Firm to soft, moist, black, Silty CLAY, low plasticity		CL		
5								
6								
7				- hole stayed open to 7' after completion; no water				
8		B2A 8-8.5						
9								
10				BORING TERMINATED AT 10 FEET				

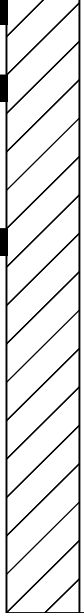
BORING ELEVATION: 11.0'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B2B		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B2B 0-0.5		Dense, dry, dark to light brown, Sandy SILT		ML	
2		B2B 1.5-2		Firm (softer with depth), moist, brown to black, Sandy Silty CLAY		CL	
3							
4							
5							
6		B2B 5.5-6		- hole stayed open to 10 feet after completion; no water			
7							
8							
9							
10				BORING TERMINATED AT 10 FEET			




BORING ELEVATION: 11.1'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B2C		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B2C 0-0.5		FILL Dense, dry, Sandy Gravelly FILL, brick fragments		CL	
2		B2C 2.0-3		Firm, moist, dark brown and grayish brown, Sandy CLAY, low to medium plasticity - hole stayed open to 4' after completion; no water			
3							
4							
5							
6							
7							
8		B2C 7.5-8					
9							
10				BORING TERMINATED AT 10 FEET			

BORING ELEVATION: 10.0'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B2D		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) <u>5.0'</u>		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B2D 0-0.5		Firm, slightly moist to moist, dark brown to black, Silty CLAY, low to medium plasticity	CL		
2		B2D 1.5-2					
3							
4							
5		B2D 4.5-5				▼	
6							
7							
8							
9						- installed temporary 3/4" PVC well casing to 8'. Waited several hours for groundwater to accumulate in borehole	
10							
11							
12						BORING TERMINATED AT 12 FEET	





BORING ELEVATION: 7.0'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B3A		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B3A 0-0.5		FILL Dense, dry, Sandy Gravelly FILL, brick fragments		CL	
2		B3A 2-2.5		Firm, moist, black, Silty CLAY, low to medium plasticity			
3							
4							
5							
6							
7		B3A 7-7.5		- very moist			
8							
9				- hole stayed open to 10 feet after completion; no water			
10				BORING TERMINATED AT 10 FEET			








Boring B3A, page 1 of 1

ENV_NO_WELL E8690-02-01 HERCULES BORING LOGS.GPJ 07/10/13











BORING ELEVATION: 9.3'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B3B		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) <u>7.0'</u>		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B3B 0-0.5		FILL Dense, dry, Sandy Gravelly FILL			
2		B3B 1-1.5		Firm, moist, dark brown with reddish brown mottles, Sandy CLAY, low plasticity	CL		
3							
4							
5		B3B 4.5-5		Firm, very moist to saturated, dark brown with reddish brown mottles, Sandy CLAY/Clayey SAND, low plasticity	CL/SC		
6							
7				▼ - inserted temporary 3/4" PVC well casing. collected groundwater sampled at 7 feet for analysis			
8							
9							
10				BORING TERMINATED AT 10 FEET			











BORING ELEVATION: 9.2'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B3C		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B3C 0-0.5		Firm, dry to slightly moist, light brown to dark brown, fine to medium Sandy SILT/Clayey SAND		ML/SC	
2		B3C 1.5-2					
3							
4							
5		B3C 4.5-5		Firm, moist, black, Silty CLAY, low to medium plasticity, white non-carbonate veins		CL	
6							
7				- hole stayed open to 7' after completion; no water			
8							
9							
10				BORING TERMINATED AT 10 FEET			




BORING ELEVATION: 10.0'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B3D		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u>	DRILLER _____		
SOIL DESCRIPTION							
1		B3D 0-0.5		Dense, dry to slightly moist, Silty SAND/Sandy SILT, brick fragments		SM/ML	
2		B3D 1.5-2					
3				Firm to stiff, moist, dark green to black, Silty CLAY, low to medium plasticity		CL	
4							
5		B3D 4.5-5					
6							
7							
8				- hole stayed open to 7' after completion; no water			
9							
10							
				BORING TERMINATED AT 10 FEET			



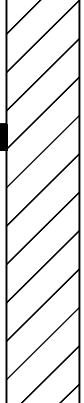
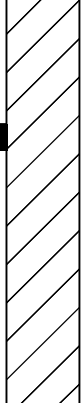
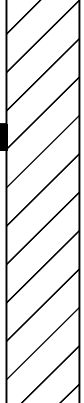
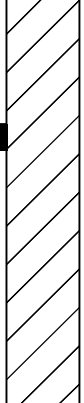
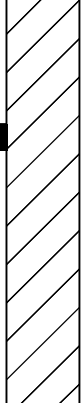
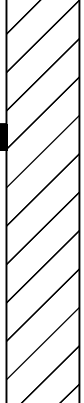
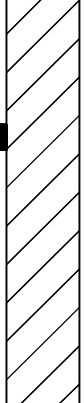
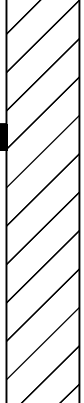
BORING ELEVATION: 10.2'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B4A		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B4A 0-0.5		Dry to slightly moist, brown, Silty SAND, with brick fragments and some gravel		SM	
2		B4A 1.5-2					
3							
4				Firm to stiff, moist, black, Silty CLAY, low to medim plasticity, white non-carbonate veins		CL	
5		B4A 4.5-5		- hole stayed open to 3' after completion; no water			
6							
7							
8							
9							
10				BORING TERMINATED AT 10 FEET			





BORING ELEVATION: 10.0'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B4B		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B4B 0-0.5		Dry, light brown, Silty fine SAND/Sandy SILT, some gravel		SM/ML	
2		B4B 1.5-2		Firm, moist, black, Silty CLAY, low to medium plasticity		CL	
3							
4							
5				- hole stayed open to 5' after completion; no water			
6		B4B 6-6.5					
7							
8							
9							
10				BORING TERMINATED AT 10 FEET			

BORING ELEVATION: 9.3'	ENGINEER/GEOLOGIST: JOHN LOVE
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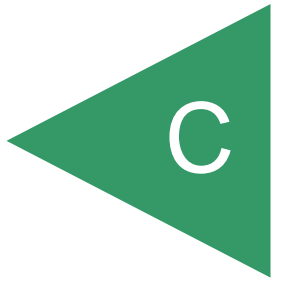
DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B4C		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) <u>7.0'</u>		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B4C 0-0.5		Dry, light brown, Silty fine SAND/Sandy SILT, some gravel		SM/ML	
2		B4C 1-1.5		Firm, moist, black, Silty CLAY, low to medium plasticity		CL	
3							
4							
5		B4C 4-4.5					
6							
7				▼ - inserted temporary 3/4" PVC well casing to 10 feet. Collected groundwater sample at 7 feet for analysis			
8							
9							
10				BORING TERMINATED AT 10 FEET			

BORING ELEVATION: 9.1'	ENGINEER/GEOLOGIST: JOHN LOVE
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DEPTH IN FEET	PERCENT RECOVERY %	SAMPLE NO.	LITHOLOGY	BORING NO. B4D		SOIL (USCS)	HEADSPACE (PPM)
				DATE DRILLED <u>6/13/2013</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Rhino Direct-Push</u> DRILLER _____			
SOIL DESCRIPTION							
1		B4D 0-0.5		Dense, dry, light brown, Silty fine SAND, some gravel		SM	
2		B4D 2-2.5		Firm, moist, black, Silty CLAY, low to medium plasticity, white non-carbonate veins		CL	
3				- hole stayed open to 7' after completion; no water			
4							
5							
6							
7							
8							
9		B4D 9-9.5					
10				BORING TERMINATED AT 10 FEET			

BORING ELEVATION: 11.2'	ENGINEER/GEOLOGIST: JOHN LOVE
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APPENDIX



June 27, 2013

John Love
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 525-4142
Fax: (925) 371-5915



Re: ATL Work Order Number : 1301795
Client Reference : Ducks Unlimited, E8690-02-01

Enclosed are the results for sample(s) received on June 15, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

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

Sincerely,

Eddie Rodriguez
Laboratory Director

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



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Composite B1A/0', B1B/0', B1C/0', B1	1301795-49	Soil	6/13/13 0:00	6/15/13 8:12
Composite B2A/0', B2B/0', B2C/0', B2	1301795-50	Soil	6/13/13 0:00	6/15/13 8:12
Composite B1A/1.5', B1B/2.5', B1C/2	1301795-51	Soil	6/13/13 0:00	6/15/13 8:12
Composite B2A/1.0', B2B/1.5', B2C/2	1301795-52	Soil	6/13/13 0:00	6/15/13 8:12
Composite B1A/4.5', B1B/5.5', B1C/8	1301795-53	Soil	6/13/13 0:00	6/15/13 8:12
Composite B2A/8.0', B2B/5.5', B2C/7	1301795-54	Soil	6/13/13 0:00	6/15/13 8:12
Composite B3A/0', B3B/0', B3C/0', B3	1301795-55	Soil	6/13/13 0:00	6/15/13 8:12
Composite B4A/0', B4B/0', B4C/0', B4	1301795-56	Soil	6/13/13 0:00	6/15/13 8:12
Composite B3A/2.0', B3B/1.0', B3C/1	1301795-57	Soil	6/13/13 0:00	6/15/13 8:12
Composite B4A/1.5', B4B/1.5', B4C/1	1301795-58	Soil	6/13/13 0:00	6/15/13 8:12
Composite B3A/7.0', B3B/4.5', B3C/4	1301795-59	Soil	6/13/13 0:00	6/15/13 8:12
Composite B4A/4.5', B4B/6.0', B4C/4.5'	1301795-60	Soil	6/13/13 0:00	6/15/13 8:12

CASE NARRATIVE

Samples for Herbicides (8151) were subcontracted to AETL with ELAP Cert.# 1541.

Samples for Explosives (8330) were subcontracted to Accutest Laboratories with NELAP Cert.# 08258CA.



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/0', B1B/0', B1C/0', B1D/0' Lab ID: 1301795-49

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Arsenic	7.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Barium	120	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:42	
Cadmium	2.1	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Chromium	15	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Cobalt	7.2	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Copper	11	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Lead	52	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Nickel	19	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Vanadium	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	
Zinc	110	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:43	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:02	

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:22	
Surrogate: Decachlorobiphenyl	112 %		39 - 128		B3F0445	06/20/2013	06/21/13 16:22	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/0', B1B/0', B1C/0', B1D/0'
Lab ID: 1301795-49

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Tetrachloro-m-xylene</i>	103 %		38 - 122		B3F0445	06/20/2013	06/21/13 16:22	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.3	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/0', B2B/0'. B2C/0', B2D/0' Lab ID: 1301795-50

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Arsenic	4.8	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Barium	96	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:45	
Cadmium	3.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Chromium	15	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Cobalt	3.6	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Copper	12	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Lead	27	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Nickel	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Vanadium	15	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	
Zinc	50	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:46	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:04	

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 16:49	
Surrogate: Decachlorobiphenyl	105 %		39 - 128		B3F0445	06/20/2013	06/21/13 16:49	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/0', B2B/0', B2C/0', B2D/0'
Lab ID: 1301795-50

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Tetrachloro-m-xylene</i>	104 %		38 - 122		B3F0445	06/20/2013	06/21/13 16:49	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.0	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Arsenic	14	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Barium	160	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Cadmium	11	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Chromium	32	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Cobalt	10	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Copper	17	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Lead	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Nickel	31	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Vanadium	28	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	
Zinc	79	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:49	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:06	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 17:14	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>107 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 17:14</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.3	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:13	
ORO	11	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:13	
<i>Surrogate: p-Terphenyl</i>	<i>79.9 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 17:13</i>	



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Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 16:05	
<i>Surrogate: Decachlorobiphenyl</i>	<i>104 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 16:05</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>70.4 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 16:05</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0' Lab ID: 1301795-51

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:16	
<i>Surrogate: Decachlorobiphenyl</i>	98.2 %		39 - 128		B3F0445	06/20/2013	06/21/13 17:16	
<i>Surrogate: Tetrachloro-m-xylene</i>	90.2 %		38 - 122		B3F0445	06/20/2013	06/21/13 17:16	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 06:57	
Surrogate: 1,2-Dichloroethane-d4	86.1 %		70 - 130		B3F0411	06/20/2013	06/20/13 06:57	



Certificate of Analysis

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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	120 %	70 - 130			B3F0411	06/20/2013	06/20/13 06:57	
Surrogate: Dibromofluoromethane	128 %	70 - 130			B3F0411	06/20/2013	06/20/13 06:57	
Surrogate: Toluene-d8	129 %	70 - 130			B3F0411	06/20/2013	06/20/13 06:57	

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:17	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
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Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0'
Lab ID: 1301795-51

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 1,2-Dichlorobenzene-d4	81.9 %	48 - 113			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 2,4,6-Tribromophenol	90.6 %	14 - 162			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 2-Chlorophenol-d4	86.8 %	40 - 117			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 2-Fluorobiphenyl	85.9 %	52 - 126			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 2-Fluorophenol	90.3 %	26 - 124			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: 4-Terphenyl-d14	80.7 %	36 - 163			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: Nitrobenzene-d5	70.0 %	42 - 118			B3F0444	06/20/2013	06/24/13 11:17	
Surrogate: Phenol-d5	89.7 %	29 - 124			B3F0444	06/20/2013	06/24/13 11:17	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.2	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'
Lab ID: 1301795-52

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Arsenic	4.5	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Barium	93	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:51	
Cadmium	2.6	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Chromium	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Cobalt	3.8	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Copper	11	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Lead	9.5	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Nickel	19	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Vanadium	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	
Zinc	39	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:52	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:08	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 17:34	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>111 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 17:34</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	13	1.0	NA	1	B3F0454	06/21/2013	06/21/13 13:28	
ORO	22	1.0	NA	1	B3F0454	06/21/2013	06/21/13 13:28	
<i>Surrogate: p-Terphenyl</i>	<i>75.2 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 13:28</i>	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'
Lab ID: 1301795-52

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 16:19	
<i>Surrogate: Decachlorobiphenyl</i>	<i>109 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 16:19</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>87.6 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 16:19</i>	



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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'

Lab ID: 1301795-52

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 17:44	
<i>Surrogate: Decachlorobiphenyl</i>	112 %		39 - 128		B3F0445	06/20/2013	06/21/13 17:44	
<i>Surrogate: Tetrachloro-m-xylene</i>	111 %		38 - 122		B3F0445	06/20/2013	06/21/13 17:44	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	



Certificate of Analysis

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Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'

Lab ID: 1301795-52

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:16	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	87.4 %		70 - 130		B3F0411	06/20/2013	06/20/13 07:16	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'

Lab ID: 1301795-52

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	119 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:16	
Surrogate: Dibromofluoromethane	126 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:16	
Surrogate: Toluene-d8	133 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:16	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	



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Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
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Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'
Lab ID: 1301795-52

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 10:51	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/1.0', B2B/1.5'. B2C/2.0', B2D/1.5'
Lab ID: 1301795-52

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 1,2-Dichlorobenzene-d4	80.7 %	48 - 113			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 2,4,6-Tribromophenol	87.8 %	14 - 162			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 2-Chlorophenol-d4	85.2 %	40 - 117			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 2-Fluorobiphenyl	85.9 %	52 - 126			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 2-Fluorophenol	86.8 %	26 - 124			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: 4-Terphenyl-d14	80.7 %	36 - 163			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: Nitrobenzene-d5	70.4 %	42 - 118			B3F0444	06/20/2013	06/24/13 10:51	
Surrogate: Phenol-d5	89.3 %	29 - 124			B3F0444	06/20/2013	06/24/13 10:51	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.7	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Arsenic	2.2	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Barium	89	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:54	
Cadmium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Chromium	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Cobalt	3.9	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Copper	9.8	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Lead	6.9	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Nickel	19	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Vanadium	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	
Zinc	32	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:55	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:10	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 17:55	
Surrogate: 4-Bromofluorobenzene	109 %		54 - 150		B3F0390	06/19/2013	06/19/13 17:55	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	12	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:30	
ORO	16	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:30	
Surrogate: p-Terphenyl	75.7 %		33 - 147		B3F0454	06/21/2013	06/21/13 17:30	



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Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 16:32	
<i>Surrogate: Decachlorobiphenyl</i>	<i>109 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 16:32</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>87.6 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 16:32</i>	



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Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:11	
<i>Surrogate: Decachlorobiphenyl</i>	<i>112 %</i>		<i>39 - 128</i>		B3F0445	06/20/2013	<i>06/21/13 18:11</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>108 %</i>		<i>38 - 122</i>		B3F0445	06/20/2013	<i>06/21/13 18:11</i>	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:34	
Surrogate: 1,2-Dichloroethane-d4	95.0 %		70 - 130		B3F0411	06/20/2013	06/20/13 07:34	



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Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	118 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:34	
Surrogate: Dibromofluoromethane	130 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:34	S1
Surrogate: Toluene-d8	136 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:34	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	



Certificate of Analysis

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 6671 Brisa Street
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Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'

Lab ID: 1301795-53

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 11:43	



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Reported : 06/27/2013

Client Sample ID Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0'
Lab ID: 1301795-53

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 1,2-Dichlorobenzene-d4	75.3 %	48 - 113			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 2,4,6-Tribromophenol	84.5 %	14 - 162			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 2-Chlorophenol-d4	80.3 %	40 - 117			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 2-Fluorobiphenyl	79.7 %	52 - 126			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 2-Fluorophenol	83.1 %	26 - 124			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: 4-Terphenyl-d14	77.5 %	36 - 163			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: Nitrobenzene-d5	65.0 %	42 - 118			B3F0444	06/20/2013	06/24/13 11:43	
Surrogate: Phenol-d5	82.8 %	29 - 124			B3F0444	06/20/2013	06/24/13 11:43	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.7	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Arsenic	2.9	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Barium	110	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Cadmium	1.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Chromium	16	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Cobalt	4.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Copper	9.9	2.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Lead	9.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Nickel	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:59	
Vanadium	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	
Zinc	34	1.0	NA	1	B3F0426	06/20/2013	06/20/13 15:58	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:12	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 18:15	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 18:15</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	9.1	1.0	NA	1	B3F0454	06/21/2013	06/21/13 15:15	
ORO	9.3	1.0	NA	1	B3F0454	06/21/2013	06/21/13 15:15	
<i>Surrogate: p-Terphenyl</i>	<i>76.9 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 15:15</i>	



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Client Sample ID Composite B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 16:45	
<i>Surrogate: Decachlorobiphenyl</i>	<i>111 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 16:45</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>90.3 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 16:45</i>	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 18:39	
<i>Surrogate: Decachlorobiphenyl</i>	<i>112 %</i>		<i>39 - 128</i>		B3F0445	06/20/2013	<i>06/21/13 18:39</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>108 %</i>		<i>38 - 122</i>		B3F0445	06/20/2013	<i>06/21/13 18:39</i>	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 07:53	
Surrogate: 1,2-Dichloroethane-d4	91.4 %		70 - 130		B3F0411	06/20/2013	06/20/13 07:53	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	116 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:53	
Surrogate: Dibromofluoromethane	133 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:53	S1
Surrogate: Toluene-d8	131 %	70 - 130			B3F0411	06/20/2013	06/20/13 07:53	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'

Lab ID: 1301795-54

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:10	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B2A/8.0', B2B/5.5'. B2C/7.5', B2D/4.5'
Lab ID: 1301795-54

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 1,2-Dichlorobenzene-d4	84.1 %	48 - 113			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 2,4,6-Tribromophenol	90.0 %	14 - 162			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 2-Chlorophenol-d4	89.3 %	40 - 117			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 2-Fluorobiphenyl	88.9 %	52 - 126			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 2-Fluorophenol	90.9 %	26 - 124			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: 4-Terphenyl-d14	83.1 %	36 - 163			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: Nitrobenzene-d5	73.2 %	42 - 118			B3F0444	06/20/2013	06/24/13 12:10	
Surrogate: Phenol-d5	91.4 %	29 - 124			B3F0444	06/20/2013	06/24/13 12:10	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/0', B3B/0', B3C/0', B3D/0' Lab ID: 1301795-55

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Arsenic	8.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Barium	130	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Cadmium	1.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Chromium	15	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Cobalt	8.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Copper	12	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Lead	16	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Nickel	21	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Vanadium	21	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	
Zinc	44	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:01	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:14	

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:06	
<i>Surrogate: Decachlorobiphenyl</i>	<i>106 %</i>		<i>39 - 128</i>		B3F0445	06/20/2013	<i>06/21/13 19:06</i>	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/0', B3B/0', B3C/0', B3D/0'
Lab ID: 1301795-55

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Tetrachloro-m-xylene</i>	103 %		38 - 122		B3F0445	06/20/2013	06/21/13 19:06	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.7	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B4A/0', B4B/0', B4C/0', B4D/0'

Lab ID: 1301795-56

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Arsenic	4.1	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Barium	110	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Cadmium	1.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Chromium	15	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Cobalt	5.3	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Copper	19	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Lead	68	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Nickel	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Vanadium	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	
Zinc	120	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:11	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	0.33	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:16	

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 19:34	
<i>Surrogate: Decachlorobiphenyl</i>	98.6 %		39 - 128		B3F0445	06/20/2013	06/21/13 19:34	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore , CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/0', B4B/0', B4C/0', B4D/0'
Lab ID: 1301795-56

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
<i>Surrogate: Tetrachloro-m-xylene</i>	94.4 %		38 - 122		B3F0445	06/20/2013	06/21/13 19:34	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.2	0.10	NA	1	B3F0350	06/17/2013	06/18/13 15:15	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'
Lab ID: 1301795-57

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Arsenic	6.2	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Barium	130	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:13	
Cadmium	1.5	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Chromium	14	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Cobalt	6.6	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Copper	12	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Lead	67	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Nickel	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Vanadium	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	
Zinc	49	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:14	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:22	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 18:36	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>112 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 18:36</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	12	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:46	
ORO	15	1.0	NA	1	B3F0454	06/21/2013	06/21/13 17:46	
<i>Surrogate: p-Terphenyl</i>	<i>108 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 17:46</i>	



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Geocon Consultants, Inc.
 6671 Brisa Street
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Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'
Lab ID: 1301795-57

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 16:58	
<i>Surrogate: Decachlorobiphenyl</i>	<i>94.4 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 16:58</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>68.0 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 16:58</i>	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'
Lab ID: 1301795-57

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:01	
<i>Surrogate: Decachlorobiphenyl</i>	99.5 %		39 - 128		B3F0445	06/20/2013	06/21/13 20:01	
<i>Surrogate: Tetrachloro-m-xylene</i>	89.7 %		38 - 122		B3F0445	06/20/2013	06/21/13 20:01	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	



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Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'

Lab ID: 1301795-57

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:30	

Surrogate: 1,2-Dichloroethane-d4 90.0 % 70 - 130 B3F0411 06/20/2013 06/20/13 08:30



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'
Lab ID: 1301795-57

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	116 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:30	
Surrogate: Dibromofluoromethane	130 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:30	
Surrogate: Toluene-d8	135 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:30	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	



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Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'

Lab ID: 1301795-57

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 12:37	



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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'
Lab ID: 1301795-57

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 1,2-Dichlorobenzene-d4	89.2 %	48 - 113			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 2,4,6-Tribromophenol	94.2 %	14 - 162			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 2-Chlorophenol-d4	95.2 %	40 - 117			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 2-Fluorobiphenyl	93.9 %	52 - 126			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 2-Fluorophenol	99.1 %	26 - 124			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: 4-Terphenyl-d14	88.5 %	36 - 163			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: Nitrobenzene-d5	77.5 %	42 - 118			B3F0444	06/20/2013	06/24/13 12:37	
Surrogate: Phenol-d5	95.2 %	29 - 124			B3F0444	06/20/2013	06/24/13 12:37	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.2	0.10	NA	1	B3F0351	06/17/2013	06/18/13 15:14	



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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'
Lab ID: 1301795-58

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Arsenic	3.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Barium	100	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:16	
Cadmium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Chromium	12	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Cobalt	3.4	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Copper	7.5	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Lead	4.9	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Nickel	12	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Vanadium	14	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	
Zinc	24	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:17	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:24	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 18:55	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98.3 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 18:55</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	49	10	NA	10	B3F0454	06/21/2013	06/21/13 14:02	
ORO	150	10	NA	10	B3F0454	06/21/2013	06/21/13 14:02	
<i>Surrogate: p-Terphenyl</i>	<i>50.7 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 14:02</i>	



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Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'
Lab ID: 1301795-58

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 17:50	
<i>Surrogate: Decachlorobiphenyl</i>	<i>87.4 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 17:50</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>82.3 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 17:50</i>	



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Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'

Lab ID: 1301795-58

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:29	
<i>Surrogate: Decachlorobiphenyl</i>	104 %		39 - 128		B3F0445	06/20/2013	06/21/13 20:29	
<i>Surrogate: Tetrachloro-m-xylene</i>	101 %		38 - 122		B3F0445	06/20/2013	06/21/13 20:29	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	



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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'
Lab ID: 1301795-58

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 08:49	

Surrogate: 1,2-Dichloroethane-d4 91.9 % 70 - 130 B3F0411 06/20/2013 06/20/13 08:49



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Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'
Lab ID: 1301795-58

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	120 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:49	
Surrogate: Dibromofluoromethane	131 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:49	S1
Surrogate: Toluene-d8	137 %	70 - 130			B3F0411	06/20/2013	06/20/13 08:49	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
1,2-Dichlorobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
1,3-Dichlorobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
1,4-Dichlorobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4,5-Trichlorophenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4,6-Trichlorophenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4-Dichlorophenol	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4-Dimethylphenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4-Dinitrophenol	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,4-Dinitrotoluene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2,6-Dinitrotoluene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Chloronaphthalene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Chlorophenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Methylnaphthalene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Methylphenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Nitroaniline	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
2-Nitrophenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
3,3'-Dichlorobenzidine	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
3-Nitroaniline	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4,6-Dinitro-2-methylphenol	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Bromophenyl-phenylether	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Chloro-3-methylphenol	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Chloroaniline	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Chlorophenyl-phenylether	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Methylphenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Nitroaniline	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
4-Nitrophenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Acenaphthene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Acenaphthylene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2



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Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'

Lab ID: 1301795-58

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzidine (M)	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzo(a)anthracene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzo(a)pyrene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzo(b)fluoranthene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzo(g,h,i)perylene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzo(k)fluoranthene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzoic acid	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Benzyl alcohol	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
bis(2-chloroethoxy)methane	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
bis(2-Chloroethyl)ether	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
bis(2-chloroisopropyl)ether	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
bis(2-ethylhexyl)phthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Butylbenzylphthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Chrysene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Di-n-butylphthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Di-n-octylphthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Dibenz(a,h)anthracene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Dibenzofuran	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Diethyl phthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Dimethyl phthalate	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Fluoranthene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Fluorene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Hexachlorobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Hexachlorobutadiene	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Hexachlorocyclopentadiene	ND	3300	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Hexachloroethane	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Indeno(1,2,3-cd)pyrene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Isophorone	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
N-Nitroso-di-n propylamine	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
N-Nitrosodiphenylamine	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Naphthalene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Nitrobenzene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Pentachlorophenol	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Phenanthrene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Phenol	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Pyrene	ND	1600	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2



Certificate of Analysis

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Client Sample ID Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'
Lab ID: 1301795-58

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	8200	NA	5	B3F0444	06/20/2013	06/24/13 13:56	D2
Surrogate: 1,2-Dichlorobenzene-d4	74.0 %		48 - 113		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: 2,4,6-Tribromophenol	72.1 %		14 - 162		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: 2-Chlorophenol-d4	76.1 %		40 - 117		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: 2-Fluorobiphenyl	79.4 %		52 - 126		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: 2-Fluorophenol	78.5 %		26 - 124		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: 4-Terphenyl-d14	78.6 %		36 - 163		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: Nitrobenzene-d5	61.2 %		42 - 118		B3F0444	06/20/2013	06/24/13 13:56	
Surrogate: Phenol-d5	75.2 %		29 - 124		B3F0444	06/20/2013	06/24/13 13:56	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.3	0.10	NA	1	B3F0351	06/17/2013	06/18/13 15:14	



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Client Sample ID Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5
Lab ID: 1301795-59

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Arsenic	3.6	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Barium	130	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Cadmium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Chromium	13	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Cobalt	3.0	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Copper	6.2	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Lead	3.5	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Nickel	11	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:21	
Vanadium	14	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	
Zinc	24	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:20	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:26	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 19:15	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>108 %</i>		<i>54 - 150</i>		B3F0390	06/19/2013	<i>06/19/13 19:15</i>	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	25	1.0	NA	1	B3F0454	06/21/2013	06/21/13 15:32	
ORO	32	1.0	NA	1	B3F0454	06/21/2013	06/21/13 15:32	
<i>Surrogate: p-Terphenyl</i>	<i>91.7 %</i>		<i>33 - 147</i>		B3F0454	06/21/2013	<i>06/21/13 15:32</i>	



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Lab ID: 1301795-59

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 17:24	
<i>Surrogate: Decachlorobiphenyl</i>	98.8 %		32 - 113		B3F0445	06/20/2013	06/21/13 17:24	
<i>Surrogate: Tetrachloro-m-xylene</i>	80.1 %		32 - 101		B3F0445	06/20/2013	06/21/13 17:24	



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Lab ID: 1301795-59

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 20:56	
<i>Surrogate: Decachlorobiphenyl</i>	105 %		39 - 128		B3F0445	06/20/2013	06/21/13 20:56	
<i>Surrogate: Tetrachloro-m-xylene</i>	94.4 %		38 - 122		B3F0445	06/20/2013	06/21/13 20:56	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'
Lab ID: 1301795-59

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:03	

Surrogate: 1,2-Dichloroethane-d4 86.9 % 70 - 130 B3F0411 06/20/2013 06/20/13 10:03



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Client Sample ID Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'
Lab ID: 1301795-59

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	117 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:03	
Surrogate: Dibromofluoromethane	128 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:03	
Surrogate: Toluene-d8	137 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:03	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	



Certificate of Analysis

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6671 Brisa Street
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Reported : 06/27/2013

Client Sample ID Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'
Lab ID: 1301795-59

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:03	



Certificate of Analysis

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Client Sample ID Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5
Lab ID: 1301795-59

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 1,2-Dichlorobenzene-d4	85.0 %	48 - 113			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 2,4,6-Tribromophenol	89.7 %	14 - 162			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 2-Chlorophenol-d4	91.5 %	40 - 117			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 2-Fluorobiphenyl	87.1 %	52 - 126			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 2-Fluorophenol	95.5 %	26 - 124			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: 4-Terphenyl-d14	80.3 %	36 - 163			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: Nitrobenzene-d5	74.1 %	42 - 118			B3F0444	06/20/2013	06/24/13 13:03	
Surrogate: Phenol-d5	92.9 %	29 - 124			B3F0444	06/20/2013	06/24/13 13:03	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B3F0351	06/17/2013	06/18/13 15:14	



Certificate of Analysis

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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0

Lab ID: 1301795-60

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Arsenic	3.7	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Barium	89	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Beryllium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Cadmium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Chromium	16	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Cobalt	3.2	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Copper	10	2.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Lead	3.6	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Molybdenum	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Nickel	17	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Selenium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Silver	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Thallium	ND	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:24	
Vanadium	18	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	
Zinc	32	1.0	NA	1	B3F0426	06/20/2013	06/20/13 16:23	

Mercury by AA (Cold Vapor) EPA 7471

Analyst: VV

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	NA	1	B3F0458	06/21/2013	06/21/13 13:28	

Gasoline Range Organics by EPA 8015B

Analyst: VN

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	1.0	NA	1	B3F0390	06/19/2013	06/19/13 19:35	
Surrogate: 4-Bromofluorobenzene	106 %		54 - 150		B3F0390	06/19/2013	06/19/13 19:35	

Diesel Range Organics by EPA 8015B (SGT)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO	10	1.0	NA	1	B3F0454	06/21/2013	06/21/13 16:56	
ORO	9.0	1.0	NA	1	B3F0454	06/21/2013	06/21/13 16:56	
Surrogate: p-Terphenyl	78.3 %		33 - 147		B3F0454	06/21/2013	06/21/13 16:56	



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 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0
Lab ID: 1301795-60

Organochlorine Pesticides by EPA 8081

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4,4'-DDD	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
4,4'-DDE	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
4,4'-DDT	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Aldrin	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
alpha-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
alpha-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
beta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Chlordane	ND	8.5	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
delta-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Dieldrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endosulfan I	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endosulfan II	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endosulfan sulfate	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endrin	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endrin aldehyde	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Endrin ketone	ND	2.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
gamma-BHC	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
gamma-Chlordane	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Heptachlor	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Heptachlor epoxide	ND	1.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Methoxychlor	ND	5.0	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
Toxaphene	ND	50	NA	1	B3F0445	06/20/2013	06/21/13 17:37	
<i>Surrogate: Decachlorobiphenyl</i>	<i>105 %</i>		<i>32 - 113</i>		B3F0445	06/20/2013	<i>06/21/13 17:37</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>87.0 %</i>		<i>32 - 101</i>		B3F0445	06/20/2013	<i>06/21/13 17:37</i>	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0
Lab ID: 1301795-60

Polychlorinated Biphenyls by EPA 8082

Analyst: BB

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1221	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1232	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1242	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1248	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1254	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1260	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1262	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
Aroclor 1268	ND	16	NA	1	B3F0445	06/20/2013	06/21/13 21:24	
<i>Surrogate: Decachlorobiphenyl</i>	<i>112 %</i>		<i>39 - 128</i>		B3F0445	06/20/2013	<i>06/21/13 21:24</i>	
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>101 %</i>		<i>38 - 122</i>		B3F0445	06/20/2013	<i>06/21/13 21:24</i>	

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1,1-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1,2,2-Tetrachloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1,2-Trichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,1-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2,3-Trichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2,3-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2,4-Trichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2,4-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2-Dibromo-3-chloropropane	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2-Dibromoethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2-Dichloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,3,5-Trimethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,3-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,3-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
1,4-Dichlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
2,2-Dichloropropane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	



Certificate of Analysis

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 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0

Lab ID: 1301795-60

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
2-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
4-Chlorotoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
4-Isopropyltoluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Benzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Bromobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Bromodichloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Bromoform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Bromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Carbon tetrachloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Chlorobenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Chloroethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Chloroform	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Chloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
cis-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
cis-1,3-Dichloropropene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Dibromochloromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Dibromomethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Dichlorodifluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Ethylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Hexachlorobutadiene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Isopropylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
m,p-Xylene	ND	10	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Methylene chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
n-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
n-Propylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Naphthalene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
o-Xylene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
sec-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Styrene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
tert-Butylbenzene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Tetrachloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Toluene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
trans-1,2-Dichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Trichloroethene	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Trichlorofluoromethane	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	
Vinyl chloride	ND	5.0	NA	1	B3F0411	06/20/2013	06/20/13 10:22	

Surrogate: 1,2-Dichloroethane-d4 91.5 % 70 - 130 B3F0411 06/20/2013 06/20/13 10:22



Certificate of Analysis

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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0

Lab ID: 1301795-60

Volatile Organic Compounds by EPA 8260

Analyst: TP

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Surrogate: 4-Bromofluorobenzene	118 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:22	
Surrogate: Dibromofluoromethane	134 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:22	S1
Surrogate: Toluene-d8	135 %	70 - 130			B3F0411	06/20/2013	06/20/13 10:22	S1

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,2,4-Trichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
1,2-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
1,3-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
1,4-Dichlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4,5-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4,6-Trichlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4-Dichlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4-Dimethylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4-Dinitrophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,4-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2,6-Dinitrotoluene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Chloronaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Chlorophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Methylnaphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
2-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
3,3'-Dichlorobenzidine	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
3-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4,6-Dinitro-2-methylphenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Bromophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Chloro-3-methylphenol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Chloroaniline	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Chlorophenyl-phenylether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Methylphenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Nitroaniline	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
4-Nitrophenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Acenaphthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Acenaphthylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0

Lab ID: 1301795-60

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzidine (M)	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzo(a)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzo(a)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzo(b)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzo(g,h,i)perylene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzo(k)fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzoic acid	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Benzyl alcohol	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
bis(2-chloroethoxy)methane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
bis(2-Chloroethyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
bis(2-chloroisopropyl)ether	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
bis(2-ethylhexyl)phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Butylbenzylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Chrysene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Di-n-butylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Di-n-octylphthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Dibenz(a,h)anthracene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Dibenzofuran	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Diethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Dimethyl phthalate	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Fluoranthene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Fluorene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Hexachlorobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Hexachlorobutadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Hexachlorocyclopentadiene	ND	660	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Hexachloroethane	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Indeno(1,2,3-cd)pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Isophorone	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
N-Nitroso-di-n propylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
N-Nitrosodiphenylamine	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Naphthalene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Nitrobenzene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Pentachlorophenol	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Phenanthrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Phenol	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Pyrene	ND	330	NA	1	B3F0444	06/20/2013	06/24/13 13:30	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Client Sample ID Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0

Lab ID: 1301795-60

Semivolatile Organic Compounds by EPA 8270C

Analyst: MFR

Analyte	Result (ug/kg)	PQL (ug/kg)	MDL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Pyridine	ND	1600	NA	1	B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 1,2-Dichlorobenzene-d4	88.2 %	48 - 113			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 2,4,6-Tribromophenol	94.4 %	14 - 162			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 2-Chlorophenol-d4	94.3 %	40 - 117			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 2-Fluorobiphenyl	91.5 %	52 - 126			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 2-Fluorophenol	98.5 %	26 - 124			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: 4-Terphenyl-d14	85.8 %	36 - 163			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: Nitrobenzene-d5	75.7 %	42 - 118			B3F0444	06/20/2013	06/24/13 13:30	
Surrogate: Phenol-d5	94.2 %	29 - 124			B3F0444	06/20/2013	06/24/13 13:30	

pH by EPA 9045C

Analyst: LA

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.4	0.10	NA	1	B3F0351	06/17/2013	06/18/13 15:14	



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6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

QUALITY CONTROL SECTION

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

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0426 - EPA 3050B

Blank (B3F0426-BLK1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

Antimony	ND	2.0		NR
Arsenic	ND	1.0		NR
Barium	ND	1.0		NR
Beryllium	ND	1.0		NR
Cadmium	ND	1.0		NR
Chromium	ND	1.0		NR
Cobalt	ND	1.0		NR
Copper	ND	2.0		NR
Lead	ND	1.0		NR
Molybdenum	ND	1.0		NR
Nickel	ND	1.0		NR
Selenium	ND	1.0		NR
Silver	ND	1.0		NR
Thallium	ND	1.0		NR
Vanadium	ND	1.0		NR
Zinc	ND	1.0		NR

LCS (B3F0426-BS1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

Antimony	51.4564	2.0	50.0000	103	80 - 120
Arsenic	49.3543	1.0	50.0000	98.7	80 - 120
Barium	51.4117	1.0	50.0000	103	80 - 120
Beryllium	53.7106	1.0	50.0000	107	80 - 120
Cadmium	49.7274	1.0	50.0000	99.5	80 - 120
Chromium	51.7308	1.0	50.0000	103	80 - 120
Cobalt	50.5260	1.0	50.0000	101	80 - 120
Copper	51.8172	2.0	50.0000	104	80 - 120
Lead	52.0032	1.0	50.0000	104	80 - 120
Molybdenum	51.7260	1.0	50.0000	103	80 - 120
Nickel	51.0364	1.0	50.0000	102	80 - 120
Selenium	47.6505	1.0	50.0000	95.3	80 - 120
Silver	47.9889	1.0	50.0000	96.0	80 - 120
Thallium	50.4144	1.0	50.0000	101	80 - 120
Vanadium	52.4314	1.0	50.0000	105	80 - 120
Zinc	52.9842	1.0	50.0000	106	80 - 120

Matrix Spike (B3F0426-MS1)

Source: 1301777-AV

Prepared: 6/20/2013 Analyzed: 6/20/2013

Antimony	85.1182	2.0	125.000	ND	68.1	21 - 109
Arsenic	105.988	1.0	125.000	0.752020	84.2	55 - 102
Barium	169.861	1.0	125.000	64.9200	84.0	40 - 130
Beryllium	111.908	1.0	125.000	ND	89.5	60 - 104



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

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0426 - EPA 3050B (continued)

Matrix Spike (B3F0426-MS1) - Continued

Source: 1301777-AV

Prepared: 6/20/2013 Analyzed: 6/20/2013

Cadmium	103.040	1.0	125.000	0.509187	82.0	52 - 100		
Chromium	128.266	1.0	125.000	22.2848	84.8	53 - 113		
Cobalt	111.971	1.0	125.000	8.98294	82.4	53 - 104		
Copper	134.269	2.0	125.000	18.8522	92.3	51 - 122		
Lead	109.894	1.0	125.000	6.03764	83.1	51 - 106		
Molybdenum	105.105	1.0	125.000	ND	84.1	55 - 103		
Nickel	117.268	1.0	125.000	13.9542	82.7	48 - 112		
Selenium	93.3720	1.0	125.000	ND	74.7	53 - 104		
Silver	109.854	1.0	125.000	ND	87.9	61 - 109		
Thallium	93.5646	1.0	125.000	ND	74.9	44 - 103		
Vanadium	150.572	1.0	125.000	41.6741	87.1	55 - 115		
Zinc	154.266	1.0	125.000	56.2516	78.4	24 - 130		

Matrix Spike Dup (B3F0426-MSD1)

Source: 1301777-AV

Prepared: 6/20/2013 Analyzed: 6/20/2013

Antimony	79.8983	2.0	125.000	ND	63.9	21 - 109	6.33	20
Arsenic	102.477	1.0	125.000	0.752020	81.4	55 - 102	3.37	20
Barium	167.413	1.0	125.000	64.9200	82.0	40 - 130	1.45	20
Beryllium	107.156	1.0	125.000	ND	85.7	60 - 104	4.34	20
Cadmium	100.041	1.0	125.000	0.509187	79.6	52 - 100	2.95	20
Chromium	124.557	1.0	125.000	22.2848	81.8	53 - 113	2.93	20
Cobalt	108.610	1.0	125.000	8.98294	79.7	53 - 104	3.05	20
Copper	130.258	2.0	125.000	18.8522	89.1	51 - 122	3.03	20
Lead	108.814	1.0	125.000	6.03764	82.2	51 - 106	0.987	20
Molybdenum	101.773	1.0	125.000	ND	81.4	55 - 103	3.22	20
Nickel	113.500	1.0	125.000	13.9542	79.6	48 - 112	3.27	20
Selenium	90.4792	1.0	125.000	ND	72.4	53 - 104	3.15	20
Silver	107.256	1.0	125.000	ND	85.8	61 - 109	2.39	20
Thallium	90.9955	1.0	125.000	ND	72.8	44 - 103	2.78	20
Vanadium	145.218	1.0	125.000	41.6741	82.8	55 - 115	3.62	20
Zinc	154.546	1.0	125.000	56.2516	78.6	24 - 130	0.181	20



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Project Number : Ducks Unlimited, E8690-02-01
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 Reported : 06/27/2013

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

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3F0458 - EPA 7471									
Blank (B3F0458-BLK1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	ND	0.10			NR				
LCS (B3F0458-BS1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	0.902164	0.10	0.833333		108	80 - 120			
Matrix Spike (B3F0458-MS1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	1.12617	0.10	0.833333	0.050076	129	70 - 130			
Matrix Spike Dup (B3F0458-MSD1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	1.11598	0.10	0.833333	0.050076	128	70 - 130	0.909	20	
Post Spike (B3F0458-PS1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	0.007062		5.00000E-3	0.000601	129	70 - 130			



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Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Gasoline Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B3F0390 - GCVOAS									
Blank (B3F0390-BLK1)									
				Prepared: 6/19/2013 Analyzed: 6/19/2013					
Gasoline Range Organics	ND	1.0			NR				
T/R Hydrocarbons: C4-C12	ND	1.0			NR				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1020		0.100000		102	54 - 150			
LCS (B3F0390-BS1)									
				Prepared: 6/19/2013 Analyzed: 6/19/2013					
Gasoline Range Organics	5.09700		5.00000		102	70 - 130			
T/R Hydrocarbons: C4-C12	5.02500		5.00000		100	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1098		0.100000		110	54 - 150			
LCS Dup (B3F0390-BSD1)									
				Prepared: 6/19/2013 Analyzed: 6/19/2013					
Gasoline Range Organics	5.42200		5.00000		108	70 - 130	6.18	20	
T/R Hydrocarbons: C4-C12	5.37100		5.00000		107	70 - 130	6.66	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1046		0.100000		105	54 - 150			
Duplicate (B3F0390-DUP1)									
		Source: 1301793-01			Prepared: 6/19/2013 Analyzed: 6/19/2013				
Gasoline Range Organics	ND	1.0		ND	NR			20	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1095		0.100000		110	54 - 150			
Matrix Spike (B3F0390-MS1)									
		Source: 1301810-04			Prepared: 6/19/2013 Analyzed: 6/19/2013				
Gasoline Range Organics	3.41800		5.00000	0.079	66.8	42 - 125			
T/R Hydrocarbons: C4-C12	3.39800		5.00000	0.086	66.2	42 - 125			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1061		0.100000		106	54 - 150			
Matrix Spike Dup (B3F0390-MSD1)									
		Source: 1301810-04			Prepared: 6/19/2013 Analyzed: 6/19/2013				
Gasoline Range Organics	3.40700		5.00000	0.079	66.6	42 - 125	0.322	20	
T/R Hydrocarbons: C4-C12	3.38400		5.00000	0.086	66.0	42 - 125	0.413	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.1080		0.100000		108	54 - 150			



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Project Number : Ducks Unlimited, E8690-02-01
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 Reported : 06/27/2013

Diesel Range Organics by EPA 8015B (SGT) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
Batch B3F0454 - GCSEMI_DRO_SOIL_LL									
Blank (B3F0454-BLK1)					Prepared: 6/21/2013 Analyzed: 6/21/2013				
DRO	ND	1.0			NR				
ORO	ND	1.0			NR				
<i>Surrogate: p-Terphenyl</i>	2.456		2.66667		92.1	33 - 147			
LCS (B3F0454-BS1)					Prepared: 6/21/2013 Analyzed: 6/21/2013				
DRO	37.2940	1.0	33.3333		112	43 - 120			
<i>Surrogate: p-Terphenyl</i>	2.844		2.66667		107	33 - 147			
Matrix Spike (B3F0454-MS1)			Source: 1301795-51		Prepared: 6/21/2013 Analyzed: 6/21/2013				
DRO	36.7843	1.0	33.3333	9.28533	82.5	17 - 112			
<i>Surrogate: p-Terphenyl</i>	2.539		2.66667		95.2	33 - 147			
Matrix Spike Dup (B3F0454-MSD1)			Source: 1301795-51		Prepared: 6/21/2013 Analyzed: 6/21/2013				
DRO	31.0660	1.0	33.3333	9.28533	65.3	17 - 112	16.9	20	
<i>Surrogate: p-Terphenyl</i>	2.138		2.66667		80.2	33 - 147			



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Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

Organochlorine Pesticides by EPA 8081 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0445 - GCSEMI_PCB/PEST

Blank (B3F0445-BLK1)

Prepared: 6/20/2013 Analyzed: 6/21/2013

4,4'-DDD	ND	2.0			NR				
4,4'-DDD [2C]	ND	2.0			NR				
4,4'-DDE	ND	2.0			NR				
4,4'-DDE [2C]	ND	2.0			NR				
4,4'-DDT	ND	2.0			NR				
4,4'-DDT [2C]	ND	2.0			NR				
Aldrin	ND	1.0			NR				
Aldrin [2C]	ND	1.0			NR				
alpha-BHC	ND	1.0			NR				
alpha-BHC [2C]	ND	1.0			NR				
alpha-Chlordane	ND	1.0			NR				
alpha-Chlordane [2C]	ND	1.0			NR				
beta-BHC	ND	1.0			NR				
beta-BHC [2C]	ND	1.0			NR				
Chlordane	ND	8.5			NR				
Chlordane [2C]	ND	8.5			NR				
delta-BHC	ND	1.0			NR				
delta-BHC [2C]	ND	1.0			NR				
Dieldrin	ND	2.0			NR				
Dieldrin [2C]	ND	2.0			NR				
Endosulfan I	ND	1.0			NR				
Endosulfan I [2C]	ND	1.0			NR				
Endosulfan II	ND	2.0			NR				
Endosulfan II [2C]	ND	2.0			NR				
Endosulfan sulfate	ND	2.0			NR				
Endosulfan Sulfate [2C]	ND	2.0			NR				
Endrin	ND	2.0			NR				
Endrin [2C]	ND	2.0			NR				
Endrin aldehyde	ND	2.0			NR				
Endrin aldehyde [2C]	ND	2.0			NR				
Endrin ketone	ND	2.0			NR				
Endrin ketone [2C]	ND	2.0			NR				
gamma-BHC	ND	1.0			NR				
gamma-BHC [2C]	ND	1.0			NR				
gamma-Chlordane	ND	1.0			NR				
gamma-Chlordane [2C]	ND	1.0			NR				
Heptachlor	ND	1.0			NR				
Heptachlor [2C]	ND	1.0			NR				
Heptachlor epoxide	ND	1.0			NR				
Heptachlor epoxide [2C]	ND	1.0			NR				
Methoxychlor	ND	5.0			NR				



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Project Number : Ducks Unlimited, E8690-02-01
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Organochlorine Pesticides by EPA 8081 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0445 - GCSEMI_PCB/PEST (continued)

Blank (B3F0445-BLK1) - Continued

Prepared: 6/20/2013 Analyzed: 6/21/2013

Methoxychlor [2C]	ND	5.0			NR				
Toxaphene	ND	50			NR				
Toxaphene [2C]	ND	50			NR				
<i>Surrogate: Decachlorobiphenyl</i>	<i>15.64</i>		<i>16.6667</i>		<i>93.8</i>	<i>32 - 113</i>			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>15.32</i>		<i>16.6667</i>		<i>91.9</i>	<i>32 - 113</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>12.61</i>		<i>16.6667</i>		<i>75.7</i>	<i>32 - 101</i>			
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	<i>12.30</i>		<i>16.6667</i>		<i>73.8</i>	<i>32 - 101</i>			

LCS (B3F0445-BS1)

Prepared: 6/20/2013 Analyzed: 6/21/2013

4,4'-DDT	15.2600	2.0	16.6667		91.6	60 - 108			
4,4'-DDT [2C]	15.2202	2.0	16.6667		91.3	60 - 108			
Aldrin	13.5297	1.0	16.6667		81.2	57 - 111			
Aldrin [2C]	12.7710	1.0	16.6667		76.6	57 - 111			
Dieldrin	13.5635	2.0	16.6667		81.4	61 - 106			
Dieldrin [2C]	13.1212	2.0	16.6667		78.7	61 - 106			
Endrin	14.9485	2.0	16.6667		89.7	57 - 97			
Endrin [2C]	14.8480	2.0	16.6667		89.1	57 - 97			
gamma-BHC	13.4825	1.0	16.6667		80.9	61 - 109			
gamma-BHC [2C]	12.7960	1.0	16.6667		76.8	61 - 109			
Heptachlor	14.9362	1.0	16.6667		89.6	58 - 115			
Heptachlor [2C]	15.0150	1.0	16.6667		90.1	58 - 115			
<i>Surrogate: Decachlorobiphenyl</i>	<i>15.17</i>		<i>16.6667</i>		<i>91.0</i>	<i>32 - 113</i>			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>16.27</i>		<i>16.6667</i>		<i>97.6</i>	<i>32 - 113</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>11.78</i>		<i>16.6667</i>		<i>70.7</i>	<i>32 - 101</i>			
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	<i>11.43</i>		<i>16.6667</i>		<i>68.6</i>	<i>32 - 101</i>			

Matrix Spike (B3F0445-MS1)

Source: 1301795-60

Prepared: 6/20/2013 Analyzed: 6/21/2013

4,4'-DDT	19.1698	2.0	16.6667	ND	115	26 - 133			
4,4'-DDT [2C]	19.2665	2.0	16.6667	ND	116	26 - 133			
Aldrin	16.5325	1.0	16.6667	ND	99.2	38 - 119			
Aldrin [2C]	15.8268	1.0	16.6667	ND	95.0	38 - 119			
Dieldrin	16.2937	2.0	16.6667	ND	97.8	30 - 120			
Dieldrin [2C]	16.3322	2.0	16.6667	ND	98.0	30 - 120			
Endrin	18.8158	2.0	16.6667	ND	113	30 - 114			
Endrin [2C]	18.8348	2.0	16.6667	ND	113	30 - 114			
gamma-BHC	16.6820	1.0	16.6667	ND	100	31 - 122			
gamma-BHC [2C]	16.3750	1.0	16.6667	ND	98.2	31 - 122			
Heptachlor	18.8723	1.0	16.6667	ND	113	38 - 123			
Heptachlor [2C]	19.7405	1.0	16.6667	ND	118	38 - 123			
<i>Surrogate: Decachlorobiphenyl</i>	<i>18.61</i>		<i>16.6667</i>		<i>112</i>	<i>32 - 113</i>			
<i>Surrogate: Decachlorobiphenyl [2C]</i>	<i>18.50</i>		<i>16.6667</i>		<i>111</i>	<i>32 - 113</i>			



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

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0445 - GCSEMI_PCB/PEST (continued)

Matrix Spike (B3F0445-MS1) - Continued

Source: 1301795-60

Prepared: 6/20/2013 Analyzed: 6/21/2013

Surrogate: Tetrachloro-m-xylene	14.30		16.6667		85.8	32 - 101
Surrogate: Tetrachloro-m-xylene [2C]	14.24		16.6667		85.4	32 - 101

Matrix Spike Dup (B3F0445-MSD1)

Source: 1301795-60

Prepared: 6/20/2013 Analyzed: 6/21/2013

4,4'-DDT	17.8243	2.0	16.6667	ND	107	26 - 133	7.27	20
4,4'-DDT [2C]	17.7867	2.0	16.6667	ND	107	26 - 133	7.99	20
Aldrin	15.6198	1.0	16.6667	ND	93.7	38 - 119	5.68	20
Aldrin [2C]	14.9168	1.0	16.6667	ND	89.5	38 - 119	5.92	20
Dieldrin	15.1997	2.0	16.6667	ND	91.2	30 - 120	6.95	20
Dieldrin [2C]	15.1782	2.0	16.6667	ND	91.1	30 - 120	7.32	20
Endrin	17.5290	2.0	16.6667	ND	105	30 - 114	7.08	20
Endrin [2C]	17.4857	2.0	16.6667	ND	105	30 - 114	7.43	20
gamma-BHC	15.8603	1.0	16.6667	ND	95.2	31 - 122	5.05	20
gamma-BHC [2C]	15.5137	1.0	16.6667	ND	93.1	31 - 122	5.40	20
Heptachlor	17.9218	1.0	16.6667	ND	108	38 - 123	5.17	20
Heptachlor [2C]	18.7195	1.0	16.6667	ND	112	38 - 123	5.31	20

Surrogate: Decachlorobiphenyl	17.50		16.6667		105	32 - 113
Surrogate: Decachlorobiphenyl [2C]	17.10		16.6667		103	32 - 113
Surrogate: Tetrachloro-m-xylene	13.62		16.6667		81.7	32 - 101
Surrogate: Tetrachloro-m-xylene [2C]	13.49		16.6667		80.9	32 - 101



Certificate of Analysis

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6671 Brisa Street
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Project Number : Ducks Unlimited, E8690-02-01
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Reported : 06/27/2013

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0445 - GCSEMI_PCB/PEST

Blank (B3F0445-BLK2)

Prepared: 6/20/2013 Analyzed: 6/21/2013

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

<i>Surrogate: Decachlorobiphenyl</i>	14.61		16.6667		87.6	39 - 128			
<i>Surrogate: Tetrachloro-m-xylene</i>	15.75		16.6667		94.5	38 - 122			

LCS (B3F0445-BS2)

Prepared: 6/20/2013 Analyzed: 6/21/2013

Aroclor 1016	154.402	16	166.667		92.6	64 - 100			
Aroclor 1260	158.246	16	166.667		94.9	68 - 100			
<i>Surrogate: Decachlorobiphenyl</i>	16.96		16.6667		102	39 - 128			
<i>Surrogate: Tetrachloro-m-xylene</i>	17.73		16.6667		106	38 - 122			

Matrix Spike (B3F0445-MS2)

Source: 1301795-49

Prepared: 6/20/2013 Analyzed: 6/21/2013

Aroclor 1016	155.356	16	166.667	ND	93.2	48 - 126			
Aroclor 1260	164.715	16	166.667	7.06522	94.6	46 - 130			
<i>Surrogate: Decachlorobiphenyl</i>	18.04		16.6667		108	39 - 128			
<i>Surrogate: Tetrachloro-m-xylene</i>	17.29		16.6667		104	38 - 122			



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Polychlorinated Biphenyls by EPA 8082 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0445 - GCSEMI_PCB/PEST (continued)

Matrix Spike Dup (B3F0445-MSD2)

Source: 1301795-49

Prepared: 6/20/2013 Analyzed: 6/21/2013

Aroclor 1016	151.268	16	166.667	ND	90.8	48 - 126	2.67	20	
Aroclor 1260	163.991	16	166.667	7.06522	94.2	46 - 130	0.441	20	
<i>Surrogate: Decachlorobiphenyl</i>	<i>18.03</i>		<i>16.6667</i>		<i>108</i>	<i>39 - 128</i>			
<i>Surrogate: Tetrachloro-m-xylene</i>	<i>17.03</i>		<i>16.6667</i>		<i>102</i>	<i>38 - 122</i>			



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Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS

Blank (B3F0411-BLK1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1,1,2-Tetrachloroethane	ND	5.0			NR
1,1,1-Trichloroethane	ND	5.0			NR
1,1,2,2-Tetrachloroethane	ND	5.0			NR
1,1,2-Trichloroethane	ND	5.0			NR
1,1-Dichloroethane	ND	5.0			NR
1,1-Dichloroethene	ND	5.0			NR
1,1-Dichloropropene	ND	5.0			NR
1,2,3-Trichloropropane	ND	5.0			NR
1,2,3-Trichlorobenzene	ND	5.0			NR
1,2,4-Trichlorobenzene	ND	5.0			NR
1,2,4-Trimethylbenzene	ND	5.0			NR
1,2-Dibromo-3-chloropropane	ND	10			NR
1,2-Dibromoethane	ND	5.0			NR
1,2-Dichlorobenzene	ND	5.0			NR
1,2-Dichloroethane	ND	5.0			NR
1,2-Dichloropropane	ND	5.0			NR
1,3,5-Trimethylbenzene	ND	5.0			NR
1,3-Dichlorobenzene	ND	5.0			NR
1,3-Dichloropropane	ND	5.0			NR
1,4-Dichlorobenzene	ND	5.0			NR
2,2-Dichloropropane	ND	5.0			NR
2-Chlorotoluene	ND	5.0			NR
4-Chlorotoluene	ND	5.0			NR
4-Isopropyltoluene	ND	5.0			NR
Benzene	ND	5.0			NR
Bromobenzene	ND	5.0			NR
Bromodichloromethane	ND	5.0			NR
Bromoform	ND	5.0			NR
Bromomethane	ND	5.0			NR
Carbon tetrachloride	ND	5.0			NR
Chlorobenzene	ND	5.0			NR
Chloroethane	ND	5.0			NR
Chloroform	ND	5.0			NR
Chloromethane	ND	5.0			NR
cis-1,2-Dichloroethene	ND	5.0			NR
cis-1,3-Dichloropropene	ND	5.0			NR
Dibromochloromethane	ND	5.0			NR
Dibromomethane	ND	5.0			NR
Dichlorodifluoromethane	ND	5.0			NR
Ethylbenzene	ND	5.0			NR
Hexachlorobutadiene	ND	5.0			NR



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

Blank (B3F0411-BLK1) - Continued

Prepared: 6/20/2013 Analyzed: 6/20/2013

Isopropylbenzene	ND	5.0					NR		
m,p-Xylene	ND	10					NR		
Methylene chloride	ND	5.0					NR		
n-Butylbenzene	ND	5.0					NR		
n-Propylbenzene	ND	5.0					NR		
Naphthalene	ND	5.0					NR		
o-Xylene	ND	5.0					NR		
sec-Butylbenzene	ND	5.0					NR		
Styrene	ND	5.0					NR		
tert-Butylbenzene	ND	5.0					NR		
Tetrachloroethene	ND	5.0					NR		
Toluene	ND	5.0					NR		
trans-1,2-Dichloroethene	ND	5.0					NR		
Trichloroethene	ND	5.0					NR		
Trichlorofluoromethane	ND	5.0					NR		
Vinyl chloride	ND	5.0					NR		
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>40.58</i>		<i>50.0000</i>		<i>81.2</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>60.90</i>		<i>50.0000</i>		<i>122</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>60.95</i>		<i>50.0000</i>		<i>122</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>65.01</i>		<i>50.0000</i>		<i>130</i>	<i>70 - 130</i>			S1



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

LCS (B3F0411-BS1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	46.4700	5.0	50.0000		92.9	70 - 130			
Benzene	101.670	5.0	100.000		102	70 - 130			
Chlorobenzene	56.0600	5.0	50.0000		112	70 - 130			
MTBE	37.0700	5.0	50.0000		74.1	70 - 130			
Toluene	108.860	5.0	100.000		109	70 - 130			
Trichloroethene	63.5000	5.0	50.0000		127	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>38.16</i>		<i>50.0000</i>		<i>76.3</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>59.79</i>		<i>50.0000</i>		<i>120</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>55.79</i>		<i>50.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>69.54</i>		<i>50.0000</i>		<i>139</i>	<i>70 - 130</i>			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

LCS Dup (B3F0411-BSD1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	46.1900	5.0	50.0000		92.4	70 - 130	0.604	20	
Benzene	100.510	5.0	100.000		101	70 - 130	1.15	20	
Chlorobenzene	56.6400	5.0	50.0000		113	70 - 130	1.03	20	
MTBE	36.4100	5.0	50.0000		72.8	70 - 130	1.80	20	
Toluene	110.630	5.0	100.000		111	70 - 130	1.61	20	
Trichloroethene	64.2500	5.0	50.0000		128	70 - 130	1.17	20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>36.90</i>		<i>50.0000</i>		<i>73.8</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>60.53</i>		<i>50.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>56.21</i>		<i>50.0000</i>		<i>112</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>71.14</i>		<i>50.0000</i>		<i>142</i>	<i>70 - 130</i>			



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

Duplicate (B3F0411-DUP1)

Source: 1301793-01

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	ND	5.0		ND	NR			20	
Benzene	ND	5.0		ND	NR			20	
Chlorobenzene	ND	5.0		ND	NR			20	
MTBE	ND	5.0		ND	NR			20	
Toluene	ND	5.0		ND	NR			20	
Trichloroethene	ND	5.0		ND	NR			20	
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>39.83</i>		<i>50.0000</i>		<i>79.7</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>57.78</i>		<i>50.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>59.83</i>		<i>50.0000</i>		<i>120</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>67.70</i>		<i>50.0000</i>		<i>135</i>	<i>70 - 130</i>			S1



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

Matrix Spike (B3F0411-MS1)

Source: 1301793-01

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	44.3300	5.0	50.0000	ND	88.7	70 - 130			
Benzene	87.1100	5.0	100.000	ND	87.1	70 - 130			
Chlorobenzene	44.2000	5.0	50.0000	ND	88.4	70 - 130			
MTBE	34.8700	5.0	50.0000	ND	69.7	70 - 130			M1
Toluene	89.7800	5.0	100.000	ND	89.8	70 - 130			
Trichloroethene	55.9700	5.0	50.0000	ND	112	70 - 130			
<hr/>									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>41.55</i>		<i>50.0000</i>		<i>83.1</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>61.12</i>		<i>50.0000</i>		<i>122</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>58.13</i>		<i>50.0000</i>		<i>116</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>66.47</i>		<i>50.0000</i>		<i>133</i>	<i>70 - 130</i>			M1



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Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0411 - MSVOAS (continued)

Matrix Spike Dup (B3F0411-MSD1)

Source: 1301793-01

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	42.6000	5.0	50.0000	ND	85.2	70 - 130	3.98	20	
Benzene	88.1600	5.0	100.0000	ND	88.2	70 - 130	1.20	20	
Chlorobenzene	43.4500	5.0	50.0000	ND	86.9	70 - 130	1.71	20	
MTBE	35.4700	5.0	50.0000	ND	70.9	70 - 130	1.71	20	
Toluene	90.3900	5.0	100.0000	ND	90.4	70 - 130	0.677	20	
Trichloroethene	56.3500	5.0	50.0000	ND	113	70 - 130	0.677	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>39.65</i>		<i>50.0000</i>		<i>79.3</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>60.58</i>		<i>50.0000</i>		<i>121</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>57.67</i>		<i>50.0000</i>		<i>115</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>68.43</i>		<i>50.0000</i>		<i>137</i>	<i>70 - 130</i>			M1



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Semivolatile Organic Compounds by EPA 8270C - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec % Rec	Limits Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI

Blank (B3F0444-BLK1)

Prepared: 6/20/2013 Analyzed: 6/24/2013

1,2,4-Trichlorobenzene	ND	330			NR				
1,2-Dichlorobenzene	ND	330			NR				
1,3-Dichlorobenzene	ND	330			NR				
1,4-Dichlorobenzene	ND	330			NR				
2,4,5-Trichlorophenol	ND	330			NR				
2,4,6-Trichlorophenol	ND	330			NR				
2,4-Dichlorophenol	ND	1600			NR				
2,4-Dimethylphenol	ND	330			NR				
2,4-Dinitrophenol	ND	1600			NR				
2,4-Dinitrotoluene	ND	330			NR				
2,6-Dinitrotoluene	ND	330			NR				
2-Chloronaphthalene	ND	330			NR				
2-Chlorophenol	ND	330			NR				
2-Methylnaphthalene	ND	330			NR				
2-Methylphenol	ND	330			NR				
2-Nitroaniline	ND	1600			NR				
2-Nitrophenol	ND	330			NR				
3,3'-Dichlorobenzidine	ND	660			NR				
3-Nitroaniline	ND	1600			NR				
4,6-Dinitro-2-methylphenol	ND	1600			NR				
4-Bromophenyl-phenylether	ND	330			NR				
4-Chloro-3-methylphenol	ND	660			NR				
4-Chloroaniline	ND	660			NR				
4-Chlorophenyl-phenylether	ND	330			NR				
4-Methylphenol	ND	330			NR				
4-Nitroaniline	ND	1600			NR				
4-Nitrophenol	ND	330			NR				
Acenaphthene	ND	330			NR				
Acenaphthylene	ND	330			NR				
Anthracene	ND	330			NR				
Benzdine (M)	ND	1600			NR				
Benzo(a)anthracene	ND	330			NR				
Benzo(a)pyrene	ND	330			NR				
Benzo(b)fluoranthene	ND	330			NR				
Benzo(g,h,i)perylene	ND	330			NR				
Benzo(k)fluoranthene	ND	330			NR				
Benzoic acid	ND	1600			NR				
Benzyl alcohol	ND	660			NR				
bis(2-chloroethoxy)methane	ND	330			NR				
bis(2-Chloroethyl)ether	ND	330			NR				
bis(2-chloroisopropyl)ether	ND	330			NR				



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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI (continued)

Blank (B3F0444-BLK1) - Continued

Prepared: 6/20/2013 Analyzed: 6/24/2013

bis(2-ethylhexyl)phthalate	ND	330			NR				
Butylbenzylphthalate	ND	330			NR				
Chrysene	ND	330			NR				
Di-n-butylphthalate	ND	330			NR				
Di-n-octylphthalate	ND	330			NR				
Dibenz(a,h)anthracene	ND	330			NR				
Dibenzofuran	ND	330			NR				
Diethyl phthalate	ND	330			NR				
Dimethyl phthalate	ND	330			NR				
Fluoranthene	ND	330			NR				
Fluorene	ND	330			NR				
Hexachlorobenzene	ND	330			NR				
Hexachlorobutadiene	ND	660			NR				
Hexachlorocyclopentadiene	ND	660			NR				
Hexachloroethane	ND	330			NR				
Indeno(1,2,3-cd)pyrene	ND	330			NR				
Isophorone	ND	330			NR				
N-Nitroso-di-n propylamine	ND	330			NR				
N-Nitrosodiphenylamine	ND	330			NR				
Naphthalene	ND	330			NR				
Nitrobenzene	ND	330			NR				
Pentachlorophenol	ND	1600			NR				
Phenanthrene	ND	330			NR				
Phenol	ND	330			NR				
Pyrene	ND	330			NR				
Pyridine	ND	1600			NR				
<hr/>									
Surrogate: 1,2-Dichlorobenzene-d4	2707		3333.33		81.2	48 - 113			
Surrogate: 2,4,6-Tribromophenol	2506		3333.33		75.2	14 - 162			
Surrogate: 2-Chlorophenol-d4	2833		3333.33		85.0	40 - 117			
Surrogate: 2-Fluorobiphenyl	2792		3333.33		83.8	52 - 126			
Surrogate: 2-Fluorophenol	2866		3333.33		86.0	26 - 124			
Surrogate: 4-Terphenyl-d14	2666		3333.33		80.0	36 - 163			
Surrogate: Nitrobenzene-d5	2207		3333.33		66.2	42 - 118			
Surrogate: Phenol-d5	2894		3333.33		86.8	29 - 124			



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Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI (continued)

LCS (B3F0444-BS1)

Prepared: 6/20/2013 Analyzed: 6/24/2013

1,2,4-Trichlorobenzene	2164.33	330	3333.33		64.9	62 - 101			
1,4-Dichlorobenzene	2220.67	330	3333.33		66.6	58 - 93			
2,4-Dinitrotoluene	3008.00	330	3333.33		90.2	67 - 133			
2-Chlorophenol	2575.33	330	3333.33		77.3	63 - 100			
4-Chloro-3-methylphenol	2706.00	660	3333.33		81.2	70 - 120			
4-Nitrophenol	2189.67	330	3333.33		65.7	55 - 137			
Acenaphthene	3015.33	330	3333.33		90.5	73 - 112			
N-Nitroso-di-n propylamine	2010.33	330	3333.33		60.3	56 - 114			
Pentachlorophenol	2805.00	1600	3333.33		84.2	61 - 125			
Phenol	2630.00	330	3333.33		78.9	61 - 106			
Pyrene	3083.67	330	3333.33		92.5	66 - 122			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>2353</i>		<i>3333.33</i>		<i>70.6</i>	<i>48 - 113</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>2927</i>		<i>3333.33</i>		<i>87.8</i>	<i>14 - 162</i>			
<i>Surrogate: 2-Chlorophenol-d4</i>	<i>2547</i>		<i>3333.33</i>		<i>76.4</i>	<i>40 - 117</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>2692</i>		<i>3333.33</i>		<i>80.8</i>	<i>52 - 126</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>2567</i>		<i>3333.33</i>		<i>77.0</i>	<i>26 - 124</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>2784</i>		<i>3333.33</i>		<i>83.5</i>	<i>36 - 163</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>2083</i>		<i>3333.33</i>		<i>62.5</i>	<i>42 - 118</i>			
<i>Surrogate: Phenol-d5</i>	<i>2579</i>		<i>3333.33</i>		<i>77.4</i>	<i>29 - 124</i>			



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI (continued)

Duplicate (B3F0444-DUP1)

Source: 1301813-10

Prepared: 6/20/2013 Analyzed: 6/24/2013

1,2,4-Trichlorobenzene	ND	820		ND	NR		20	D2	
1,4-Dichlorobenzene	ND	820		ND	NR		20	D2	
2,4-Dinitrotoluene	ND	820		ND	NR		20	D2	
2-Chlorophenol	ND	820		ND	NR		20	D2	
4-Chloro-3-methylphenol	ND	1600		ND	NR		20	D2	
4-Nitrophenol	ND	820		ND	NR		20	D2	
Acenaphthene	ND	820		ND	NR		20	D2	
N-Nitroso-di-n propylamine	ND	820		ND	NR		20	D2	
Pentachlorophenol	ND	4100		ND	NR		20	D2	
Phenol	ND	820		ND	NR		20	D2	
Pyrene	86.6667	820		ND	NR		20	D2	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>2191</i>		<i>3333.33</i>		<i>65.7</i>	<i>48 - 113</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>2752</i>		<i>3333.33</i>		<i>82.6</i>	<i>14 - 162</i>			
<i>Surrogate: 2-Chlorophenol-d4</i>	<i>2536</i>		<i>3333.33</i>		<i>76.1</i>	<i>40 - 117</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>2580</i>		<i>3333.33</i>		<i>77.4</i>	<i>52 - 126</i>			
<i>Surrogate: 2-Fluorophenol</i>	<i>2584</i>		<i>3333.33</i>		<i>77.5</i>	<i>26 - 124</i>			
<i>Surrogate: 4-Terphenyl-d14</i>	<i>2762</i>		<i>3333.33</i>		<i>82.9</i>	<i>36 - 163</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>2008</i>		<i>3333.33</i>		<i>60.2</i>	<i>42 - 118</i>			
<i>Surrogate: Phenol-d5</i>	<i>2502</i>		<i>3333.33</i>		<i>75.1</i>	<i>29 - 124</i>			



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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI (continued)

Matrix Spike (B3F0444-MS1)

Source: 1301795-52

Prepared: 6/20/2013 Analyzed: 6/24/2013

1,2,4-Trichlorobenzene	2517.00	330	3333.33	ND	75.5	52 - 111			
1,4-Dichlorobenzene	2592.33	330	3333.33	ND	77.8	47 - 101			
2,4-Dinitrotoluene	3046.00	330	3333.33	ND	91.4	66 - 134			
2-Chlorophenol	3112.67	330	3333.33	ND	93.4	55 - 107			
4-Chloro-3-methylphenol	2971.67	660	3333.33	ND	89.2	64 - 129			
4-Nitrophenol	2699.67	330	3333.33	ND	81.0	56 - 144			
Acenaphthene	3158.33	330	3333.33	ND	94.8	63 - 121			
N-Nitroso-di-n propylamine	2277.67	330	3333.33	ND	68.3	45 - 123			
Pentachlorophenol	3407.67	1600	3333.33	ND	102	51 - 144			
Phenol	3094.33	330	3333.33	ND	92.8	50 - 116			
Pyrene	3125.33	330	3333.33	ND	93.8	65 - 127			

<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	2698		3333.33		81.0	48 - 113			
<i>Surrogate: 2,4,6-Tribromophenol</i>	3060		3333.33		91.8	14 - 162			
<i>Surrogate: 2-Chlorophenol-d4</i>	2963		3333.33		88.9	40 - 117			
<i>Surrogate: 2-Fluorobiphenyl</i>	2824		3333.33		84.7	52 - 126			
<i>Surrogate: 2-Fluorophenol</i>	2860		3333.33		85.8	26 - 124			
<i>Surrogate: 4-Terphenyl-d14</i>	2791		3333.33		83.7	36 - 163			
<i>Surrogate: Nitrobenzene-d5</i>	2307		3333.33		69.2	42 - 118			
<i>Surrogate: Phenol-d5</i>	2876		3333.33		86.3	29 - 124			



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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Semivolatile Organic Compounds by EPA 8270C - Quality Control (cont'd)

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0444 - MSSEMI (continued)

Matrix Spike Dup (B3F0444-MSD1)

Source: 1301795-52

Prepared: 6/20/2013 Analyzed: 6/24/2013

1,2,4-Trichlorobenzene	2449.00	330	3333.33	ND	73.5	52 - 111	2.74	20	
1,4-Dichlorobenzene	2510.67	330	3333.33	ND	75.3	47 - 101	3.20	20	
2,4-Dinitrotoluene	2996.67	330	3333.33	ND	89.9	66 - 134	1.63	20	
2-Chlorophenol	2948.67	330	3333.33	ND	88.5	55 - 107	5.41	20	
4-Chloro-3-methylphenol	2866.33	660	3333.33	ND	86.0	64 - 129	3.61	20	
4-Nitrophenol	2622.67	330	3333.33	ND	78.7	56 - 144	2.89	20	
Acenaphthene	3097.00	330	3333.33	ND	92.9	63 - 121	1.96	20	
N-Nitroso-di-n propylamine	2140.33	330	3333.33	ND	64.2	45 - 123	6.22	20	
Pentachlorophenol	3348.33	1600	3333.33	ND	100	51 - 144	1.76	20	
Phenol	2975.33	330	3333.33	ND	89.3	50 - 116	3.92	20	
Pyrene	3069.00	330	3333.33	ND	92.1	65 - 127	1.82	20	

<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	2622		3333.33		78.7	48 - 113			
<i>Surrogate: 2,4,6-Tribromophenol</i>	3023		3333.33		90.7	14 - 162			
<i>Surrogate: 2-Chlorophenol-d4</i>	2824		3333.33		84.7	40 - 117			
<i>Surrogate: 2-Fluorobiphenyl</i>	2797		3333.33		83.9	52 - 126			
<i>Surrogate: 2-Fluorophenol</i>	2754		3333.33		82.6	26 - 124			
<i>Surrogate: 4-Terphenyl-d14</i>	2722		3333.33		81.7	36 - 163			
<i>Surrogate: Nitrobenzene-d5</i>	2260		3333.33		67.8	42 - 118			
<i>Surrogate: Phenol-d5</i>	2809		3333.33		84.3	29 - 124			



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Geocon Consultants, Inc.
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Livermore , CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0350 - Prep_WC_1_S

Duplicate (B3F0350-DUP1)

Source: 1301717-10

Prepared: 6/17/2013 Analyzed: 6/18/2013

pH	8.09000	0.10		8.19000	NR		1.23	20	
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Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/27/2013

pH by EPA 9045C - Quality Control (cont'd)

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0351 - Prep_WC_1_S

Duplicate (B3F0351-DUP1)

Source: 1301795-57

Prepared: 6/17/2013 Analyzed: 6/18/2013

pH	7.58000	0.10		7.18000	NR		5.42	20	
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Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/27/2013

Notes and Definitions

S10	Surrogate recovery outside of laboratory acceptance limit possibly due to matrix interference.
S1	Surrogate recovery was above laboratory acceptance limit. No target analyte was detected in the sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D2	Sample required dilution due to high concentration of non-target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

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



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Ordered By

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Number of Pages 4

Date Received 06/18/2013
Date Reported 06/24/2013

Telephone: (562)989-4045
Attention: Diane Galvan

Job Number	Order Date	Client
69841	06/18/2013	ATL

Project ID: 1301795
Project Name: PO# SC08063

Enclosed please find results of analyses of 8 soil samples which were analyzed as specified on the attached chain of custody. If there are any questions, please do not hesitate to call.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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Page: 1 A

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Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755-5225

Project ID: 1301795
Date Received 06/18/2013
Date Reported 06/24/2013

Telephone: (562) 989-4045
Attention: Diane Galvan

Job Number	Order Date	Client
69841	06/18/2013	ATL

CERTIFICATE OF ANALYSIS CASE NARRATIVE

AETL received 8 samples with the following specification on 06/18/2013.

Lab ID	Sample ID	Sample Date	Matrix	Quantity Of Containers
69841.01	1301795-51	06/13/2013	Soil	1
69841.02	1301795-52	06/13/2013	Soil	1
69841.03	1301795-53	06/13/2013	Soil	1
69841.04	1301795-54	06/13/2013	Soil	1
69841.05	1301795-57	06/13/2013	Soil	1
69841.06	1301795-58	06/13/2013	Soil	1
69841.07	1301795-59	06/13/2013	Soil	1
69841.08	1301795-60	06/13/2013	Soil	1

Method ^ Submethod	Req Date	Priority	TAT	Units
(8151A)	06/25/2013	2	Normal	ug/Kg

The samples were analyzed as specified on the enclosed chain of custody. No analytical non-conformances were encountered.

Checked By: _____

Approved By: _____

Cyrus Razmara, Ph.D.
Laboratory Director



American Environmental Testing Laboratory Inc.

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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Diane Galvan

Page: 2

Project ID: 1301795

Project Name: PO# SC08063

AETL Job Number	Submitted	Client
69841	06/18/2013	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 062013

Our Lab I.D.			Method Blank	69841.01	69841.02	69841.03	69841.04
Client Sample I.D.				1301795-51	1301795-52	1301795-53	1301795-54
Date Sampled				06/13/2013	06/13/2013	06/13/2013	06/13/2013
Date Prepared			06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
Preparation Method			3550B	3550B	3550B	3550B	3550B
Date Analyzed			06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
Matrix			Soil	Soil	Soil	Soil	Soil
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Dilution Factor			1	1	1	1	1
Analytes	MDL	PQL	Results	Results	Results	Results	Results
Acifluorfen	20	20	ND	ND	ND	ND	ND
Bentazon	10	10	ND	ND	ND	ND	ND
Chloramben	10	10	ND	ND	ND	ND	ND
2,4-D	10	10	ND	ND	ND	ND	ND
Dalapon	20	20	ND	ND	ND	ND	ND
2,4-DB	10	10	ND	ND	ND	ND	ND
DCPA diacid	20	20	ND	ND	ND	ND	ND
Dicamba	10	10	ND	ND	ND	ND	ND
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND	ND	ND
Dichloroprop	10	10	ND	ND	ND	ND	ND
Dinoseb (DNBP, 2-sec-Butyl-4,6-dinitrophenol)	20	20	ND	ND	ND	ND	ND
MCPA	2000	2000	ND	ND	ND	ND	ND
MCPP	2000	2000	ND	ND	ND	ND	ND
4-Nitrophenol	10	10	ND	ND	ND	ND	ND
Pentachlorophenol (PCP)	10	10	ND	ND	ND	ND	ND
Picloram	10	10	ND	ND	ND	ND	ND
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND	ND	ND
2,4,5-TP	10	10	ND	ND	ND	ND	ND
Our Lab I.D.			Method Blank	69841.01	69841.02	69841.03	69841.04
Surrogates	%Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	% Rec.
DCAA	50-150		53.6	63.2	73.0	88.5	87.7



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ANALYTICAL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Diane Galvan

Page: 3

Project ID: 1301795

Project Name: PO# SC08063

AETL Job Number	Submitted	Client
69841	06/18/2013	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 062013

Our Lab I.D.			69841.05	69841.06	69841.07	69841.08	
Client Sample I.D.			1301795-57	1301795-58	1301795-59	1301795-60	
Date Sampled			06/13/2013	06/13/2013	06/13/2013	06/13/2013	
Date Prepared			06/20/2013	06/20/2013	06/20/2013	06/20/2013	
Preparation Method			3550B	3550B	3550B	3550B	
Date Analyzed			06/20/2013	06/20/2013	06/20/2013	06/20/2013	
Matrix			Soil	Soil	Soil	Soil	
Units			ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Dilution Factor			1	1	1	1	
Analytes	MDL	PQL	Results	Results	Results	Results	
Acifluorfen	20	20	ND	ND	ND	ND	
Bentazon	10	10	ND	ND	ND	ND	
Chloramben	10	10	ND	ND	ND	ND	
2,4-D	10	10	ND	ND	ND	ND	
Dalapon	20	20	ND	ND	ND	ND	
2,4-DB	10	10	ND	ND	ND	ND	
DCPA diacid	20	20	ND	ND	ND	ND	
Dicamba	10	10	ND	ND	ND	ND	
3,5-Dichlorobenzoic acid	10	10	ND	ND	ND	ND	
Dichloroprop	10	10	ND	ND	ND	ND	
Dinoseb (DNBP, 2-sec-Butyl-4,6-dinitrophenol)	20	20	ND	ND	ND	ND	
MCPA	2000	2000	ND	ND	ND	ND	
MCPP	2000	2000	ND	ND	ND	ND	
4-Nitrophenol	10	10	ND	ND	ND	ND	
Pentachlorophenol (PCP)	10	10	ND	ND	ND	ND	
Picloram	10	10	ND	ND	ND	ND	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	10	10	ND	ND	ND	ND	
2,4,5-TP	10	10	ND	ND	ND	ND	
Our Lab I.D.			69841.05	69841.06	69841.07	69841.08	
Surrogates	%Rec.Limit		% Rec.	% Rec.	% Rec.	% Rec.	
DCAA	50-150		65.6	89.0	50.2	68.7	



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QUALITY CONTROL RESULTS

Ordered By

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755-5225

Telephone: (562)989-4045

Attn: Diane Galvan

Page: 4

Project ID: 1301795
 Project Name: PO# SC08063

AETL Job Number	Submitted	Client
69841	06/18/2013	ATL

Method: (8151A), Chlorinated Herbicides by GC/ECD

QC Batch No: 062013; LCS: Clean Sand; LCS Prepared: 06/20/2013; LCS Analyzed: 06/20/2013; Units: ug/Kg

Analytes	LCS	LCS	LCS	LCS DUP	LCS DUP	LCS DUP	LCS RPD	LCS/LCSD	LCS RPD	
	Concen	Recov	% REC	Concen	Recov	% REC	% REC	% Limit	% Limit	
2,4-D	50.0	32.0	64.0	50.0	33.6	67.2	4.9	40-140	<20	
Dalapon	50.0	34.5	69.0	50.0	28.1	56.2	20.4	40-140	<20	
2,4-DB	50.0	64.0	128	50.0	40.0	79.9	46.3	40-140	<20	
Dicamba	50.0	34.2	68.4	50.0	35.7	71.4	4.3	40-140	<20	
Dichloroprop	50.0	30.4	60.8	50.0	32.0	64.0	5.1	40-140	<20	
Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	50.0	29.3	58.6	50.0	29.9	59.8	2.0	40-140	<20	
MCPA	5,000	3,520	70.4	5,000	2,830	56.6	21.7	40-140	<20	
MCPP	5,000	3,680	73.6	5,000	3,670	73.4	<1	40-140	<20	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	50.0	30.8	61.6	50.0	30.3	60.6	1.6	40-140	<20	
2,4,5-TP	50.0	34.1	68.2	50.0	35.2	70.4	3.2	40-140	<20	
Surrogates										
DCAA	100	65.9	65.9	100	71.7	71.7	8.4	40-140	<20	



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Data Qualifiers and Descriptors

Data Qualifier:

- #: Recovery is not within acceptable control limits.
- *: In the QC section, sample results have been taken directly from the ICP reading. No preparation factor has been applied.
- B: Analyte was present in the Method Blank.
- D: Result is from a diluted analysis.
- E: Result is beyond calibration limits and is estimated.
- H: Analysis was performed over the allowed holding time due to circumstances which were beyond laboratory control.
- J: Analyte was detected . However, the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL).
- M: Matrix spike recovery is outside control limits due to matrix interference. Laboratory Control Sample recovery was acceptable.
- MCL: Maximum Contaminant Level
- NS: No Standard Available
- S6: Surrogate recovery is outside control limits due to matrix interference.
- S8: The analysis of the sample required a dilution such that the surrogate concentration was diluted below the method acceptance criteria.
- X: Results represent LCS and LCSD data.

Definition:

- %Limit: Percent acceptable limits.
- %REC: Percent recovery.
- Con.L: Acceptable Control Limits
- Conce: Added concentration to the sample.
- LCS: Laboratory Control Sample
- MDL: Method Detection Limit is a statistically derived number which is specific for each instrument, each method, and each compound. It indicates a distinctively detectable quantity with 99% probability.



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Data Qualifiers and Descriptors

- MS:** Matrix Spike
- MS DU:** Matrix Spike Duplicate
- ND:** Analyte was not detected in the sample at or above MDL.
- PQL:** Practical Quantitation Limit or ML (Minimum Level as per RWQCB) is the minimum concentration that can be quantified with more than 99% confidence. Taking into account all aspects of the entire analytical instrumentation and practice.
- Recov:** Recovered concentration in the sample.
- RPD:** Relative Percent Difference
-


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 LABORATORIES

69841

SUBCONTRACT ORDER

Work Order: 1301795

SENDING LABORATORY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 Phone: 562.989.4045
 Fax: 562.989.6348
 Project Manager: Diane Galvan

RECEIVING LABORATORY:

AETL
 2834 North Naomi Street
 Burbank, CA 91504
 Phone : (818) 845-8200
 Fax: (818) 845-8840
 PO#: SC08063 - STANDARD TAT *e*

IMPORTANT : Please include Work Order # and PO # in your invoice.

Analysis	Due	Expires	Soil	Sampled
ATL Lab#: 1301795-51 / Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/2.0' 8151 [Chlorinated Herbicides by GC]	06/25/13 17:00	06/27/13 00:00	Soil 69841-01	06/13/13 00:00

1-Glass Jar - 4 oz

Comments:

ATL Lab#: 1301795-52 / Composite B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5' 8151 [Chlorinated Herbicides by GC]	06/25/13 17:00	06/27/13 00:00	Soil 69841-02	06/13/13 00:00
---	----------------	----------------	---------------	----------------

1-Glass Jar - 4 oz

Comments:

ATL Lab#: 1301795-53 / Composite B1A/4.5', B1B/5.5', B1C/8.5', B1D/9.0' 8151 [Chlorinated Herbicides by GC]	06/25/13 17:00	06/27/13 00:00	Soil 69841-03	06/13/13 00:00
---	----------------	----------------	---------------	----------------

1-Glass Jar - 4 oz

Comments:

Released By <i>fl</i>	Date <i>6/18/13 1224</i>	Received By <i>Sara Lopez</i>	Date <i>6.18.13 1224</i>
Released By <i>Sara Lopez</i>	Date <i>6.18.13 1730</i>	Received By <i>Francisco</i>	Date <i>06/18/13 1730</i>


ADVANCED TECHNOLOGY
 LABORATORIES

SUBCONTRACT ORDER

Work Order: 1301795

69841

Analysis	Due	Expires	Sampled
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ATL Lab#: 1301795-54 / Composite B2A/8.0', B2B/5.5', B2C/7.5', B2D/4.5'	Soil 69841.04	06/13/13 00:00
8151	06/25/13 17:00	06/27/13 00:00
[Chlorinated Herbicides by GC]		

1-Glass Jar - 4 oz

Comments:

ATL Lab#: 1301795-57 / Composite B3A/2.0', B3B/1.0', B3C/1.5', B3D/1.5'	Soil 69841.05	06/13/13 00:00
8151	06/25/13 17:00	06/27/13 00:00
[Chlorinated Herbicides by GC]		

1-Glass Jar - 4 oz

Comments:

ATL Lab#: 1301795-58 / Composite B4A/1.5', B4B/1.5', B4C/1.0', B4D/2.0'	Soil 69841.06	06/13/13 00:00
8151	06/25/13 17:00	06/27/13 00:00
[Chlorinated Herbicides by GC]		


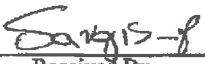


1-Glass Jar - 4 oz

Comments:

ATL Lab#: 1301795-59 / Composite B3A/7.0', B3B/4.5', B3C/4.5', B3D/4.5'	Soil 69841.07	06/13/13 00:00
8151	06/25/13 17:00	06/27/13 00:00
[Chlorinated Herbicides by GC]		

1-Glass Jar - 4 oz

Comments:

 Released By	6/18/13 1224 Date	 Received By	6.18.13. 1224 Date
 Released By	6.18.13 1730 Date	 Received By	06/18/13 1730 Date


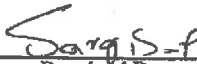



ADVANCED TECHNOLOGY
 LABORATORIES

69841

SUBCONTRACT ORDER

Work Order: 1301795

Analysis	Due	Expires	Sampled
ATL Lab#: 1301795-60 / Composite B4A/4.5, B4B/6.0, B4C/4.5, B4D/9.0 8151 [Chlorinated Herbicides by GC]	06/25/13 17:00	06/27/13 00:00	Soil 69841.08 06/13/13 00:00
1-Glass Jar - 4 oz			
Comments:			

 Released By	6/18/13 1224 Date	 Received By	6.18.13 1224 Date
 Released By	6.18.13 1730 Date	 Received By	06/18/13 1730 Date

Technical Report for

Advanced Technology Laboratories

1301795

1301795/SC8064

Accutest Job Number: FA5682

Sampling Date: 06/13/13

Report to:

Advanced Technology Laboratories
3275 Walnut Ave
Signal Hill, CA 90755-5225
diane@atlglobal.com

ATTN: Diane Galvan

Total number of pages in report: 15



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.



Harry Behzadi, Ph.D.
Laboratory Director

Client Service contact: Muna Mohammed 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001)
DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), AK, AR, GA, KY, MA, NV, OK, UT, VA, WA, WI

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

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Sample Summary

Advanced Technology Laboratories

Job No: FA5682

1301795

Project No: 1301795/SC8064

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA5682-1	06/13/13	00:00 ATL	06/18/13	SO	Soil	1301795-51/COMPOSITE
FA5682-2	06/13/13	00:00 ATL	06/18/13	SO	Soil	1301795-52/COMPOSITE

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Advanced Technology Laboratories

Job No: FA5682

Site: 1301795

Report Date 6/27/2013 9:12:37 AM

2 Samples were collected on 06/13/2013 and were received at Accutest SE on 06/18/2013 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of FA5682. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GC By Method SW846 8330A

Matrix: SO

Batch ID: OP47463

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA5682-1MS, FA5682-1MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

Date: June 27, 2013

Lovelie Metzgar, QA Officer (signature on file)

Summary of Hits

Job Number: FA5682
Account: Advanced Technology Laboratories
Project: 1301795
Collected: 06/13/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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FA5682-1 1301795-51/COMPOSITE

No hits reported in this sample.

FA5682-2 1301795-52/COMPOSITE

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 1301795-51/COMPOSITE	Date Sampled: 06/13/13
Lab Sample ID: FA5682-1	Date Received: 06/18/13
Matrix: SO - Soil	Percent Solids: n/a
Method: SW846 8330A SW846 8330A	
Project: 1301795	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB037368.D	1	06/25/13	KL	06/24/13	OP47463	GBB938
Run #2							

Run #	Initial Weight	Final Volume
Run #1	2.50 g	20.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	160	64	ug/kg	
121-82-4	RDX	ND	160	64	ug/kg	
99-65-0	1,3-Dinitrobenzene	ND	160	64	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	160	64	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	160	64	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	160	64	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	160	64	ug/kg	
98-95-3	Nitrobenzene	ND	160	64	ug/kg	
88-72-2	o-Nitrotoluene	ND	160	64	ug/kg	
99-08-1	m-Nitrotoluene	ND	160	64	ug/kg	
99-99-0	p-Nitrotoluene	ND	160	64	ug/kg	
479-45-8	Tetryl	ND	160	64	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	ND	160	64	ug/kg	
118-96-7	2,4,6-Trinitrotoluene	ND	160	64	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	115%		72-134%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID:	1301795-52/COMPOSITE	Date Sampled:	06/13/13
Lab Sample ID:	FA5682-2	Date Received:	06/18/13
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8330A SW846 8330A		
Project:	1301795		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB037371.D	1	06/25/13	KL	06/24/13	OP47463	GBB938
Run #2							

Run #	Initial Weight	Final Volume
Run #1	2.27 g	20.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	180	70	ug/kg	
121-82-4	RDX	ND	180	70	ug/kg	
99-65-0	1,3-Dinitrobenzene	ND	180	70	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	180	70	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	70	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	180	70	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	180	70	ug/kg	
98-95-3	Nitrobenzene	ND	180	70	ug/kg	
88-72-2	o-Nitrotoluene	ND	180	70	ug/kg	
99-08-1	m-Nitrotoluene	ND	180	70	ug/kg	
99-99-0	p-Nitrotoluene	ND	180	70	ug/kg	
479-45-8	Tetryl	ND	180	70	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	ND	180	70	ug/kg	
118-96-7	2,4,6-Trinitrotoluene	ND	180	70	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	118%		72-134%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

ADVANCED TECHNOLOGY LABORATORIES
SUBCONTRACT ORDER

FA 5682

Work Order: 1301795

SENDING LABORATORY:

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Phone: 562.989.4045
Fax: 562.989.6348
Project Manager: Diane Galvan

RECEIVING LABORATORY:

Accutest
4405 Vineland Road, Suite C-15
Orlando, FL 32811
Phone: (407) 425-6700
Fax: -
PO#: SC08064 - STANDARD TAT

IMPORTANT: Please include Work Order # and PO # in your invoice.

Analysis	Dur	Expires	Sampled
① ATL Lab#: 1301795-S1 / Composite B1A/1.5', B1B/2.5', B1C/2.5', B1D/W2.0'	07/01/13 17:00	06/27/13 00:00	06/13/13 00:00
8330 [Nitrometals and Nitramines by HPLC]			
1-Glass Jar - 4 oz			
Comments:			
② ATL Lab#: 1301795-S2 / Composite B2A/1.0', B2B/1.5', B2C/2.0', B2D/1.5'	07/01/13 17:00	06/27/13 00:00	06/13/13 00:00
8330 [Nitrometals and Nitramines by HPLC]			
1-Glass Jar - 4 oz			
Comments:			

Released By	Date	Received By	Date
<i>[Signature]</i>	6/17/13 14:11	FED EXP 7960 1923 5379	6/13/13
FED EXP	6/17/13	J. C. [Signature]	6-18-13
Released By	Date	Received By	Date
			07:30

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 5682 CLIENT: ATC PROJECT: 1301795
 DATE/TIME RECEIVED: 6-18-13 09:30 (MM/DD/YY 24:00) NUMBER OF COOLERS RECEIVED: 1
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER
 AIRBILL NUMBERS: 7960 1923 5037

COOLER INFORMATION

- CUSTODY SEAL NOT PRESENT OR NOT INTACT
- CHAIN OF CUSTODY NOT RECEIVED (COC)
- ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- TEMPERATURE CRITERIA NOT MET
- WET ICE PRESENT

TRIP BLANK INFORMATION

- TRIP BLANK PROVIDED
- TRIP BLANK NOT PROVIDED
- TRIP BLANK NOT ON COC
- TRIP BLANK INTACT
- TRIP BLANK NOT INTACT
- RECEIVED WATER TRIP BLANK
- RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES? 25-GRAM 5-GRAM
 NUMBER OF 5035 FIELD KITS? _____
 NUMBER OF LAB FILTERED METALS? _____

TEMPERATURE INFORMATION

IR THERM ID 3 CORR. FACTOR 404
 OBSERVED TEMPS: 3.2
 CORRECTED TEMPS: 3.6

SAMPLE INFORMATION

- SAMPLE LABELS PRESENT ON ALL BOTTLES
- INCORRECT NUMBER OF CONTAINERS USED
- SAMPLE RECEIVED IMPROPERLY PRESERVED
- INSUFFICIENT VOLUME FOR ANALYSIS
- DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- D/Ps ON COC DO NOT MATCH LABEL
- VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- SAMPLE CONTAINER(S) RECEIVED BROKEN
- % SOLIDS JAR NOT RECEIVED
- 5035 FIELD KIT FROZEN WITHIN 48 HOURS
- RESIDUAL CHLORINE PRESENT

(APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

SUMMARY OF COMMENTS: _____

TECHNICIAN SIGNATURE/DATE Jc 6-18-13 REVIEWER SIGNATURE/DATE [Signature] 06/18/13
 NF 12/10 receipt confirmation 122910.xls

5.1
5

GC Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: FA5682
 Account: ATLCASH Advanced Technology Laboratories
 Project: 1301795

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47463-MB	BB037367.D	1	06/25/13	KL	06/24/13	OP47463	GBB938

The QC reported here applies to the following samples:

Method: SW846 8330A

FA5682-1, FA5682-2

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	200	80	ug/kg	
121-82-4	RDX	ND	200	80	ug/kg	
99-65-0	1,3-Dinitrobenzene	ND	200	80	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	80	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	80	ug/kg	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	200	80	ug/kg	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	200	80	ug/kg	
98-95-3	Nitrobenzene	ND	200	80	ug/kg	
88-72-2	o-Nitrotoluene	ND	200	80	ug/kg	
99-08-1	m-Nitrotoluene	ND	200	80	ug/kg	
99-99-0	p-Nitrotoluene	ND	200	80	ug/kg	
479-45-8	Tetryl	ND	200	80	ug/kg	
99-35-4	1,3,5-Trinitrobenzene	ND	200	80	ug/kg	
118-96-7	2,4,6-Trinitrotoluene	ND	200	80	ug/kg	

CAS No.	Surrogate Recoveries	Limits
610-39-9	3,4-Dinitrotoluene	114% 72-134%

6.1.1
6

Blank Spike Summary

Job Number: FA5682
 Account: ATLCASH Advanced Technology Laboratories
 Project: 1301795

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47463-BS	BB037366.D 1		06/25/13	KL	06/24/13	OP47463	GBB938

The QC reported here applies to the following samples:

Method: SW846 8330A

FA5682-1, FA5682-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
2691-41-0	HMX	5000	5470	109	64-159
121-82-4	RDX	5000	5380	108	78-120
99-65-0	1,3-Dinitrobenzene	5000	5330	107	80-125
606-20-2	2,6-Dinitrotoluene	5000	5600	112	75-143
121-14-2	2,4-Dinitrotoluene	5000	5480	110	80-130
35572-78-2	2-amino-4,6-Dinitrotoluene	5000	5540	111	79-122
19406-51-0	4-amino-2,6-Dinitrotoluene	5000	5080	102	76-124
98-95-3	Nitrobenzene	5000	5750	115	77-139
88-72-2	o-Nitrotoluene	5000	5720	114	84-126
99-08-1	m-Nitrotoluene	5000	5630	113	84-129
99-99-0	p-Nitrotoluene	5000	5900	118	83-132
479-45-8	Tetryl	5000	4700	94	63-135
99-35-4	1,3,5-Trinitrobenzene	5000	5600	112	81-133
118-96-7	2,4,6-Trinitrotoluene	5000	5180	104	69-124

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	121%	72-134%

* = Outside of Control Limits.

6.2.1
6

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA5682
 Account: ATLCASH Advanced Technology Laboratories
 Project: 1301795

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP47463-MS	BB037369.D	1	06/25/13	KL	06/24/13	OP47463	GBB938
OP47463-MSD	BB037370.D	1	06/25/13	KL	06/24/13	OP47463	GBB938
FA5682-1	BB037368.D	1	06/25/13	KL	06/24/13	OP47463	GBB938

The QC reported here applies to the following samples:

Method: SW846 8330A

FA5682-1, FA5682-2

CAS No.	Compound	FA5682-1 ug/kg	Spike Q	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	ND	4460	5050	113	4780	110	5	64-159/17
121-82-4	RDX	ND	4460	4430	99	4220	97	5	78-120/16
99-65-0	1,3-Dinitrobenzene	ND	4460	4910	110	4710	109	4	80-125/15
606-20-2	2,6-Dinitrotoluene	ND	4460	5140	115	4990	115	3	75-143/22
121-14-2	2,4-Dinitrotoluene	ND	4460	5030	113	4850	112	4	80-130/20
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	4460	5080	114	4890	113	4	79-122/20
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	4460	4650	104	4460	103	4	76-124/23
98-95-3	Nitrobenzene	ND	4460	5300	119	5100	118	4	77-139/17
88-72-2	o-Nitrotoluene	ND	4460	5290	118	5090	118	4	84-126/21
99-08-1	m-Nitrotoluene	ND	4460	5240	117	5070	117	3	84-129/21
99-99-0	p-Nitrotoluene	ND	4460	5440	122	5280	122	3	83-132/25
479-45-8	Tetryl	ND	4460	4440	99	4090	94	8	63-135/25
99-35-4	1,3,5-Trinitrobenzene	ND	4460	5140	115	4980	115	3	81-133/19
118-96-7	2,4,6-Trinitrotoluene	ND	4460	4630	104	4550	105	2	69-124/18

CAS No.	Surrogate Recoveries	MS	MSD	FA5682-1	Limits
610-39-9	3,4-Dinitrotoluene	120%	120%	115%	72-134%

* = Outside of Control Limits.

6.3.1
6

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

P.O.#: _____
 Logged By: _____ Date: _____

Method of Transport: Client ATL CA OverN FEDEX Other: GSD

Sample Condition Upon Receipt:
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VON) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: **GEOCON CONSULTANTS, INC.**
 Address: **6671 Brisa Street**
 City: **Livermore** State: **CA** Zip Code: **94550** TEL: (925) 371-5900
 FAX: (925) 371-5915

Project #: **E8690-02-01** Sampler: **J. Love**
 Relinquished by: **John Love** Date: **6/14/13** Time: **16:30**
 Received by: **J. Love** Date: **6/15/13** Time: **08:20**

Bill To: _____
 Altn: _____
 Co: **SAME AS ABOVE**
 Address: _____
 City: _____ State: _____ Zip: _____

Special Instructions/Comments:
Composite samples B1A thru B1D to form one sample.
Composite samples B2A thru B2D to form one sample.

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
 Storage Fees (applies when storage is requested):
 • Sample : \$2.00 / sample / mo (after 45 days)
 • Records : \$1.00 / ATL workorder / mo (after 1 year)

LAB USE ONLY:	Sample Description	Sample I.D. / Location	Date	Time
1		B1A / 0'	6/13/13	0805
2		B1B / 0'		0740
3		B1C / 0'		0800
4		B1D / 0'		0850
5		B2A / 0'		0915
6		B2B / 0'		0930
7		B2C / 0'		0945
8		B2D / 0'		1010

LAB USE ONLY:	Batch #:	Lab No.	Sample I.D. / Location	Date	Time	PRESERVATION										REMARKS									
						801A (pesticides)	802 (PCB)	8260B (Volatiles)	8010B (Total Metals)	8015B (GRO) / BTEX	8015B (DRO) / BTEX	8021 (BTEX)	MTLE 22 / CAM 17 (6010 / 7000)	PH	Herbicides (B15/B)		WATER	GROUND WATER	WASTEWATER						
		1301795 - 1	B1A / 0'	6/13/13	0805	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 2	B1B / 0'		0740	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 3	B1C / 0'		0800	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 4	B1D / 0'		0850	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 5	B2A / 0'		0915	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 6	B2B / 0'		0930	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 7	B2C / 0'		0945	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		- 8	B2D / 0'		1010	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

TAT: A= Overnight ≤ 24 hr
 B= Emergency Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Metal
 Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Method of Transport
 Client ATL
 CA OverN FEDEX
 Other: _____

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

Client: GEOCON CONSULTANTS, INC.
 Address: 6671 Brisa Street
 City: Livemore State: CA Zip: 94550
 TEL: (925) 371-5900 FAX: (925) 371-5915

Project #: E8690-02-01 Sampler: J. Love
 Date: 6/14/13
 Received by: (Signature and Printed Name) *J. Love*

Relinquished by: (Signature and Printed Name) *J. Love*
 Date: 6/14/13
 Project Mgr / Submitter: J. Love

Relinquished by: (Signature and Printed Name) *J. Love*
 Date: 6/14/13

Special Instructions/Comments:
 Composite samples B1A thru B1D to form one sample.
 Composite samples B2A thru B2D to form one sample.

LAB USE ONLY: Batch #: Lab No.:	Sample I.D. / Location	Date	Time	8018A (pesticides)		8028 (PCB)		8270C (Volatiles)		9018 (Total Metals)		9015B (GRO)		8021 (PTEX)		TITLE 22 (CAM 17 (6010/7000))		SPECIFY APPROPRIATE MATRIX	RESERVATION	Q / Q C	REMARKS
				Request	Requested	Request	Requested	Request	Requested	Request	Requested	Request	Requested	Request	Requested	Request	Requested				
1101945-918	B1A / 1.5'	6/13/13	0905	X	X	X	X	X	X	X	X	X	X	X	X	X	X	WATER			
	B1B / 2.5'		0742	X	X	X	X	X	X	X	X	X	X	X	X	X	X	GROUND WATER			
	B1C / 2.5'		0805	X	X	X	X	X	X	X	X	X	X	X	X	X	X	SOL			
	B1D / 2.0'		0850	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
13	B2A / 1.0'		0915	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
14	B2B / 1.5'		0930	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
15	B2C / 2.0'		0945	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
16	B2D / 1.5'		1010	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

Client: **GEOCON CONSULTANTS, INC.**
 Attn: **John Love**
 Address: 6671 Brisa Street
 City: Livemore State: CA Zip Code: 94550
 TEL: (925) 371-5900
 FAX: (925) 371-5915

Method of Transport:
 Client
 ATL
 CA OverN
 FEDEX
 Other: _____

Sample Condition Upon Receipt:
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOL) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Project #: **E8690-02-01** Sampler: **J. Love**
 Date: **6/14/02** Time: **16:30**
 Received by: **John Love** (Signature and Printed Name)
 Received by: **J. Love** (Signature and Printed Name)
 Date: **6/14/02** Time: **16:30**
 Received by: _____ (Signature and Printed Name)
 Date: _____ Time: _____

Special Instructions/Comments:
Composite samples B1A thru B1D to form one sample.
Composite samples B2A thru B2D to form one sample.

Bill To: _____
 Attn: _____
 Co: **SAME AS ABOVE**
 Address: _____
 City: _____ State: _____ Zip: _____

LAB USE ONLY: Batch #:	Lab No.	Sample I.D. / Location	Date	Time	Sample Description
1307795-17		B1A / 4.5'	6/14/02	0910	
-17		B1B / 5.5'		0745	
-19		B1C / 8.5'		0810	
-20		B1D / 9.0'		0855	
-2		B2A / 8.0'		0920	
-2		B2B / 5.5'		0935	
-23		B2C / 7.5'		0955	
-24		B2D / 4.5'		1015	

Send Report To:
 Attn: _____
 Co: **SAME AS ABOVE**
 Address: _____
 City: _____ State: _____ Zip: _____

Circle or Add Analysis(es) Requested:
 801A (Pesticides)
 802 (PCB)
 8270C (Volatiles)
 80108 (Total Metals)
 80158 (GRO)
 80158 (DRO)
 8021 (ATEX)
 8022 / CAM 17 (6010 / 7000)
 Herbicides (81518)
 PH

Matrix	SOIL	WATER	GROUND WATER	WASTEWATER	Container(s)	TAT #	Type	PRESERVATION	QA/QC
1	X	X	X	X	Composite	E	1	T	RTNE <input type="checkbox"/> CT <input type="checkbox"/>
2	X	X	X	X	Composite				SWRCB <input type="checkbox"/> Logcode <input type="checkbox"/>
3	X	X	X	X	Composite				OTHER <input type="checkbox"/>
4	X	X	X	X	Composite				REMARKS

LAB USE ONLY:
 TAT: A= Overnight < 24 hr
 B= Emergency Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays
 Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tealjar G=Glass P=Plastic M=Metal
 Preservatives: H=Hcl N=HNO3 S=H2SO4 C=4°C Z=Zn(AC) O=NaOH T=Na2S2O8

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories

3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

Sample Condition Upon Receipt:
 1. CHILLED
 2. HEADSPACE (VOA)
 3. CONTAINER INTACT
 4. SEALED
 5. # OF SPLS MATCH COC
 6. PRESERVED

Y N Y N
 Y N Y N
 Y N Y N

Client: **GEOCON CONSULTANTS, INC.**

Address: 6671 Brisa Street

City: Livemore

State: CA

Zip Code: 94550

TEL: (925) 371-5900

FAX: (925) 371-5915

Project #: **E8690-02-01**

Sampler: **J. Love**

Date: **6/14/13**

Time: **16:30**

Received by: **J. Love**

Signature and Printed Name

Date: **6/15/13**

Time: **0812**

Received by: **J. Love**

Signature and Printed Name

Date: _____

Time: _____

Received by: _____

Signature and Printed Name

Date: _____

Time: _____

Received by: _____

Signature and Printed Name

Date: _____

Time: _____

Special Instructions/Comments:
 Composite Samples B3A thru B3D to form one sample.
 Composite Samples B4A thru B4D to form one sample.

Bill To:

Alt:

Co: SAME AS ABOVE

Address:

City:

State:

Zip:

Circle or Add Analysis(s) Requested

801A (Pesticides)

802 (PCB)

8200 (Volatiles)

8270C (BNA)

8010B (Total Metal)

8015B (GRO) / BTEX

8015B (DPO) / BTEX

8021 (BTEX)

MTLE 22 / CAN 17 (6010 / 7000)

Herbicides (8151B)

Water

Ground Water

Wastewater

Container(s)

TAT

Type

REMARKS

QA/QC

RTNE

CT

SWRCB

Logcode

OTHER

LAB USE ONLY:
 Batch #: **130795-25**
 Lab No. _____

Sample I.D. / Location
B3A 10'
B3B 10'
B3C 10'
B3D 10'
B4A 10'
B4B 10'
B4C 10'
B4D 10'

Date
6/13/13
6/13/13
6/13/13
6/13/13
6/13/13
6/13/13
6/13/13

Time
0935
1055
1110
1125
1235
1300
1220
1320

Emergency Next workday

Critical 2 Workdays

Urgent 3 Workdays

D=7 Workdays

Preservatives:
 H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC) O=NaOH T=Na₂S₂O₅

TAT: A=Overnight ≤ 24 hr
 B=Emergency Next workday
 C=Critical 2 Workdays
 D=Urgent 3 Workdays
 E=D=7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Metal

DISTRIBUTION: White with report. Yellow to folder. Pink to submitter.

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

P.O.#: _____
 Logged By: _____
 Date: _____

Method of Transport
 Client
 ATL
 CA OverN
 FEDEX
 Other: _____

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: **GEOCON CONSULTANTS, INC.**
 Address: 6671 Brisa Street
 City: Livemore State: CA Zip Code: 94550
 TEL: (925) 371-5900 FAX: (925) 371-5915

Project Name: **Ducks Unlimited**
 Project #: **F8690-02-01** Sampler: **J. Love**
 Relinquished by: **John Love** (Signature and Printed Name)
 Received by: **J. Love** (Signature and Printed Name)
 Date: **6/14/13** Time: **16:30**
 Relinquished by: **John Love** (Signature and Printed Name)
 Received by: **F. Powers** (Signature and Printed Name)
 Date: **6/15/13** Time: **08:15**

Relinquished by: _____ (Signature and Printed Name)
 Received by: _____ (Signature and Printed Name)
 Date: _____ Time: _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: **J. Love**
 Date: **6/14/13**

Send Report To:
 Alt: _____
 Co: **SAME AS ABOVE**
 Address: _____
 City: _____ State: _____ Zip: _____

Special Instructions/Comments:
composite Samples B3A thru B3D to form one sample
composite Samples B4A thru B4D to form one sample

LAB USE ONLY: Batch #:	Lab No.	Sample Description	Date	Time	SPECIFY APPROPRIATE MATRIX										QA/QC RTNE <input type="checkbox"/> CT <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode OTHER	REMARKS	
					SOIL	WATER	GROUND WATER	WASTEWATER	Container(s)	TAT	Type	PRESERVATION					
130795-33	-34	B3A 12.0'	6/14/13	1035	X	X	X	X	X	X	X	X	X	X	X	X	
	-35	B3B 11.0'		1035	X	X	X	X	X	X	X	X	X	X	X	X	
	-36	B3C 11.5'		1110	X	X	X	X	X	X	X	X	X	X	X	X	
	-37	B3D 11.5'		1125	X	X	X	X	X	X	X	X	X	X	X	X	
	-38	B4A 11.5'		1235	X	X	X	X	X	X	X	X	X	X	X	X	
	-39	B4B 11.5'		1300	X	X	X	X	X	X	X	X	X	X	X	X	
	-40	B4C 11.0'		1250	X	X	X	X	X	X	X	X	X	X	X	X	
		B4D 12.0'		1320	X	X	X	X	X	X	X	X	X	X	X	X	

Circle or Add Analyst(s) Requested:
 801A (Pesticides) 8258 (Metals) 8018 (Total Metal) 8015B (DRO) + TPH metal 8015A (DRO) 8015B (DRO) 8021 (BTEX) Herbicides (81518) 8021 (CAM 17 (601/700)) PH

LAB USE ONLY:
 TAT: A= Overnight ≤ 24 hr
 B= Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Metal
 Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C
 Z=Zn(AC) O=NaOH T=Na₂S₂O₃

DISTRIBUTION: White with report Yellow in folder Pink in submitter

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

Client: GEOCON CONSULTANTS, INC.
 Attn: John Love
 Address: 6671 Brisa Street
 City: Livemore State: CA Zip Code: 94550
 TEL: (925) 371-5900
 FAX: (925) 371-5915

Project Name: Dixus Unlimited
 Project #: F8690-02-01 Sampler: J. Love
 Date: 6/14/13 Received by: (Signature and Printed Name) J. Love
 Date: 6/15/13 Time: 09:12
 Date: Received by: (Signature and Printed Name) P. Brown
 Date: Time:

Method of Transport
 Client ATL CA OverN FEDEX Other: _____
Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Special Instructions/Comments:
 composite Sample B3A thru B3D 59
 composite Samples B4A thru B4D 60
 to form one sample to form one sample

Circle or Add Analysis(es) Requested
 801A (Pesticides) X
 802 (PCB) X
 82208 (Volatiles) X
 8015B (Total Metals) X
 8015B (TOC) X
 8021 (PTE) X
 TITLE 221C/M 17 (6010/100) X
 Herbicides (SISIB) X
 PH X

LAB USE ONLY:
 Batch #: 130795-41
 Lab No. B3A 17.0'
 B3B 14.5'
 B3C 14.5'
 B3D 14.5'
 B4A 14.5'
 B4B 16.0'
 B4C 14.5'
 B4D 19.0'

Date/Time: 6/14/13 10:45
 11:00
 11:15
 11:30
 12:40
 1:305
 12:55
 1:325

LAB USE ONLY: Batch # / Lab No.	Sample Description	Sample I.D. / Location	Date	Time	801A (Pesticides)	802 (PCB)	82208 (Volatiles)	8015B (Total Metals)	8015B (TOC)	8021 (PTE)	TITLE 221C/M 17 (6010/100)	Herbicides (SISIB)	PH	SOIL	GROUND WATER	WASTEWATER	SPECIFY APPROPRIATE MATRIX	Container(s) # Type	RESERVATION	Q A / Q C
130795-41	B3A 17.0'		6/14/13	10:45	X	X	X	X	X	X	X	X	X	X	X	X		F 1 TP		RTNE <input type="checkbox"/>
-42	B3B 14.5'			11:00	X	X	X	X	X	X	X	X	X	X	X	X				CT <input type="checkbox"/>
-43	B3C 14.5'			11:15	X	X	X	X	X	X	X	X	X	X	X	X				SWRCB <input type="checkbox"/>
-44	B3D 14.5'			11:30	X	X	X	X	X	X	X	X	X	X	X	X				Logcode <input type="checkbox"/>
-45	B4A 14.5'			12:40	X	X	X	X	X	X	X	X	X	X	X	X				OTHER <input type="checkbox"/>
-45	B4B 16.0'			1:305	X	X	X	X	X	X	X	X	X	X	X	X				REMARKS
-47	B4C 14.5'			12:55	X	X	X	X	X	X	X	X	X	X	X	X				
-48	B4D 19.0'			1:325	X	X	X	X	X	X	X	X	X	X	X	X				

Sample/Records - Archival & Disposal
 Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
 - Sample: \$2.00 / sample / mo (after 45 days)
 - Records: \$1.00 / ATL workorder / mo (after 1 year)

LAB USE ONLY:
 TAT: A= Overnight ≤ 24 hr
 B= Emergency Next workday
 C= Critical 2 Workdays
 D= Urgent 3 Workdays
 E= Routine 7 Workdays
 Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Mictal
 Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(AC)₂ O=NaOH T=Na₂S₂O₃

Diane Galvan

From: John Love [love@geoconinc.com]
Sent: Monday, June 17, 2013 9:29 AM
To: Diane Galvan
Subject: Explosives Analysis
Attachments: E8690-02-01 COC Page 2 of 6.pdf

Hi Diane:

We would like to have a couple soil samples that arrived at the lab on Saturday also analyzed for explosives. I've attached a revised COC for the samples.

Let me know if there are any problems.

Thanks.



John Love, PG | *Senior Project Geologist*

Geocon Consultants, Inc.

6671 Brisa Street, Livermore, California 94550

Tel 925.371.5900 ext. 407 Direct 925.961.5276 Mobile 925.525.4142

www.geoconinc.com

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Advanced Technology Laboratories
 3275 Walnut Avenue
 Fremont Hill, CA 90755
 (562) 989-3045 • Fax (562) 989-4030

Client: **GEOCON CONSULTANTS, INC.**
 Attn: **John Love**

Project Name: **Ducks Unlimited**
 Received by: *[Signature]* (Printed Name) **John Love**
 Date: **6/14/13**

Method of Transport: Client ATL CA OverN FEDEX Other: _____
 Sample Condition Upon Receipt: 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOL) Y N 5. P. OF B.P.LS MATCH OCC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Address: 6671 Brisa Street
 City: Livemore State: CA Zip Code: 94550
 Project #: **E8690-02-01** Sampler: _____
 Received by: *[Signature]* (Printed Name) **J. Love**
 Date: **6/14/13** Time: **16:30**
 Received by: _____ (Printed Name) _____
 Date: _____ Time: _____

Bill To: _____
 Attn: _____
 Co: **SAME AS ABOVE**
 Address: _____
 City: _____ State: _____ Zip: _____
 Circle or Add Analyst(s) Requester: _____
 Special Instructions/Comments: **Compos. to samples B1A thru B1D to form one sample.**
Compos. to samples B2A thru B2D to form one sample.

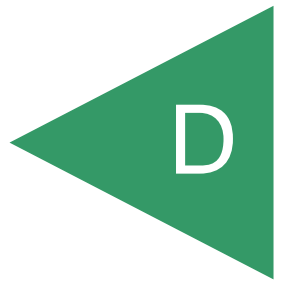
Sample/Records - Archival & Disposal
 (Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.)
 Storage Fees (applies when storage is requested):
 - Sample : \$2.00 / sample / mo (after 45 days)
 - Records : \$1.00 / ATL workorder / mo (after 1 year)

LAB USE ONLY:	Sample I.D. / Location	Date	Time	QA/QC	RESERVATION	REMARKS
Batch #:	B1A / 1.5'	6/14/13	0905	RTNE <input type="checkbox"/> CT <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode <input type="checkbox"/> OTHER <input type="checkbox"/>		
Lab No.:	B1B / 2.5'	6/14/13	0742			
	B1C / 2.5'	6/14/13	0905			
	B1D / 2.0'	6/14/13	0950			
	B2A / 1.0'	6/14/13	0915			
	B2B / 1.5'	6/14/13	0930			
	B2C / 2.0'	6/14/13	0945			
	B2D / 1.5'	6/14/13	1010			

TAT: A = Overnight < 24 hr
 B = Next workday
 C = Critical 2 Workdays
 D = Urgent 3 Workdays
 E = Routine 7 Workdays
 Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Tedlar G=Glass P=Plastic M=Metal
 Preservatives: H=HCl N=HNO S=H₂SO C=4 C
 Z=Zn(AC) O=NaOH T=Na₂SO₄

DISTRIBUTION: White with report Yellow to Inlier Pink to submitter

APPENDIX



June 24, 2013

John Love
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 525-4142
Fax: (925) 371-5915

ACCREDITED IN ACCORDANCE WITH
nelac
ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No.: T104704502

Re: ATL Work Order Number : 1301798

Client Reference : Ducks Unlimited, E8690-02-01

Enclosed are the results for sample(s) received on June 15, 2013 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

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

Sincerely,



Eddie Rodriguez
Laboratory Director

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



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1B	1301798-01	Groundwater	6/13/13 8:29	6/15/13 8:12
B2D	1301798-02	Groundwater	6/13/13 11:55	6/15/13 8:12
B4C	1301798-03	Groundwater	6/13/13 13:45	6/15/13 8:12
B3B	1301798-04	Groundwater	6/13/13 14:10	6/15/13 8:12
Equipment Blank	1301798-05	Water	6/13/13 11:15	6/15/13 8:12
Trip Blank	1301798-06	Water	6/13/13 8:00	6/15/13 8:12



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B1B

Lab ID: 1301798-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Arsenic	ND	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Barium	0.18	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Beryllium	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:16	
Cadmium	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Chromium	0.0030	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Cobalt	0.013	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Copper	ND	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Lead	ND	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Molybdenum	0.029	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Nickel	0.014	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Selenium	0.015	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Silver	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Thallium	ND	0.015	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Vanadium	0.012	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:17	
Zinc	0.029	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:17	

Mercury by AA (Cold Vapor) EPA 7470

Analyst: VV

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	NA	1	B3F0461	06/21/2013	06/21/13 15:34	

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 17:17	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>106 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 17:17</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B1B

Lab ID: 1301798-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID B1B

Lab ID: 1301798-01

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:14	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>99.3 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:14</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>90.8 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:14</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.8 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:14</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.6 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:14</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B2D

Lab ID: 1301798-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Arsenic	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Barium	0.083	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Beryllium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:48	D2, D5
Cadmium	0.073	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Chromium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Cobalt	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Copper	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Lead	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Molybdenum	0.21	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Nickel	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Selenium	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Silver	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Thallium	ND	0.30	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Vanadium	0.20	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5
Zinc	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:49	D2, D5

Mercury by AA (Cold Vapor) EPA 7470

Analyst: VV

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	NA	1	B3F0461	06/21/2013	06/21/13 15:44	

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 17:36	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>116 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 17:36</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B2D

Lab ID: 1301798-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID B2D

Lab ID: 1301798-02

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 12:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>106 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>92.1 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.4 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.4 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 12:38</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B4C

Lab ID: 1301798-03

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Arsenic	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Barium	0.28	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Beryllium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:52	D2, D5
Cadmium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Chromium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Cobalt	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Copper	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Lead	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Molybdenum	0.33	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Nickel	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Selenium	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Silver	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:52	D2, D5
Thallium	ND	0.30	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5
Vanadium	0.18	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:52	D2, D5
Zinc	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:53	D2, D5

Mercury by AA (Cold Vapor) EPA 7470

Analyst: VV

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	NA	1	B3F0461	06/21/2013	06/21/13 15:46	

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 17:56	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>110 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 17:56</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID B4C

Lab ID: 1301798-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result	PQL	MDL	Dilution	Batch	Prepared	Date/Time	Notes
	(ug/L)	(ug/L)	(ug/L)				Analyzed	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID B4C

Lab ID: 1301798-03

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:02	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:02</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>95.3 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:02</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>92.6 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:02</i>	
<i>Surrogate: Toluene-d8</i>	<i>80.9 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:02</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B3B

Lab ID: 1301798-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Arsenic	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Barium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Beryllium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:55	D2, D5
Cadmium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Chromium	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Cobalt	0.11	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Copper	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Lead	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Molybdenum	ND	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Nickel	0.18	0.10	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Selenium	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Silver	ND	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Thallium	ND	0.30	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Vanadium	0.17	0.060	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5
Zinc	ND	0.20	NA	20	B3F0393	06/19/2013	06/19/13 16:56	D2, D5

Mercury by AA (Cold Vapor) EPA 7470

Analyst: VV

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	NA	1	B3F0461	06/21/2013	06/21/13 15:48	

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 18:15	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>112 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 18:15</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID B3B

Lab ID: 1301798-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result	PQL	MDL	Dilution	Batch	Prepared	Date/Time	Notes
	(ug/L)	(ug/L)	(ug/L)				Analyzed	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID B3B

Lab ID: 1301798-04

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 13:26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>105 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:26</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>91.2 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:26</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>90.6 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:26</i>	
<i>Surrogate: Toluene-d8</i>	<i>78.1 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 13:26</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID Equipment Blank Lab ID: 1301798-05

Title 22 Metals by ICP-AES EPA 6010B

Analyst: AG

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Arsenic	ND	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Barium	0.031	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Beryllium	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:34	
Cadmium	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Chromium	0.012	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Cobalt	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Copper	0.0078	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:34	
Lead	0.0099	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Molybdenum	ND	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Nickel	0.0055	0.0050	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Selenium	ND	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Silver	ND	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:34	
Thallium	ND	0.015	NA	1	B3F0393	06/19/2013	06/19/13 16:35	
Vanadium	0.0037	0.0030	NA	1	B3F0393	06/19/2013	06/19/13 16:34	
Zinc	0.023	0.010	NA	1	B3F0393	06/19/2013	06/19/13 16:35	

Mercury by AA (Cold Vapor) EPA 7470

Analyst: VV

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	NA	1	B3F0461	06/21/2013	06/21/13 15:50	

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 15:57	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>104 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 15:57</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	



Certificate of Analysis

Geocon Consultants, Inc.
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Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID Equipment Blank Lab ID: 1301798-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Client Sample ID Equipment Blank Lab ID: 1301798-05

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>95.3 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 10:38</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>93.7 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 10:38</i>	
<i>Surrogate: Dibromofluoromethane</i>	<i>86.5 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 10:38</i>	
<i>Surrogate: Toluene-d8</i>	<i>77.8 %</i>		<i>70 - 130</i>		B3F0420	06/20/2013	<i>06/20/13 10:38</i>	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID Trip Blank

Lab ID: 1301798-06

Gasoline Range Organics by EPA 8015B

Analyst: DP

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics	ND	0.05	NA	1	B3F0401	06/19/2013	06/19/13 15:38	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>104 %</i>		<i>70 - 130</i>		B3F0401	06/19/2013	<i>06/19/13 15:38</i>	

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1,1-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1,2,2-Tetrachloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1,2-Trichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,1-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2,3-Trichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2,3-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2,4-Trichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2,4-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2-Dibromo-3-chloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2-Dibromoethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2-Dichloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,3,5-Trimethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,3-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,3-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
1,4-Dichlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
2,2-Dichloropropane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
2-Chloroethyl vinyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
2-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
4-Chlorotoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
4-Isopropyltoluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Benzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Bromobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Bromodichloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Bromoform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Bromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Client Sample ID Trip Blank

Lab ID: 1301798-06

Volatile Organic Compounds by EPA 8260

Analyst: SL

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Carbon tetrachloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Chlorobenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Chloroethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Chloroform	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Chloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
cis-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
cis-1,3-Dichloropropene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Di-isopropyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Dibromochloromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Dibromomethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Dichlorodifluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Ethyl tert-butyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Ethylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Hexachlorobutadiene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Isopropylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
m,p-Xylene	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Methylene chloride	ND	1.0	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
MTBE	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
n-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
n-Propylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Naphthalene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
o-Xylene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
sec-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Styrene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
tert-Amyl methyl ether	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
tert-Butanol	ND	10	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
tert-Butylbenzene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Tetrachloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Toluene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
trans-1,2-Dichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Trichloroethene	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Trichlorofluoromethane	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	
Vinyl chloride	ND	0.50	NA	1	B3F0420	06/20/2013	06/20/13 10:15	

Surrogate: 1,2-Dichloroethane-d4	103 %	70 - 130		B3F0420	06/20/2013	06/20/13 10:15
Surrogate: 4-Bromofluorobenzene	98.9 %	70 - 130		B3F0420	06/20/2013	06/20/13 10:15
Surrogate: Dibromofluoromethane	93.6 %	70 - 130		B3F0420	06/20/2013	06/20/13 10:15
Surrogate: Toluene-d8	85.9 %	70 - 130		B3F0420	06/20/2013	06/20/13 10:15



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

QUALITY CONTROL SECTION

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

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0393 - EPA 3010A

Blank (B3F0393-BLK1)

Prepared: 6/19/2013 Analyzed: 6/19/2013

Antimony	ND	0.0050			NR
Arsenic	ND	0.010			NR
Barium	ND	0.0030			NR
Beryllium	ND	0.0030			NR
Cadmium	ND	0.0030			NR
Chromium	ND	0.0030			NR
Cobalt	ND	0.0030			NR
Copper	ND	0.0050			NR
Lead	ND	0.0050			NR
Molybdenum	ND	0.0050			NR
Nickel	ND	0.0050			NR
Selenium	ND	0.010			NR
Silver	ND	0.0030			NR
Thallium	ND	0.015			NR
Vanadium	ND	0.0030			NR
Zinc	ND	0.010			NR

LCS (B3F0393-BS1)

Prepared: 6/19/2013 Analyzed: 6/19/2013

Antimony	1.03977	0.0050	1.00000		104	80 - 120
Arsenic	0.977774	0.010	1.00000		97.8	80 - 120
Barium	0.988298	0.0030	1.00000		98.8	80 - 120
Beryllium	1.03879	0.0030	1.00000		104	80 - 120
Cadmium	0.976710	0.0030	1.00000		97.7	80 - 120
Chromium	0.998795	0.0030	1.00000		99.9	80 - 120
Cobalt	1.00369	0.0030	1.00000		100	80 - 120
Copper	1.01952	0.0050	1.00000		102	80 - 120
Lead	1.02510	0.0050	1.00000		103	80 - 120
Molybdenum	0.999402	0.0050	1.00000		99.9	80 - 120
Nickel	0.995129	0.0050	1.00000		99.5	80 - 120
Selenium	0.952573	0.010	1.00000		95.3	80 - 120
Silver	1.00909	0.0030	1.00000		101	80 - 120
Thallium	1.02116	0.015	1.00000		102	80 - 120
Vanadium	1.01538	0.0030	1.00000		102	80 - 120
Zinc	1.03728	0.010	1.00000		104	80 - 120

Matrix Spike (B3F0393-MS1)

Source: 1301748-01

Prepared: 6/19/2013 Analyzed: 6/19/2013

Antimony	2.48420	0.0050	2.50000	ND	99.4	78 - 117
Arsenic	2.35734	0.010	2.50000	ND	94.3	78 - 113
Barium	2.48169	0.0030	2.50000	0.089112	95.7	77 - 112
Beryllium	2.47876	0.0030	2.50000	ND	99.2	82 - 112



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

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

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0393 - EPA 3010A (continued)

Matrix Spike (B3F0393-MS1) - Continued

Source: 1301748-01

Prepared: 6/19/2013 Analyzed: 6/19/2013

Cadmium	2.28534	0.0030	2.50000	ND	91.4	76 - 107
Chromium	2.38102	0.0030	2.50000	0.002829	95.1	76 - 113
Cobalt	2.28593	0.0030	2.50000	ND	91.4	75 - 110
Copper	2.39466	0.0050	2.50000	ND	95.8	77 - 115
Lead	2.33899	0.0050	2.50000	ND	93.6	76 - 109
Molybdenum	2.39116	0.0050	2.50000	0.010817	95.2	77 - 108
Nickel	2.28314	0.0050	2.50000	1.9513E-3	91.2	67 - 121
Selenium	2.30023	0.010	2.50000	0.015236	91.4	67 - 125
Silver	2.43452	0.0030	2.50000	ND	97.4	68 - 129
Thallium	2.37348	0.015	2.50000	ND	94.9	70 - 119
Vanadium	2.45591	0.0030	2.50000	0.014063	97.7	80 - 113
Zinc	2.27649	0.010	2.50000	ND	91.1	62 - 120

Matrix Spike Dup (B3F0393-MSD1)

Source: 1301748-01

Prepared: 6/19/2013 Analyzed: 6/19/2013

Antimony	2.48718	0.0050	2.50000	ND	99.5	78 - 117	0.120	20
Arsenic	2.36478	0.010	2.50000	ND	94.6	78 - 113	0.315	20
Barium	2.49226	0.0030	2.50000	0.089112	96.1	77 - 112	0.425	20
Beryllium	2.48884	0.0030	2.50000	ND	99.6	82 - 112	0.406	20
Cadmium	2.29296	0.0030	2.50000	ND	91.7	76 - 107	0.333	20
Chromium	2.38583	0.0030	2.50000	0.002829	95.3	76 - 113	0.202	20
Cobalt	2.28771	0.0030	2.50000	ND	91.5	75 - 110	0.0777	20
Copper	2.40157	0.0050	2.50000	ND	96.1	77 - 115	0.288	20
Lead	2.34774	0.0050	2.50000	ND	93.9	76 - 109	0.374	20
Molybdenum	2.39960	0.0050	2.50000	0.010817	95.6	77 - 108	0.352	20
Nickel	2.28802	0.0050	2.50000	1.9513E-3	91.4	67 - 121	0.213	20
Selenium	2.31445	0.010	2.50000	0.015236	92.0	67 - 125	0.617	20
Silver	2.44008	0.0030	2.50000	ND	97.6	68 - 129	0.228	20
Thallium	2.37023	0.015	2.50000	ND	94.8	70 - 119	0.137	20
Vanadium	2.45644	0.0030	2.50000	0.014063	97.7	80 - 113	0.0216	20
Zinc	2.28102	0.010	2.50000	ND	91.2	62 - 120	0.198	20



Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Mercury by AA (Cold Vapor) EPA 7470 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0461 - EPA 245.1/7470

Blank (B3F0461-BLK1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	ND	0.20			NR				
LCS (B3F0461-BS1)				Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	10.2587	0.20	10.0000		103	80 - 120			
Matrix Spike (B3F0461-MS1)				Source: 1301798-01 Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	9.93623	0.20	10.0000	0.049436	98.9	70 - 130			
Matrix Spike Dup (B3F0461-MSD1)				Source: 1301798-01 Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	9.97081	0.20	10.0000	0.049436	99.2	70 - 130		0.347	20
Post Spike (B3F0461-PS1)				Source: 1301798-01 Prepared: 6/21/2013 Analyzed: 6/21/2013					
Mercury	4.94644		5.00000	0.049436	97.9	70 - 130			



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Gasoline Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0401 - GCVOAW

Blank (B3F0401-BLK1)

Prepared: 6/19/2013 Analyzed: 6/19/2013

Gasoline Range Organics	ND	0.05				NR			
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<i>Surrogate: 4-Bromofluorobenzene</i>	0.09924		0.100000			99.2	70 - 130		
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LCS (B3F0401-BS1)

Prepared: 6/19/2013 Analyzed: 6/19/2013

Gasoline Range Organics	0.919000	0.05	1.00000			91.9	70 - 130		
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<i>Surrogate: 4-Bromofluorobenzene</i>	0.09909		0.100000			99.1	70 - 130		
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LCS Dup (B3F0401-BSD1)

Prepared: 6/19/2013 Analyzed: 6/19/2013

Gasoline Range Organics	0.904000	0.05	1.00000			90.4	70 - 130	1.65	20
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<i>Surrogate: 4-Bromofluorobenzene</i>	0.1060		0.100000			106	70 - 130		
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Duplicate (B3F0401-DUP1)

Source: 1301805-01

Prepared: 6/19/2013 Analyzed: 6/19/2013

Gasoline Range Organics	ND	0.05				ND	NR		20
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<i>Surrogate: 4-Bromofluorobenzene</i>	0.1029		0.100000			103	70 - 130		
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Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	Limits	RPD	RPD	Notes
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Batch B3F0420 - MSVOAW_LL

Blank (B3F0420-BLK1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1,1,2-Tetrachloroethane	ND	0.50			NR				
1,1,1-Trichloroethane	ND	0.50			NR				
1,1,2,2-Tetrachloroethane	ND	0.50			NR				
1,1,2-Trichloroethane	ND	0.50			NR				
1,1-Dichloroethane	ND	0.50			NR				
1,1-Dichloroethene	ND	0.50			NR				
1,1-Dichloropropene	ND	0.50			NR				
1,2,3-Trichloropropane	ND	0.50			NR				
1,2,3-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trichlorobenzene	ND	0.50			NR				
1,2,4-Trimethylbenzene	ND	0.50			NR				
1,2-Dibromo-3-chloropropane	ND	0.50			NR				
1,2-Dibromoethane	ND	0.50			NR				
1,2-Dichlorobenzene	ND	0.50			NR				
1,2-Dichloroethane	ND	0.50			NR				
1,2-Dichloropropane	ND	0.50			NR				
1,3,5-Trimethylbenzene	ND	0.50			NR				
1,3-Dichlorobenzene	ND	0.50			NR				
1,3-Dichloropropane	ND	0.50			NR				
1,4-Dichlorobenzene	ND	0.50			NR				
2,2-Dichloropropane	ND	0.50			NR				
2-Chloroethyl vinyl ether	ND	0.50			NR				
2-Chlorotoluene	ND	0.50			NR				
4-Chlorotoluene	ND	0.50			NR				
4-Isopropyltoluene	ND	0.50			NR				
Benzene	ND	0.50			NR				
Bromobenzene	ND	0.50			NR				
Bromodichloromethane	ND	0.50			NR				
Bromoform	ND	0.50			NR				
Bromomethane	ND	0.50			NR				
Carbon tetrachloride	ND	0.50			NR				
Chlorobenzene	ND	0.50			NR				
Chloroethane	ND	0.50			NR				
Chloroform	ND	0.50			NR				
Chloromethane	ND	0.50			NR				
cis-1,2-Dichloroethene	ND	0.50			NR				
cis-1,3-Dichloropropene	ND	0.50			NR				
Di-isopropyl ether	ND	0.50			NR				
Dibromochloromethane	ND	0.50			NR				
Dibromomethane	ND	0.50			NR				
Dichlorodifluoromethane	ND	0.50			NR				



Certificate of Analysis

Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
Report To : John Love
Reported : 06/24/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B3F0420 - MSVOAW_LL (continued)

Blank (B3F0420-BLK1) - Continued

Prepared: 6/20/2013 Analyzed: 6/20/2013

Ethyl tert-butyl ether	ND	0.50			NR				
Ethylbenzene	ND	0.50			NR				
Hexachlorobutadiene	ND	0.50			NR				
Isopropylbenzene	ND	0.50			NR				
m,p-Xylene	ND	1.0			NR				
Methylene chloride	ND	1.0			NR				
MTBE	ND	0.50			NR				
n-Butylbenzene	ND	0.50			NR				
n-Propylbenzene	ND	0.50			NR				
Naphthalene	ND	0.50			NR				
o-Xylene	ND	0.50			NR				
sec-Butylbenzene	ND	0.50			NR				
Styrene	ND	0.50			NR				
tert-Amyl methyl ether	ND	0.50			NR				
tert-Butanol	ND	10			NR				
tert-Butylbenzene	ND	0.50			NR				
Tetrachloroethene	ND	0.50			NR				
Toluene	ND	0.50			NR				
trans-1,2-Dichloroethene	ND	0.50			NR				
Trichloroethene	ND	0.50			NR				
Trichlorofluoromethane	ND	0.50			NR				
Vinyl chloride	ND	0.50			NR				

<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.88		25.0000		104	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	26.16		25.0000		105	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	24.29		25.0000		97.2	70 - 130			
<i>Surrogate: Toluene-d8</i>	21.26		25.0000		85.0	70 - 130			

LCS (B3F0420-BS1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	20.8700		20.0000		104	70 - 130			
Benzene	41.2000		40.0000		103	70 - 130			
Chlorobenzene	20.6000		20.0000		103	70 - 130			
MTBE	22.6100		20.0000		113	70 - 130			
Toluene	41.6200		40.0000		104	70 - 130			
Trichloroethene	21.3700		20.0000		107	70 - 130			

<i>Surrogate: 1,2-Dichloroethane-d4</i>	21.19		25.0000		84.8	70 - 130			
<i>Surrogate: 4-Bromofluorobenzene</i>	22.23		25.0000		88.9	70 - 130			
<i>Surrogate: Dibromofluoromethane</i>	21.24		25.0000		85.0	70 - 130			
<i>Surrogate: Toluene-d8</i>	21.13		25.0000		84.5	70 - 130			

LCS Dup (B3F0420-BSD1)

Prepared: 6/20/2013 Analyzed: 6/20/2013

1,1-Dichloroethene	19.3700		20.0000		96.8	70 - 130	7.46	20	
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Certificate of Analysis

Geocon Consultants, Inc.
 6671 Brisa Street
 Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01
 Report To : John Love
 Reported : 06/24/2013

Volatile Organic Compounds by EPA 8260 - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B3F0420 - MSVOAW_LL (continued)

LCS Dup (B3F0420-BSD1) - Continued

Prepared: 6/20/2013 Analyzed: 6/20/2013

Benzene	40.2500		40.0000		101	70 - 130	2.33	20	
Chlorobenzene	19.8200		20.0000		99.1	70 - 130	3.86	20	
MTBE	21.6700		20.0000		108	70 - 130	4.25	20	
Toluene	40.6100		40.0000		102	70 - 130	2.46	20	
Trichloroethene	20.4500		20.0000		102	70 - 130	4.40	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>21.09</i>		<i>25.0000</i>		<i>84.4</i>	<i>70 - 130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>22.89</i>		<i>25.0000</i>		<i>91.6</i>	<i>70 - 130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>21.05</i>		<i>25.0000</i>		<i>84.2</i>	<i>70 - 130</i>			
<i>Surrogate: Toluene-d8</i>	<i>21.04</i>		<i>25.0000</i>		<i>84.2</i>	<i>70 - 130</i>			



Certificate of Analysis

Geocon Consultants, Inc.

6671 Brisa Street

Livermore, CA 94550

Project Number : Ducks Unlimited, E8690-02-01

Report To : John Love

Reported : 06/24/2013

Notes and Definitions

D5	Sample diluted due to failing internal standard in the original run.
D2	Sample required dilution due to high concentration of non-target analyte.
ND	Analyte not detected at or above reporting limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA1	CA-NELAP (CDPH)
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

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

Advanced Technology Laboratories
 3275 Walnut Avenue
 Signal Hill, CA 90755
 (562) 989-4045 • Fax (562) 989-4040

P.O.#: _____
 Logged By: _____
 Date: _____

Method of Transport
 Client ATL CA OverN FEDEX Other: GSU

Sample Condition Upon Receipt
 1. CHILLED 2c, 1-8 N 4. SEALED Y N
 2. HEADSPACE (VOA) N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

Client: **GEOCON CONSULTANTS, INC.**
 Address: 6671 Brisa Street
 City: **Livermore** State: **CA** Zip Code: **94550**
 TEL: (925) 371-5900 FAX: (925) 371-5915

Project Name: **Ducks unlimited** Project #: **E8690-02-01** Sampler: **J. Love**

Relinquished by: **John Love** (Print Name) (Signature) (Date) **6/14/13**
 Received by: **John Love** (Signature and Printed Name) (Date) **6/15/13**
 Time: **16:30** Date: **6/15/13**
 Time: **08:12** Date: _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: **J. Love** (Print Name) (Signature) (Date) **6/14/13**

Special Instructions/Comments:
Water - Gel cleanup

Send Report To:
 Alt: _____ Co: **SAME AS ABOVE**
 Address _____ City _____ State _____ Zip _____

Circle or Add Analysis(s) Requested:
 809A (Pesticides) 8220C (RNA) 8015B (GFO) 8015B (GFO) + TRM 8021 (ATEX) 8015B (GFO) + TRM Herbicides (S1518) WASTE WATER GROUND WATER SOIL WATER CONTAINER(S)

LAB USE ONLY:	Batch #:	Sample Description	Sample I.D. / Location	Date	Time	Q A / Q C
1	100798	1	B1B	6/13/13	8:29	RTNE <input type="checkbox"/> CT <input type="checkbox"/>
2		2	B2D		11:55	SWRCB <input type="checkbox"/> Logcode: _____ OTHER: _____
3		3	B4C		13:45	REMARKS
4		4	B3B		14:10	
5		5	Equipment Blank		11:15	

TAT starts 8 a.m. following day if samples received after 3 p.m.
 Container Types: T=Tube V=VOA L=Liter P=Pin J=Jar B=Fecliar G=Glass P=Plastic M=Metal
 C=Critical 2 Workdays D=Urgent 3 Workdays E=7 Workdays
 Preservatives: H=Hcl N=HNO3 S=H2SO4 C=4°C Z=Zn(AC) O=NaOH T=Na2S2O8

CHAIN OF CUSTODY RECORD

FOR LABORATORY USE ONLY:

Method of Transport
 Client
 ATL
 CA OverN
 FEDEX
 Other: _____

Sample Condition Upon Receipt
 1. CHILLED Y N 4. SEALED Y N
 2. HEADSPACE (VOA) Y N 5. # OF SPLS MATCH COC Y N
 3. CONTAINER INTACT Y N 6. PRESERVED Y N

P.O.#: _____ Date: _____

Logged By: _____

Address: 6671 Brisa Street
 City: Livemore State: CA Zip Code: 94550
 TEL: (925) 371-5900
 FAX: (925) 371-5915

Client: GEOCON CONSULTANTS, INC.
 Attn: John Love

Project Name: Ducks Unlimited
 Project #: F8698-02-01 Sampler: J. Love

Received by: (Signature and Printed Name) J. Love Date: 6/14/13 Time: 16:30

Received by: (Signature and Printed Name) [Signature] Date: 6/15/13 Time: 0812

Received by: (Signature and Printed Name) _____ Date: _____ Time: _____

Special Instructions/Comments: Herbicides (81518)

Bill To: _____
 Attn: _____
 Co: SAME AS ABOVE
 Address: _____
 City: _____ State: _____ Zip: _____

I hereby authorize ATL to perform the work indicated below:
 Project Mgr / Submitter: J. Love
 Date: _____

Signature: [Signature]

LAB USE ONLY:	Sample Description	Sample I.D. / Location	Date	Time	Circle or Add Analysis(es) Requested	Container(s)	RESERVATION	QA/QC					
Batch #:						#	Type	RTNE <input type="checkbox"/> CT <input type="checkbox"/> SVRCB <input type="checkbox"/> Logcode _____ OTHER _____					
190798-6	Trip Blank		6/13/13	8:00	201A (Pesticides) 202 (PCB) 203 (VOCs) 204 (Sulfides) 205 (GRO) 206 (GRO) 207 (GRO) 208 (GRO) 209 (GRO) 210 (GRO) 211 (GRO) 212 (GRO) 213 (GRO) 214 (GRO) 215 (GRO) 216 (GRO) 217 (GRO) 218 (GRO) 219 (GRO) 220 (GRO) 221 (GRO) 222 (GRO) 223 (GRO) 224 (GRO) 225 (GRO) 226 (GRO) 227 (GRO) 228 (GRO) 229 (GRO) 230 (GRO) 231 (GRO) 232 (GRO) 233 (GRO) 234 (GRO) 235 (GRO) 236 (GRO) 237 (GRO) 238 (GRO) 239 (GRO) 240 (GRO) 241 (GRO) 242 (GRO) 243 (GRO) 244 (GRO) 245 (GRO) 246 (GRO) 247 (GRO) 248 (GRO) 249 (GRO) 250 (GRO) 251 (GRO) 252 (GRO) 253 (GRO) 254 (GRO) 255 (GRO) 256 (GRO) 257 (GRO) 258 (GRO) 259 (GRO) 260 (GRO) 261 (GRO) 262 (GRO) 263 (GRO) 264 (GRO) 265 (GRO) 266 (GRO) 267 (GRO) 268 (GRO) 269 (GRO) 270 (GRO) 271 (GRO) 272 (GRO) 273 (GRO) 274 (GRO) 275 (GRO) 276 (GRO) 277 (GRO) 278 (GRO) 279 (GRO) 280 (GRO) 281 (GRO) 282 (GRO) 283 (GRO) 284 (GRO) 285 (GRO) 286 (GRO) 287 (GRO) 288 (GRO) 289 (GRO) 290 (GRO) 291 (GRO) 292 (GRO) 293 (GRO) 294 (GRO) 295 (GRO) 296 (GRO) 297 (GRO) 298 (GRO) 299 (GRO) 300 (GRO)	E	2	V	G				
1	B1B			8:29									
2	B2D			11:55									
3	B4C			15:45									
4	B3B			14:10									

TAT: A= Overnight < 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO₃ S=H₂SO₄ C=4°C Z=Zn(AC) O=NaOH T=Na₂S₂O₃