Appendix C

Technical Memorandum
Investigation and Evaluation of Organochlorine Pesticides at the Proposed Jones Elementary School
San Bernadino, California

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Technical Memorandum

Investigation and Evaluation of Organochlorine Pesticides Proposed Jones Elementary School Site San Bernardino, California

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DEPARTMENT OF TOXIC SUBSTANCES CONTROL
Southern California Region

TECHNICAL MEMORANDUM DTSC

Subject: Technical Memorandum for Investigation and Evaluation of Organochlorine Pesticides in Soil at the Proposed Jones Elementary School Site-San Bernardino, California, as part of the DTSC Residential Pesticide Study

1.0 INTRODUCTION

This Technical Memorandum presents the results of an environmental investigation of organochlorine pesticides at a proposed school site in the San Bernardino City Unified School District (SBCUSD). The investigation was carried out by the State of California Department of Toxic Substances Control (DTSC), as a part of the U.S. EPA-funded Residential Pesticide Study to determine the prevalence of organochlorine pesticides in soils associated with historical termiticide applications, and whether they pose a threat to human health or the environment at residential properties proposed as school sites. The Residential Pesticide Study samples were collected by DTSC staff in conjunction with the Preliminary Environmental Assessment (PEA) investigation conducted by Kleinfelder, Inc. on behalf of the SBCUSD. This Technical Memorandum presents the findings of the DTSC investigation and conclusions based on a human health risk assessment for the proposed school site.

SBCUSD voluntarily agreed to participate in the study to evaluate the residences at the Proposed Jones Elementary School site. A total of four residences were sampled as part of the initial investigation, specifically, 758 F Street, 746 F Street, 697 7th Street and 679 7th Street (Figure 1). Once access was obtained, a supplemental pesticide investigation was performed at 758 F Street, 746 F Street, 752 F Street, 679 7th Street and 679 G Street (Figure 2).

1.1 Background

Chlordane was widely used throughout the United States as a termiticide until it was banned by the U.S. EPA in 1988. Based on historical information, chlordane was commercially applied using primarily two methods: 1) application onto surface soils around homes and in crawlspaces; and 2) injection into subsurface soils around home footings and foundations as a concentrated liquid barrier.

For proposed school sites, DTSC does not routinely evaluate residential properties for potential impacts from organochlorine pesticides. However, based on the widespread application of chlordane in and around homes; the potential unacceptable risks posed by residual chlordane and other pesticides in soil within residential subdivisions; the environmental persistence of chlorinated pesticides; and the lack of data on pesticide residues at residential and/or commercial properties, further investigation is warranted

In order to evaluate the need for sampling and analysis of organochlorine pesticides at residential areas acquired for new school construction, DTSC is conducting a Residential Pesticide Study and is collecting soil samples at selected residential areas for analysis of organochlorine pesticides at a State of California-certified contract laboratory. Under an unrestricted land use scenario, the results will be evaluated for potential human health risks and presented to the school district for further investigation or removal action if necessary. The overall findings of the DTSC study will be presented

in a final report, along with the recommendation for or against region-wide organochlorine pesticide sampling at residential areas proposed for school development in southern California.

2.0 SAMPLING METHODS AND PROCEDURES

Samples were collected under a DTSC-prepared scope of work (DTSC 2002). During the initial investigation of four homes, a total of 48 soil samples, including two field duplicate soil samples and one stoop sample, were collected for analysis of organochlorine pesticides (OCPs) using EPA Method 8081A. Hand auger soil sampling techniques were used to collect grab soil samples from the surface (0- to 0.5-feet), 2-feet below ground surface (bgs) and 4-feet bgs. Samples were collected near the footings of the homes. During the supplemental pesticide investigation, 23 soil samples, including two field duplicate samples and one stoop sample, were collected for analysis of OCPs. Based on the results of the initial investigation, only surface soil samples (0- to 0.5-feet bgs) were collected. Sampling locations are shown in Figure 1 and 2.

2.1.1 Utility Clearance

Prior to field activities, Underground Service Alert (USA) was notified of intent to conduct subsurface investigations. All proposed locations were clearly marked with surveyor's flagging, as required by USA. USA contacted utility owners of record with the site vicinity and notified them of the subsurface investigation intent that may be in near buried utilities. Utility owners or their designated agent were responsible to clearly mark the position of their utilities on ground surface through out the area designated for investigation within the public right of way.

2.1.2 Soil Samples

Borings were advanced using hand auger techniques. Once the sample depth was reached, the hand auger was removed from the boring and grab samples were collected using disposable hand trowels and placed in pre-labeled glass jars. Upon completion of sampling, soil cuttings generated during hand augering were placed back into borings.

2.1.3 Sample Containers and Preservatives

Prior to sampling, Associated Laboratories, a State of California-certified contract laboratory in Orange, California, provided sample containers required for the specific analysis. Upon collection of soil samples, samples were placed in an insulated cooler at 4 °C and transported to the lab under chains of custody.

2.1.4 Sample Packaging and Shipment

To identify and manage samples obtained in the field, a sample label was affixed to each sample container. The sample labels included the following information:

- Site name
- Boring number
- Sample identification number
- Sampler's initials

- Date and time of collection

2.1.5 Sample Documentation

Field notes were taken to document where, when, how, and from whom any vital project information was obtained (Appendix A). Entries in the field notes include the following:

- Sample identification number
- Sample depth
- Sample time
- Sampler's initials
- General comments/observations

2.1.6 Geologic Soil Classification

All soil samples were classified by a DTSC Registered Geologist, in accordance with the United States Classification System In general, the majority of the soil samples can be classified as relatively fine grained, composed predominantly of silts and clay, with a small percentage of fine sands. The 0.5-foot samples are predominantly silts (i.e., composed mostly of silt with lesser amounts of sand and clay) The high organic content (roots, leaf debris, etc.) is likely the result of vegetation growing at the site. Soil samples from the 2-foot and 4-foot depths were predominantly clayey silts, with dark to medium brown coloring, and less evidence of organic material. Fine sand became more abundant with depth

2.1.7 Chain-of-Custody (COC) Records

COC records were used to document sample collection and shipment history to the laboratory for analysis, copies of which are maintained on file at DTSC. A COC record accompanied all sample shipments for analyses.

2.1.8 Decontamination Procedures

All non-disposable equipment that came into contact with potentially contaminated soil or water was decontaminated consistently to assure the quality of samples collected. Disposable equipment intended for one time use was not decontaminated, but was packaged for appropriate disposal. After each boring location was sampled, equipment was decontaminated using a three-stage procedure as follows:

- Non-phosphate detergent and tap water wash, brush when necessary
- Initial deionized/distilled water rinse
- Final deionized/distilled water rinse

Equipment was decontaminated in a pre-designated area on plastic sheeting, and clean bulky equipment was stored on plastic sheeting in uncontaminated areas.

After all samples were collected and equipment was decontaminated, an equipment blank was collected. This procedure consisted of collecting a one-liter sample of the final deionized/distilled water rinseate as it was poured over a decontaminated hand auger. The sample was collected in a pre-labeled glass jar and placed in the cooler

along with the soil samples for transport to the laboratory and analysis of organochlorine pesticides by EPA Method 8081A

2.1.9 Investigative-Derived Waste Management

In the process of collecting environmental samples during the proposed field sampling program, different types of potentially contaminated investigation-derived wastes were generated, including the following:

- Used personal protective equipment (PPE)
- Disposable sampling equipment
- Soil cuttings
- Decontamination fluids

Sampling depths did not advance past four feet bgs. Soil cuttings were placed back in respective borings. Decontamination fluids were properly disposed of offsite. Disposable sampling equipment and used PPE were double-bagged and placed in a municipal refuse receptacle. These wastes were not considered hazardous and were sent to a municipal landfill. Any PPE and disposable equipment that could potentially be reused were rendered inoperable before disposal in the refuse receptacle.

3.0 ANALYTICAL PROGRAM AND RESULTS

A total of 71 soil samples were collected (48 surface and sub-surface samples during the initial investigation and 23 surface samples during the supplemental investigation), including quality control samples, and analyzed for organochlorine pesticides by EPA Method 8081A.

3.1.1 Analytical Results

The organochlorine pesticide (OCP) analytical results are summarized in Tables 3-1for the initial (e.g., JON-1-0.5) and supplemental (e.g., JONB-1-0.5) investigations. The raw analytical data are also provided in Appendix B.

The following pesticides were detected at least once in site soil samples:

- 4,4'-DDD (maximum concentration of 4.45 mg/kg)
- 4,4'-DDE (maximum concentration of 3.36 mg/kg)
- 4,4'-DDT (maximum concentration of 9.65 mg/kg)
- Chlordane (maximum concentration of 336 mg/kg)
- Dieldrin (maximum concentration of 24.0 mg/kg)
- Endrin (maximum concentration of 0.005 mg/kg)
- Heptachlor (maximum concentration of 0.92 mg/kg)
- Heptachlor epoxide (maximum concentration of 0.78 mg/kg)
- Lindane (maximum concentration of 0.036 mg/kg)

The highest concentration of each pesticide was detected in surface soil samples (0- to 0.5-feet bgs). At 2- and 4-feet bgs, only low levels of chlordane, 4,4'-DDE, 4,4'-DDT and dieldrin were detected. The frequency of detection for OCPs in surface soil samples was as follows:

- 4,4'-DDD (13/42 or 31 percent)
- 4,4'-DDE (36/42 or 86 percent)
- 4,4'-DDT (37/42 or 88 percent)
- Chlordane (40/42 or 95 percent)
- Dieldrin (31/42 or 74 percent)
- Endrin (1/42 or 2 percent)
- Heptachlor (10/42 or 24 percent)
- Heptachlor epoxide (4/42 or 10 percent)
- Lindane (3/42 or 7 percent)

For subsurface soil samples collected at 2-feet bgs, the OCPs detected and the frequencies of detection were as follows:

- 4,4'-DDE (5/15 or 33 percent)
- 4,4'-DDT (4/15 or 27 percent)
- Chlordane (8/15 or 53 percent)
- Dieldrin (9/15 or 60 percent)

For subsurface soil samples collected at 4-feet bgs, the OCPs detected and the frequencies of detection were as follows:

- 4,4'-DDE (3/15 or 20 percent)
- 4,4'-DDT (3/15 or 20 percent)
- Chlordane (6/15 or 40 percent)
- Dieldrin (4/15 or 27 percent)

As can be seen from the above data, the OCPs detected, the reported soil concentration and the frequency of detection all substantially decrease with depth.

3.2 Data Validation

This section summarizes the findings of the validation of 48 soil samples and two water samples for Lab Report #106849. These samples were collected on 2/19/03 Also, this report summarizes the findings of the validation of 23 soil samples for Lab Report #109785. These samples were collected on 4/23/03. Associated Laboratories in Orange, California analyzed all samples. The samples were analyzed for OCPs (EPA 8081A).

The laboratory data were reviewed to evaluate compliance with this method, and the quality of the data reported. The following aspects of data quality were evaluated:

- Data Completeness
- Holding Times and Preservation
- Blanks
- Laboratory Control Samples
- Matrix Spike/Matrix Spike Duplicates
- Initial Calibration

- Calibration Verification
- Surrogate Spikes
- Compound Quantitation

3.2.1 Documentation

All samples were properly recorded on COC Records. All COC Records were properly signed. All analyses were performed as requested on the chain-of-custody records.

3.2.2 Timeliness

All soil analyses were performed within the method-specified holding time. For Lab Report #106849, the two water samples were analyzed on 3/03/03 and 3/06/03 and the method blank, LCS and LCSD were analyzed on 2/24/03 with the batch date 2/26/03 (i.e., Associated Labs uses the batch date as the extraction date). The method blank, LCS and LCSD were applicable to the batch of 2/26/03. The water samples were analyzed within the required holding time. The samples were preserved on ice in the field and remained preserved on ice until the transfer of custody at the laboratory.

3.2.3 Initial Calibration and Continuing Calibration

Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and producing a linear calibration curve. Continuing calibration establishes the 12-hour relative response factors on which the quantitations are based and checks satisfactory performance of the instrument on a day to day basis. Initial calibration criteria were met for all analytes.

3.2.4 Method Blanks

The purpose of the laboratory method (or field) blank analysis is to determine the existence and magnitude of contamination resulting from laboratory (or field) activities. Method blanks were run at the required frequency. Organochlorine pesticides were not detected in the associated method blanks for the water analyses. The raw data was not submitted and therefore not reviewed. Organochlorine pesticides were not detected in one method blank for soil. Only one soil blank was reported for each lab report, although there were three batches of soil samples for Lab Report #106849 and two batches of soil samples for Lab Report #109785 and no indication as to which batch the reported blank belongs. Organochlorine pesticides were not detected in the equipment blank for Lab Report #106849. Therefore, decontamination procedures and cross-contamination is not suspected of having an effect on the sample results. For Lab Report #109785, an equipment blank was not submitted. Therefore, validation of decontamination procedures and cross-contamination cannot be performed.

3.2.5 Laboratory Control Samples

The laboratory control sample (LCS) provides a measure of the accuracy of analytical results. This is accomplished by adding a known amount of a substance to a previously analyzed sample. The accuracy is measured by comparing the measured increase in the sample result to the known spiked amount. LCS were run at the required frequency. All percent recoveries were within the laboratory QC acceptance criteria for water and soil analyses.

The raw data for the water was not submitted and therefore not reviewed.

3.2.6 Quality Control Samples

For Lab Report #106849, all percent recoveries were within the laboratory QC acceptance criteria for the soil samples. Matrix spike and matrix spike duplicate were not analyzed for the water samples. Consequently, matrix effects cannot be determined for these samples. For Lab Report #109785, in QC sample #109785-426829, Matrix Spike Duplicate (MSD) and Relative Percent Difference (RPD) were outside limits for Dieldrin. Also, the same QC sample's Matrix Spike (MS) was outside limits for DDT. All Method Blanks and LCS conformed, and the remaining MS/MSD was within limits. The bulk of the surrogate recoveries conformed. Therefore, the data was acceptable and no corrective action was necessary. The sample that was spiked contained significant levels of analytes, which most likely resulted in the observed interference.

3.2.8 Field and Quality Control Sample Raw Data Review

Raw data was reviewed to verify acceptable calculations of sample results reported by the laboratory. Reporting limits were adjusted if the sample was diluted. The sample values were reported correctly by using the wet weight. The data are valid and usable. For Lab Report #106849, soil samples #413527 (JON-5-0.5), #413528 (JON-5-0.5Dup), and #413532 (JON-6-0.5) had compounds reported as detected but were below the reporting limit. There was no Method Detection Limit (MDL) reported. Therefore, these values are qualitative and should be J flagged or reported as non-detect based on the MDL.

Field duplicate samples were collected (10%) and analyzed to evaluate sampling and analytical precision. Field duplicates were collected and analyzed in the same manner as the primary samples. Agreement between duplicate sample results indicates acceptable sampling and analytical precision. The precision goal or data quality objective (DQO) for field duplicates analyses was plus or minus 100 relative percent difference (RPD). Results for samples exceeding these goals were qualified as estimated or rejected.

First event:

Two duplicate samples were collected at borings JON-5-0.5, and JON-13-4.
The precision DQO was satisfied for the samples collected during the project. RPDs were within control limits and the precision is considered acceptable for both sets of samples.

Second event:

Two duplicate samples were collected at borings JONB-4-0.5 and JONB-17-0.5.
The precision DQO was generally satisfied for the samples collected during the project. RPDs were within control limits and the precision was considered acceptable except for two compounds within the JONB-4-0.5 set and one compound in the JONB-17-0.5 set. Sample JONB-4-0.5 had 0.096 mg/Kg and sample JONB-4-0.5 was non-detect (ND) at 0.04 mg/kg for 4,4-DDE. To calculate the RPD, half of the detection limit concentration was used with a concentration of 0.02 mg/kg. The RPD between both concentrations is 131. Therefore, these two concentrations were qualified as estimate results.

4,4-DDT was outside the acceptable percent RPD limit of 100 for the JONB-4-0.5 set. JONB-4-0.5 had a detection of 0.19 mg/kg of 4,4-DDT and JONB-4-0.5B had a non-detect (ND) at 0.05 mg/kg for 4,4-DDT. To calculate the RPD, half of the detection limit concentration was used with a concentration of 0.025 mg/kg. The RPD between both concentrations was 153. Therefore, these two concentrations were qualified as estimate results. Sample JONB-17-0.5 had a non-detect (ND) at 0.003 mg/kg for Heptachlor epoxide. Sample JONB-17-0.5 had a detection of 0.010 mg/kg. To calculate the RPD, half of the detection limit concentration was used with a concentration of 0.0015 mg/kg. The RPD between both concentrations was 148. Therefore, these two concentrations were qualified as estimate results.

3.2.11 Data Assessment

Based on the above results, the data was acceptable for intended use.

4.0 HUMAN HEALTH SCREENING EVALUATION

This section presents the Human Health Screening Evaluation for organochlorine pesticides detected in soil. The human health screening evaluation utilizes maximum concentrations of identified chemicals of potential concern (COPCs) to estimate contaminant intakes through the ingestion, dermal contact and inhalation routes of exposure. These estimated chemical intakes are evaluated for potential carcinogenic risks and noncarcinogenic health hazards using health-based toxicity criteria developed by the EPA and State of California (Office of Environmental Health Hazard Assessment (OEHHA)). This human health screening evaluation is health-protective, in that residential (unrestricted) land use is considered, regardless of the current or future intended uses of the property.

4.1 Exposure Pathways and Media of Concern

This section discusses the conceptual site model (CSM) in light of existing contamination (i.e., COPCs), identifies the receptors of concern, and identifies all relevant potential exposure pathways.

4.1.1 Conceptual Site Model

Consistent with PEA guidance for performing human health evaluations, it was assumed that the site was completely uncovered and that site soils were available for direct contact. In the future, children attending school at this site may be exposed to COPCs in soil through incidental ingestion, dermal contact, and inhalation of suspended soil particulates. Consistent with PEA guidance, health effects were conservatively evaluated for a residential receptor. Estimated carcinogenic risks were evaluated for a combined child and adult over an assumed 30-year exposure period. Noncarcinogenic health effects were evaluated for a child, since this is a sensitive receptor and would maximize potential exposures.

4.1.2 Soil Exposure Pathways

COPCs in soil include organochlorine pesticides. Lead was previously identified as a COPC on-site and was evaluated as part of the Preliminary Environmental Assessment (PEA) conducted for the site (Kleinfelder, 2002). Potential residential exposure to

organochlorine pesticides was evaluated through incidental ingestion and dermal contact. Exposures by these two routes were estimated according to the following equations

Intake of Soil Contaminants

Incidental Ingestion Intake (mg/kg-day) = $$\frac{C_s \times IngR \times EF \times ED \times CF_1}{BW \times AT}$$

Where,

C_s	=	Maximum reported COPC soil concentration, mg/kg
IngR	=	Adult soil ingestion rate, 100 mg/day (DTSC 1999)
	=	Child ingestion rate, 200 mg/day (DTSC 1999)
EF	=	Residential exposure frequency, 350 days/year (DTSC 1999)
ED	=	Adult exposure duration, 24 years (DTSC 1999)
	=	Child exposure duration, 6 years (DTSC 1999)
CF_1	=	Conversion factor, 1×10^{-6} kg/mg
BW	=	Adult body weight, 70 kg
	=	Child body weight, 15 kg
AT	=	Averaging time, days
	=	ED * 365 days/year for noncarcinogens
	=	70 years * 365 days/year for carcinogens

Dermal Contact Intake (mg/kg-day) = $$\frac{C_s \times SA \times AF \times CF_1 \times EF \times ED}{BW \times AT}$$

Where,

C_s	=	Maximum reported COPC soil concentration, mg/kg
SA	=	Adult skin surface area for exposure, 5700 cm^2 (DTSC 2000)
	=	Child skin surface area for exposure, 2900 cm^2 (DTSC 2000)
AF	=	Adult soil-to-skin adherence factor, 0.07 mg/cm^2 (DTSC 2000)
	=	Child soil-to-skin adherence factor, 0.2 mg/cm^2 (DTSC 2000)
CF_1	=	Conversion factor, 1×10^{-6} kg/mg
EF	=	Adult exposure frequency, 100 days/year (DTSC 2000)
	=	Child exposure frequency, 350 days/year (DTSC 2000)
ED	=	Adult exposure duration, 24 years (DTSC 1999)

	=	Child exposure duration, 6 years (DTSC 1999)
BW	=	Adult body weight, 70 kg
	=	Child body weight, 15 kg
AT	=	Averaging time, days
	=	ED * 365 days/year for noncarcinogens
	=	70 years * 365 days/year for carcinogens

4.1.3 Water Exposure Pathways

Groundwater impacts from the site are considered extremely unlikely and the groundwater pathway was not evaluated further in this human health screening assessment

4.1.4 Air Exposure Pathways

Potential residential exposure to organochlorine pesticides detected in soil was evaluated for inhalation of suspended soil particulates. Exposure through the inhalation route was estimated according to the following equation:

Inhalation Intake (mg/kg-day) = $$\frac{C_a \times InhR \times EF \times ED}{BW \times AT}$$

Where,

C_a	=	Estimated COPC concentration in air, mg/m^3
InhR	=	Adult inhalation rate, 20 m^3/day (DTSC 1999)
	=	Child inhalation rate, 10 m^3/day (DTSC 1999)
EF	=	Residential exposure frequency, 350 days/year (DTSC 1999)
ED	=	Adult exposure duration, 24 years (DTSC 1999)
	=	Child exposure duration, 6 years (DTSC 1999)
BW	=	Adult body weight, 70 kg
	=	Child body weight, 15 kg
AT	=	Averaging time, days
	=	ED * 365 days/year for noncarcinogens
	=	70 years * 365 days/year for carcinogens

For inhalation of soil particulates, air concentrations were estimated using the EPA Particulate Emission Factor (PEF) approach, as documented in EPA's Soil Screening Guidance. The PEF is defined by the following equation:

$$PEF(m^3/kg) = Q/C \times \left(\frac{3{,}600 s/h}{0.036 \times (1-V) \times (Um/Ut)^3 \times F(x)} \right)$$

Where,

Q/C = Inverse of mean concentration at the center of a 0.5-acre square source, 68 81 g/m^2-s per kg/m^3 (for the Los Angeles Area)

V = Fraction of vegetative cover (0.5 (50%), default value)

Um = Mean annual wind speed, 4.69 m/s, default

Ut = Equivalent threshold value of windspeed at 7 m, 11.32 m/s, default

F(x) = Function dependent on Um/Ut, 0.194 default

Based on the regional-specific Q/C for the Los Angeles area, the PEF was estimated to be 1.0E+09 m^3/kg. Then, the air concentration of suspended soil COPCs (mg/m^3) is equal to the maximum reported soil concentration (mg/kg) divided by the PEF (m^3/kg)

4.2 Exposure Concentrations and Chemicals

This section identifies the COPCs and estimates the concentration of each COPC, in each medium of concern (e g., soil, air or water) to which receptors may be exposed.

The following pesticides were detected at least once in site soil samples:

- 4,4'-DDD (maximum concentration of 4.45 mg/kg)
- 4,4'-DDE (maximum concentration of 3.36 mg/kg)
- 4,4'-DDT (maximum concentration of 9.65 mg/kg)
- Chlordane (maximum concentration of 336 mg/kg)
- Dieldrin (maximum concentration of 24 mg/kg)
- Endrin (maximum concentration of 0 005 mg/kg)
- Heptachlor (maximum concentration of 0.92 mg/kg)
- Heptachlor epoxide (maximum concentration of 0 78 mg/kg)
- Lindane (maximum concentration of 0.036 mg/kg)

Table 4-1 presents a summary of the OCPs detected in surface (0- to 0.5-feet bgs) and subsurface (2- to 4-feet bgs) soil samples The highest concentration of each pesticide was detected in surface soil samples. At 2- and 4-feet bgs, only low levels of chlordane, 4,4'-DDE, 4,4'-DDT and dieldrin were detected. For the purposes of this human health screening evaluation, potential carcinogenic risks and noncarcinogenic health hazards were estimated 1) for surface soils using the maximum reported soil concentrations detected on-site; and 2) for subsurface soils at 2-feet bgs, in order to assist decision-makers regarding the depth of future soil removal

4.3 Toxicity Values

This section describes the process of characterizing the relationship between the exposure to an agent and the incidence of adverse health effects in exposed populations. In a quantitative carcinogenic risk assessment, the dose-response relationship of a carcinogen is expressed in terms of a slope factor (oral) or unit risk (inhalation), which are used to estimate the probability of risk of cancer associated with a given exposure pathway. Cancer slope factors and unit risk factors as published by Cal-EPA (01/2003) and EPA (Integrated Risk Information System (IRIS)) were used in this human health risk assessment.

For noncarcinogenic effects, toxicity data developed from animal or human studies are typically used to develop noncancer acceptable levels, or reference doses (RfDs). A chronic reference dose is defined as an estimate of a daily exposure for the human population, including sensitive subpopulations, that is likely to be without appreciable risk of deleterious effects during a lifetime. The oral chronic reference doses, as published in IRIS or EPA's Health Effects Assessment Summary Tables (HEAST), were used in this evaluation. Inhalation reference doses were calculated from the Cal/EPA Reference Exposure Levels (RELs), as published by the Office of Environmental Health Hazard Assessment (OEHHA, 2001). If an REL was unavailable for a particular chemical, the inhalation reference dose from IRIS or HEAST was used.

Table 4-2 summarizes the cancer slope factors, reference doses, and data source for each COPC evaluated in this human health screening evaluation.

4.4 Risk Characterization Summary

This section describes the approach used to assess the potential carcinogenic risk and noncarcinogenic health hazards for the populations of concern represented by the chemical contaminants in soil at the site. Potential carcinogenic effects were estimated from the predicted intakes and chemical-specific dose-response information. Potential noncarcinogenic effects were estimated by comparing the predicted intakes of COPCs to their respective toxicity criteria (i.e., inhalation reference doses (RfD_i)).

4.4.1 Noncarcinogenic Health Effects for Soil Contaminants

In order to estimate the potential effects from exposure to multiple COPCs, the hazard index (HI) approach was used. The HI is defined as the summation of the hazard quotients for each COPC, for each route of exposure, and is represented by the following equation:

$$HI = \frac{\text{Predicted Dose}_a}{RfD_a} + \frac{\text{Predicted Dose}_b}{RfD_b} + \ldots + \frac{\text{Predicted Dose}_i}{RfD_i}$$

A total HI less than or equal to unity is indicative of acceptable levels of exposure for chemicals assumed to exhibit additive health effects. To be truly additive in effect, chemicals must affect the same target organ system or result in the same critical toxic endpoint. A HI less than or equal to 1.0 suggests that adverse health effects would not be expected following a lifetime of exposure, even in sensitive members of the population.

4.4.2 Carcinogenic Health Effects for Soil Contaminants

Quantitative estimates of upper-bound incremental cancer risk due to site-related contamination were evaluated for each COPC according to the following equation:

$$R_i = Intake_i \times SF_i$$

Where,

R_i = Estimated incremental risk of cancer associated with the ith chemical

$Intake_i$ = Intake or lifetime average daily dose for the ith chemical, mg/kg-day

SF_i = Cancer slope factor for the ith chemical, $(mg/kg\text{-}day)^{-1}$

Carcinogenic risk was assumed to be additive and was estimated by summing the upper-limit incremental cancer risk for all carcinogenic COPCs.

4.4.3 Site Specific Risks and Hazards

The residential noncarcinogenic health hazards and carcinogenic risks associated with exposure to surface soils from ingestion, dermal contact, and inhalation of suspended soil particulates are summarized in Tables 4-3 and 4-4, respectively. Detailed risk and hazard calculations are included in Appendix C. The residential hazard index for exposure to maximum reported concentrations of pesticides in site surface soil was 18.4, which is above the DTSC level of concern (HI = 1), and is indicative of potential adverse health effects from exposure to site soils. This estimated hazard was primarily attributable to chlordane (approximately 54 per cent of the total hazard) and dieldrin (approximately 38 per cent of the total hazard)

The total excess carcinogenic risk from ingestion of surface soil, dermal contact with surface soil and inhalation of suspended surface soil particulates was 1.5E-03. This risk is well above the upper end of the risk management range defined by regulatory agencies (1E-06 to 1E-04). Consequently, the total site risk is considered unacceptable under an unrestricted, residential land use scenario. This estimated risk was primarily attributable to chlordane (approximately 52 per cent of the total risk) and dieldrin (approximately 46 per cent of the total risk

Tables 4-5 and 4-6 summarize the noncarcinogenic health hazards and carcinogenic risks associated with exposure to subsurface soils (2-feet bgs) from ingestion, dermal contact and inhalation of soil particulates. The residential hazard index associated with exposure to soils at 2-feet bgs. was 0.07, which is well below the DTSC level of concern The total excess cancer risk associated with exposure to subsurface soils was 6E-06, which is slightly above the DTSC point of departure (1E-06) but well within the risk management range.

Tables 4-7 and 4-8 summarize the noncarcinogenic health hazards and carcinogenic risks associated with exposure to subsurface soils at 4-feet bgs. from ingestion, dermal contact and inhalation of soil particulates. The residential hazard index associated with

exposure to soils at 4-feet bgs was 0 02, which is well below the DTSC level of concern The total excess cancer risk associated with exposure to subsurface soils was 2E-06, which is slightly above the DTSC point of departure (1E-06) but well within the risk management range

4.4.4 Uncertainty Analysis

The noncarcinogenic health hazard and carcinogenic risk associated with OCPs in soil from incidental ingestion, dermal contact, and inhalation of suspended particulate were based on the maximum reported soil concentrations detected in samples collected immediately adjacent to the home's foundation. Pesticide application could have extended laterally out into the yard area, with higher OCP concentrations potentially occurring. Since a data gap exists regarding the presence of OCPs in the yards away from the building foundations, the potential risks and hazards may remain unchanged, or could be even higher.

In order to better define the potential site-specific risks and identify those sample locations requiring further investigation (step-out sampling) or removal, sample location-specific risks and hazards were estimated. Specifically, the total hazard and risk from OCPs were calculated for each sample, at each depth and are summarized in Table 4-9 for the OCP Investigation and Supplemental OCP Investigation results. Based on the sample-specific results, elevated cancer risks and noncarcinogenic health hazards were associated with the following sample locations:

- JON-1-0.5 (cancer risk = 1 2E-04; HI = 1.4)
- JON-1-2 (cancer risk = 6.2E-06)
- JON-2-0.5 (cancer risk = 1 2E-04; HI = 1.4)
- JON-3-0.5 (cancer risk = 8.9E-05; HI = 1)
- JON-4-0.5 (cancer risk = 1.5E-03; HI = 17)
- JON-5-0.5-DUP (cancer risk = 1.3E-05)
- JON-6-0 5 (cancer risk = 2.6E-05)
- JON-7-0 5 (cancer risk = 2.5E-05)
- JON-8-0.5 (cancer risk = 4 9E-05)
- JON-9-0.5 (cancer risk = 2 4E-05)
- JON-10-0 5 (cancer risk = 1.6E-05)
- JON-11-0.5 (cancer risk = 6E-06)
- JON-12-0.5 (cancer risk = 1.7E-05)
- JONB-1-0.5 (cancer risk = 2.1E-05)
- JONB-3-0.5 (cancer risk = 2E-04; HI = 2.5)
- JONB-4-0.5 (cancer risk = 2.2E-04; HI = 2.8)
- JONB5-0 5 (cancer risk = 9.1E-06)
- JONB-724-ST (cancer risk = 8.6E-04; HI = 11)
- JONB-6-0 5 (cancer risk = 4.1E-05)
- JONB-7-0.5 (cancer risk = 1.4E-05)
- JONB-11-0.5 (cancer risk = 6E-6)
- JONB-12-0 5 (cancer risk = 1.7E-05)

Based on these results, HERD recommends that step-out samples be collected at the above sample locations

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the OCP investigation and the human health screening evaluation, the following site-specific findings were made:

1 For a hypothetical residential receptor, the total noncarcinogenic health hazard for exposure to surface soils was 18, which is well above the DTSC level of concern (HI = 1) and would be considered an unacceptable health hazard

2 For a hypothetical residential receptor, the total excess cancer risk for exposure to surface soils was 1.5E-03, which is above the DTSC point of departure (1E-06) and above the upper end of the risk management range (1E-06 to 1E-04). This estimated site risk is considered unacceptable

3 For a hypothetical residential receptor, the total noncarcinogenic health hazard for exposure to subsurface soils at 2-feet bgs was 0.07, which is well below the DTSC level of concern (HI = 1).

4 For a hypothetical residential receptor, the total excess cancer risk for exposure to subsurface soils at 2-feet bgs was 6E-06, which is slightly above the DTSC point of departure (1E-06) but within the risk management range (1E-06 to 1E-04). This estimated site risk is considered marginally elevated and warrants further evaluation.

5. For a hypothetical residential receptor, the total noncarcinogenic health hazard for exposure to subsurface soils at 4-feet bgs was 0.02, which is well below the DTSC level of concern (HI = 1)

6. For a hypothetical residential receptor, the total excess cancer risk for exposure to subsurface soils at 4-feet bgs was 2E-06, which is slightly above the DTSC point of departure (1E-06) but within the risk management range (1E-06 to 1E-04). This estimated site risk is considered marginally elevated and warrants further evaluation.

Based on the above conclusions, DTSC makes the following recommendation:

Based on the sample-specific risk calculations, HERD recommends that step-out samples be collected at the following locations to better define the lateral extent of OCP contamination:

- JON-1-0.5 (cancer risk = 1.2E-04; HI = 1.4)
- JON-1-2 (cancer risk = 6.2E-06)
- JON-2-0.5 (cancer risk = 1.2E-04; HI = 1.4)
- JON-3-0.5 (cancer risk = 8.9E-05; HI = 1)
- JON-4-0.5 (cancer risk = 1.5E-03; HI = 17)
- JON-5-0.5-DUP (cancer risk = 1.3E-05)
- JON-6-0.5 (cancer risk = 2.6E-05)

- JON-7-0.5 (cancer risk = 2.5E-05)
- JON-8-0.5 (cancer risk = 4.9E-05)
- JON-9-0.5 (cancer risk = 2.4E-05)
- JON-10-0.5 (cancer risk = 1.6E-05)
- JON-11-0.5 (cancer risk = 6E-06)
- JON-12-0.5 (cancer risk = 1.7E-05)
- JONB-1-0.5 (cancer risk = 2.1E-05)
- JONB-3-0.5 (cancer risk = 2E-04; HI = 2.5)
- JONB-4-0.5 (cancer risk = 2.2E-04; HI = 2.8)
- JONB5-0.5 (cancer risk = 9.1E-06)
- JONB-724-ST (cancer risk = 8.6E-04; HI = 11)
- JONB-6-0.5 (cancer risk = 4.1E-05)
- JONB-7-0.5 (cancer risk = 1.4E-05)
- JONB-11-0.5 (cancer risk = 6E-6)
- JONB-12-0.5 (cancer risk = 1.7E-05)

6.0 REFERENCES

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Tables

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location									
	758 F Street									
Organochlorine Pesticide	JON-1-0.5 (mg/kg)	JON-1-2 (mg/kg)	JON-1-4 (mg/kg)	JON-2-0.5 (mg/kg)	JON-2-2 (mg/kg)	JON-2-4 (mg/kg)	JON-3-0.5 (mg/kg)	JON-3-2 (mg/kg)	JON-3-4 (mg/kg)	JON-4-0.5 (mg/kg)
4,4'-DDD	0.900	ND	ND	ND	ND	ND	ND	ND	ND	4.450
4,4'-DDE	0.323	0.011	ND	ND	ND	ND	ND	ND	ND	3.360
4,4'-DDT	0.180	0.008	ND	ND	ND	ND	ND	ND	ND	9.650
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	19.500	0.773	0.050	22.200	0.104	ND	9.670	0.559	0.229	336.000
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	2.580	0.156	0.011	2.580	0.016	ND	2.380	0.072	0.037	24.000
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

Organochlorine Pesticide	Organochlorine Pesticide Concentrations at Each Sample Location									
	JON-4-2 (mg/kg)	JON-4-4 (mg/kg)	JON-5-0.5 (mg/kg)	JON-5-0.5-DUP (mg/kg)	JON-746-ST (mg/kg)	JON-5-2 (mg/kg)	JON-5-4 (mg/kg)	JON-6-0.5 (mg/kg)	JON-6-2 (mg/kg)	JON-6-4 (mg/kg)
4,4'-DDD	ND	ND	0.020	0.022	ND	ND	ND	0.035	ND	ND
4,4'-DDE	0.006	ND	0.192	0.197	0.046	ND	ND	0.107	ND	ND
4,4'-DDT	0.011	ND	0.155	0.249	0.272	ND	ND	0.207	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	0.294	0.247	2.050	2.600	17.600	ND	ND	7.000	ND	0.044
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.020	0.048	0.162	0.240	0.151	ND	ND	0.362	ND	ND
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND		ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND		ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location									
Organochlorine Pesticide	JON-7-0.5 (mg/kg)	JON-7-2 (mg/kg)	JON-7-4 (mg/kg)	JON-8-0.5 (mg/kg)	JON-8-2 (mg/kg)	JON-8-4 (mg/kg)	JON-9-0.5 (mg/kg)	JON-9-2 (mg/kg)	JON-10-0.5 (mg/kg)	JON-10-2 (mg/kg)
4,4'-DDD	ND	ND	ND	0.100	ND	ND	0.011	ND	ND	ND
4,4'-DDE	0.040	ND	ND	0.859	0.006	ND	0.021	ND	0.011	ND
4,4'-DDT	0.131	ND	ND	0.654	ND	ND	0.073	ND	0.073	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	6.420	0.039	0.037	11.900	0.051	0.030	1.110	0.034	0.945	ND
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.377	ND	ND	0.728	0.008	0.007	0.745	0.037	0.496	0.009
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location									
Organochlorine Pesticide	JON-10-4 (mg/kg)	JON-11-0.5 (mg/kg)	JON-11-2 (mg/kg)	JON-11-4 (mg/kg)	JON-12-0.5 (mg/kg)	JON-12-2 (mg/kg)	JON-12-4 (mg/kg)	JON-13-0.5 (mg/kg)	JON-13-2 (mg/kg)	JON-13-4 (mg/kg)
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	0.042	ND	ND
4,4'-DDE	ND	0.009	ND	ND	0.012	ND	ND	0.716	0.032	0.019
4,4'-DDT	ND	0.039	ND	ND	0.041	ND	ND	0.758	0.034	0.021
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	ND	0.428	0.030	ND	0.244	ND	ND	0.053	ND	ND
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	0.179	0.008	ND	0.569	0.009	ND	0.008	ND	ND
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location							
Organochlorine Pesticide	JON-13-4-DUP (mg/kg)	JON-14-0.5 (mg/kg)	JON-14-2 (mg/kg)	JON-14-4 (mg/kg)	JON-15-0.5 (mg/kg)	JON-15-2 (mg/kg)	JON-15-4 (mg/kg)	JON-17-0.5 (mg/kg)
4,4'-DDD	ND	0.028	ND	ND	0.290	ND	ND	0.116
4,4'-DDE	0.024	0.650	0.021	0.035	0.332	ND	ND	0.434
4,4'-DDT	0.025	0.700	0.013	0.026	0.433	ND	ND	0.900
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	ND	0.223	ND	ND	0.416	ND	ND	0.071
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	0.011	ND	ND	0.011	ND	ND	0.033
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	0.036
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location								
Organochlorine Pesticide	JONB-1-0.5 (mg/kg)	JONB-2-0.5 (mg/kg)	JONB-3-0.5 (mg/kg)	JONB-4-0.5 (mg/kg)	JONB-4-0.5-DUP (mg/kg)	JONB-5-0.5 (mg/kg)	JONB-724-ST (mg/kg)	JONB-6-0.5 (mg/kg)	JONB-7-0.5 (mg/kg)
4,4'-DDD	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.150	0.100	0.170	0.096	ND	0.039	ND	0.027	0.016
4,4'-DDT	0.600	0.190	0.190	0.190	ND	0.170	ND	0.073	0.063
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	7.200	2.300	80.000	86.000	70.000	2.800	320.000	11.000	3.800
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.150	ND	0.590	0.700	0.610	0.082	4.300	0.530	0.170
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.019	ND	0.220	0.270	0.190	0.043	0.920	0.120	0.047
Heptachlor epoxide	ND	ND	ND	ND	ND	0.100	ND	0.780	0.111
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	0.007
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

	Organochlorine Pesticide Concentrations at Each Sample Location								
Organochlorine Pesticide	JONB-8-0.5 (mg/kg)	JONB-9-0.5 (mg/kg)	JONB-10-0.5 (mg/kg)	JONB-11-0.5 (mg/kg)	JONB-12-0.5 (mg/kg)	JONB-13-0.5 (mg/kg)	JONB-14-0.5 (mg/kg)	JONB-15-0.5 (mg/kg)	JONB-16-0.5 (mg/kg)
4,4'-DDD	ND	ND	ND	0.041	ND	ND	ND	0.005	ND
4,4'-DDE	0.150	0.004	ND	0.200	0.026	0.017	0.005	0.009	0.019
4,4'-DDT	0.350	0.013	0.007	0.540	0.051	0.068	0.016	0.089	0.063
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	0.900	0.060	0.089	0.340	0.700	0.094	ND	0.100	0.077
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.060	0.042	0.028	0.170	0.530	ND	ND	ND	ND
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	0.005	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.022	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	0.043	ND	ND	ND	ND	ND	ND	ND	ND
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

Organochlorine Pesticide	Organochlorine Pesticide Concentrations at Each Sample Location					Maximum Concentration	Maximum Concentration	Maximum Concentration
	JONB-17-0.5	JONB-17-0.5-DUP	JONB-18-0.5	JONB-19-0.5	JONB-20-0.5	All Depths	(0- to 0.5-Feet)	(2-Feet bgs)
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
4,4'-DDD	ND	ND	ND	ND	ND	4.450	4.450	ND
4,4'-DDE	0.100	0.140	0.260	0.029	0.005	3.360	3.360	0.032
4,4'-DDT	0.440	0.550	0.900	0.270	0.037	9.650	9.650	0.034
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	0.650	0.780	1.500	0.680	0.076	336.000	336.000	0.773
Delta BHC	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND	ND	24.000	24.000	0.156
Endosulfan I	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	0.005	0.005	ND
Endrin aldehyde	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	ND	0.010	ND	ND	ND	0.920	0.920	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	0.780	0.780	ND
Lindane	ND	ND	ND	0.007	ND	0.036	0.036	ND
Methoxychlor	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-1

Organochlorine Pesticide Data Summary

Organochlorine Pesticide	Maximum Concentration (4-Feet bgs) (mg/kg)
4,4'-DDD	ND
4,4'-DDE	0.035
4,4'-DDT	0.026
Aldrin	ND
Alpha BHC	ND
Beta BHC	ND
Chlordane	0.247
Delta BHC	ND
Dieldrin	0.048
Endosulfan I	ND
Endosulfan II	ND
Endosulfan sulfate	ND
Endrin	ND
Endrin aldehyde	ND
Heptachlor	ND
Heptachlor epoxide	ND
Lindane	ND
Methoxychlor	ND
Toxaphene	ND

Table 4-1

Maximum Reported Soil Concentrations
of Organochlorine Pesticides, (0- to 2-Feet bgs)

Organochlorine Pesticide	Maximum Concentration All Depths (mg/kg)	Maximum Concentration (0- to 0.5-Feet) (mg/kg)	Maximum Concentration (2-Feet bgs) (mg/kg)	Maximum Concentration (4-Feet bgs) (mg/kg)
4,4'-DDD	4.450	4.450	ND	ND
4,4'-DDE	3.360	3.360	0.032	0.035
4,4'-DDT	9.650	9.650	0.034	0.026
Aldrin	ND	ND	ND	ND
Alpha BHC	ND	ND	ND	ND
Beta BHC	ND	ND	ND	ND
Chlordane	336.000	336.000	0.773	0.247
Delta BHC	ND	ND	ND	ND
Dieldrin	24.000	24.000	0.156	0.048
Endosulfan I	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND
Endrin	0.005	0.005	ND	ND
Endrin aldehyde	ND	ND	ND	ND
Heptachlor	0.920	0.920	ND	ND
Heptachlor epoxide	0.780	0.780	ND	ND
Lindane	0.036	0.036	ND	ND
Methoxychlor	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND

Table 4-2

Toxicity Criteria

Chemical of Potential Concern (COPC)	Criteria for Noncarcinogens				Criteria for Carcinogens			
	Oral RfD (mg/kg-day)	Source	Inhalation RfD (mg/kg-day)	Source	Oral Slope Factor (mg/kg-day)$^{-1}$	Source	Inhalation Slope Factor (mg/kg-day)$^{-1}$	Source
Organochlorine Pesticides								
Chlordane	5.00E-04	*a*	2.00E-04	*a*	1.30E+00	*c*	1.20E+00	*c*
4,4'-DDD	5.00E-04	*d*	5.00E-04	*d*	2.40E-01	*c*	2.40E-01	*c*
4,4'-DDE	5.00E-04	*d*	5.00E-04	*d*	3.40E-01	*c*	3.40E-01	*c*
4,4'-DDT	5.00E-04	*a*	5.00E-04	*b*	3.40E-01	*c*	3.40E-01	*c*
Dieldrin	5.00E-05	*a*	5.00E-05	*b*	1.60E+01	*c*	1.60E+01	*c*
Endrin	3.00E-04	*a*	3.00E-04	*b*	N/A		N/A	
Heptachlor	5.00E-04	*a*	5.00E-04	*b*	4.10E+00	*c*	4.10E+00	*c*
Heptachlor epoxide	1.30E-05	*a*	1.30E-05	*b*	5.50E+00	*c*	5.50E+00	*c*
Lindane (γ–Hexachlorocyclohexane)	3.00E-04	*a*	3.00E-04	*b*	1.10E+00	*c*	1.10E+00	*c*

a USEPA Integrated Risk Information System (IRIS),
b Route-to-route extrapolation from the oral RfD.
c Cal/EPA, Office of Environmental Health Hazard Assessment (OEHHA), California Cancer Potency Values.
d Use the toxicity criteria for 4,4'-DDT, based on structural similarity.

Table 4-3

Hazard Summary for Surface Soils (0- to 0.5-Feet bgs)

COPCs	Hazards from Site Soils			Percent Contribution
	Hazard from Incidental Ingestion	Hazard from Dermal Contact	Hazard from Inhalation of Soil Particulates	
Organochlorine Pesticides				
Chlordane	8.6E+00	1.3E+00	1.1E-03	53.81%
4,4'-DDD	1.1E-01	1.7E-02	5.7E-06	0.71%
4,4'-DDE	8.6E-02	1.3E-02	4.3E-06	0.54%
4,4'-DDT	2.5E-01	3.7E-02	1.2E-05	1.55%
Dieldrin	6.1E+00	9.3E-01	3.1E-04	38.43%
Endrin	2.1E-04	3.2E-05	1.1E-08	0.00%
Heptachlor	2.4E-02	3.6E-03	1.2E-06	0.15%
Heptachlor epoxide	7.7E-01	1.2E-01	3.8E-05	4.80%
Lindane (γ–Hexachlorocyclohexane)	1.5E-03	2.3E-04	7.7E-08	0.01%
Total Hazard	**1.6E+01**	**2.4E+00**	**1.4E-03**	100.00%
		Hazard Index :	**18.4**	

Table 4-4

Risk Summary for Surface Soil (0- to 0.5-feet bgs)

COPCs	Risks from Site Soils			Percent Contribution
	Cancer Risk from Incidental Ingestion	Cancer Risk from Dermal Contact	Cancer Risk from Inhalation of Soil Particulates	
Organochlorine Pesticides				
Chlordane	6 9E-04	8.1E-05	6.01E-08	52 35%
4,4'-DDD	1.7E-06	2.0E-07	1.59E-10	0.13%
4,4'-DDE	1.8E-06	2.1E-07	1.70E-10	0.14%
4,4'-DDT	5.2E-06	6.1E-07	4.89E-10	0.39%
Dieldrin	6.0E-04	7 1E-05	5.72E-08	46 02%
Endrin	N/A	N/A	N/A	N/A
Heptachlor	5 9E-06	7.0E-07	5.62E-10	0 45%
Heptachlor epoxide	6 7E-06	8.0E-07	6 39E-10	0.51%
Lindane (γ–Hexachlorocyclohexane)	6.2E-08	7.3E-09	5.90E-12	0.00%
Pathway-Specific Risk	**1.3E-03**	**1.5E-04**	**1.2E-07**	100 00%
		Total Risk	**1.5E-03**	

Table 4-5

Hazard Summary for Subsurface Soils (2-feet bgs)

COPCs	Hazards from Site Soils (2-feet bgs)		
	Hazard from *Incidental* Ingestion	Hazard from *Dermal* Contact	Hazard from *Inhalation of* Soil Particulates
Organochlorine Pesticides			
Chlordane	2.0E-02	3.0E-03	2.5E-06
4,4'-DDE	8.2E-04	1.2E-04	4.1E-08
4,4'-DDT	8.7E-04	1.3E-04	4.3E-08
Dieldrin	4.0E-02	6.0E-03	2.0E-06
Total Hazard	**6.1E-02**	**9.3E-03**	**4.5E-06**
		Hazard Index :	**0.07**

Table 4-6

Risk Summary for Subsurface Soils (2-feet bgs)

COPCs	Risks from Site Soils (2-feet bgs)		
	Cancer Risk from Incidental Ingestion	Cancer Risk from Dermal Contact	Cancer Risk from Inhalation of Soil Particulates
Organochlorine Pesticides			
Chlordane	1.6E-06	1.9E-07	1.38E-10
4,4'-DDE	1.7E-08	2.0E-09	1.62E-12
4,4'-DDT	1.8E-08	2.1E-09	1.72E-12
Dieldrin	3.9E-06	4.6E-07	3.72E-10
Pathway-Specific Risk	**5.5E-06**	**6.5E-07**	**5.1E-10**
		Total Risk	**6.2E-06**

Table 4-7

Hazard Summary for Subsurface Soils (4-feet bgs)

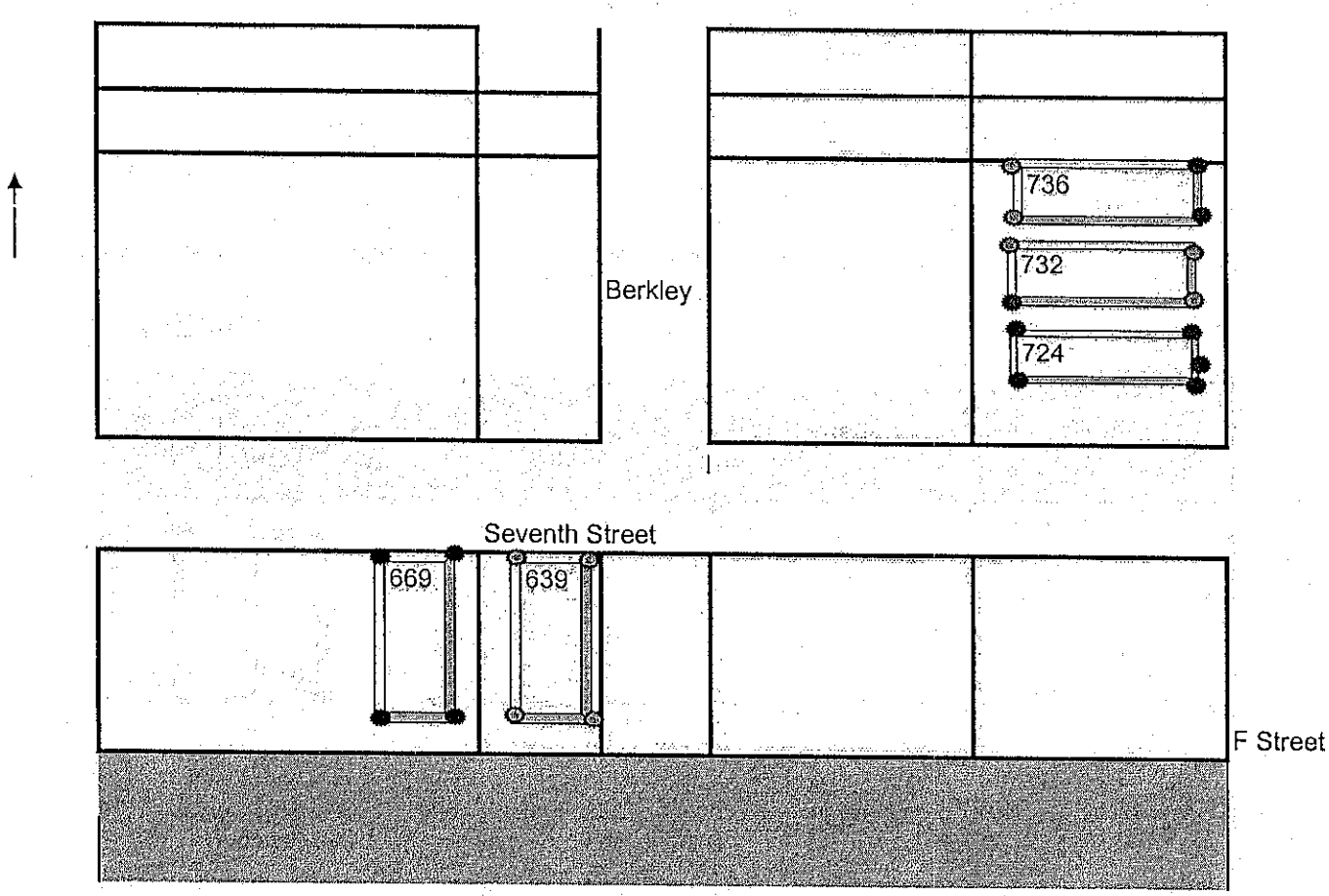
COPCs	Hazards from Site Soils (4-feet bgs)		
	Hazard from Incidental Ingestion	Hazard from Dermal Contact	Hazard from Inhalation of Soil Particulates
Organochlorine Pesticides			
Chlordane	6.3E-03	9.5E-04	7.9E-07
4,4'-DDE	9.0E-04	1.4E-04	4.5E-08
4,4'-DDT	6.7E-04	1.0E-04	3.3E-08
Dieldrin	1.2E-02	1.9E-03	6.1E-07
Total Hazard	**2.0E-02**	**3.0E-03**	**1.5E-06**
		Hazard Index :	**0.02**

Table 4-8

Risk Summary for Subsurface Soils (4-feet bgs)

COPCs	Risks from Site Soils (4-feet bgs)		
	Cancer Risk from Incidental Ingestion	Cancer Risk from Dermal Contact	Cancer Risk from Inhalation of Soil Particulates
Organochlorine Pesticides			
Chlordane	5 0E-07	6 0E-08	4.42E-11
4,4'-DDE	1.9E-08	2.2E-09	1.77E-12
4,4'-DDT	1.4E-08	1.6E-09	1 32E-12
Dieldrin	1 2E-06	1 4E-07	1.14E-10
Pathway-Specific Risk	**1.7E-06**	**2.1E-07**	**1.6E-10**
		Total Risk	**1.9E-06**

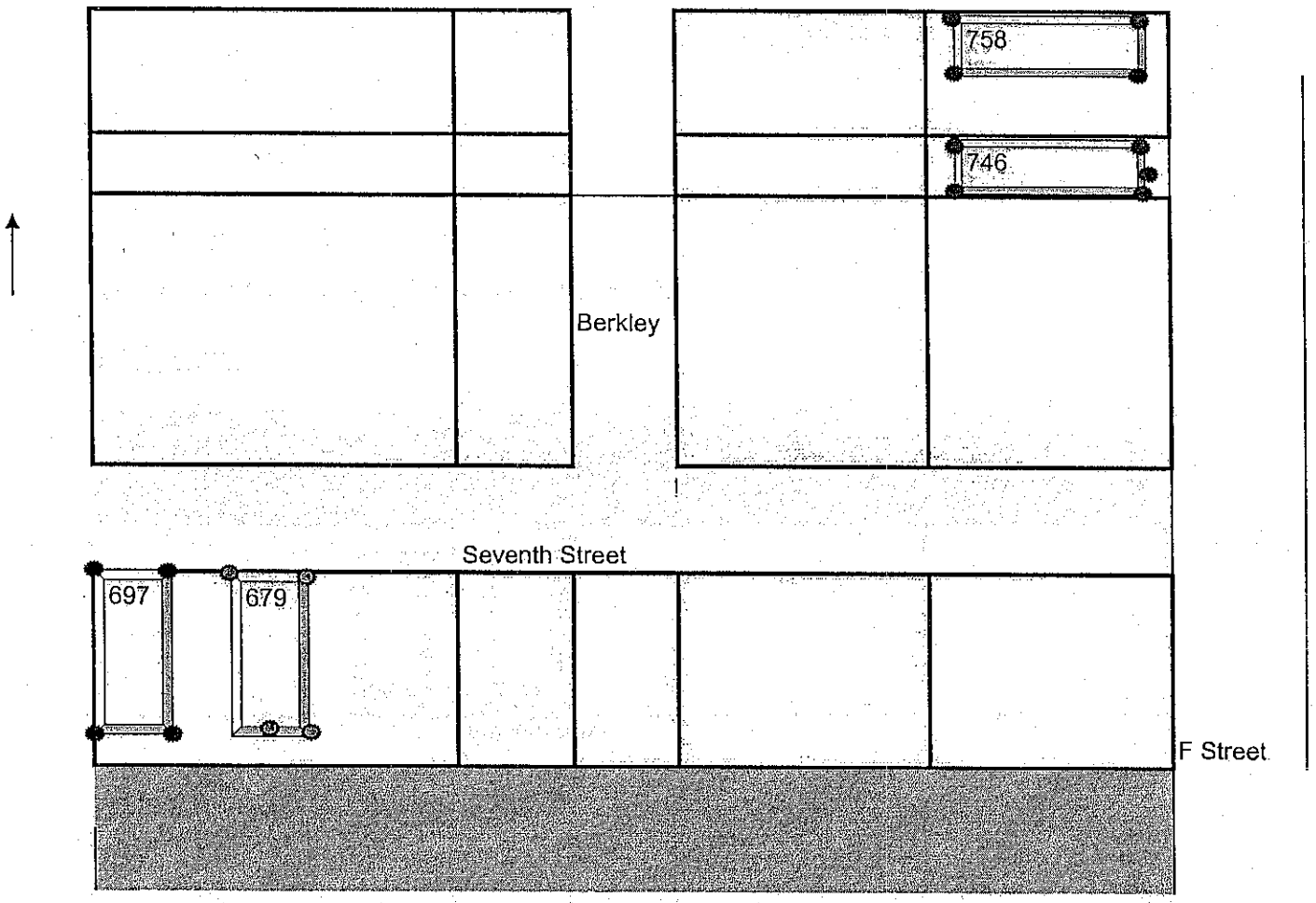
Figures



LEGEND

● Discrete Home Perimeter Foundation Soil Boring

FIGURE 1
First Round of Soil Sampling Locations



LEGEND

● Discrete Home Perimeter Foundation Soil Boring

FIGURE 2
Second Round of Soil Sampling Locations

Appendix A

Field Log Sheets

DTSC Residential Pesticide Study Log Sheet

Site Name: Jones Elementary School

Sampler Name(s): Joe Serrean (JS); Juan Osornio (JO); Rao Akula (RA); Robbie Morris (RM); Jennifer Jones (JJ)

Date: 2-19-03

#	Sample ID	Sample Depth (ft)	Sample Time	Sampler	Comments
1	JON-1-0.5	0.5	9:15	RM	#758 SE Corner of home
2	JON-2-0.5	0.5	9:21	JO	#758 NE Corner of home
3	JON-1-2	2	9:19	JS	
4	JON-1-4	4	9:28	JS	
5	JON-2-2	2	9:30	JO	
6	JON-2-4	4	9:45	JO	
7	JON-4-0.5	0.5	9:38	JS	#758 SW Corner
8	JON-4-2	2	9:42	JS	"
9	JON-4-4	4	9:51	JS	"
10	JON-3-0.5	0.5	9:50	JO	#758 NW Corner
11	JON-3-2	2	9:58	JO	"
12	JON-3-4	4	10:05	JO	"
13	JON-746-ST	0.5	10:10	RM	surface soil collected under stoop
14	JON-5-0.5	0.5	10:08	JS	#746 SE Corner
15	JON-5-0.5 Dup	0.5	10:10	JS	
16	JON-6-0.5	0.5	10:15	JO	#746 NE Corner
17	JON-5-2	2	10:20	JS	stepped out 2 inches south of surface sample
18	JON-6-2	2	10:23	JO	
19	JON-5-4	4	10:30	JS	
20	JON-6-4	4	10:28	JO	
21	JON-7-0.5	0.5	10:33	RA	#746 NW Corner
22	JON-8-0.5	0.5	10:40	JS	#746 SW Corner
23	JON-8-2	2	10:45	JS	"
24	JON-7-2	2	10:46	RA	
25	JON-8-4	4	10:49	JS	
26	JON-7-4	4	11:00	RA	
27	JON-10-0.5	0.5	11:20	JS	#697 7th St. NW corner

DTSC Residential Pesticide Study Log Sheet

Site Name: Jones Elementary School

Sampler Name(s): Joe Severean (JS); Juan Osornio (JO); Robbie Morris (RM); Jennifer Jones (JJ); Rao Akula (RA)

Date: 2/19/03

#	Sample ID	Sample Depth (ft)	Sample Time	Sampler	Comments
28	JON-10-2	2	11:24	JS	#697 7th St. NW Corner
29	JON-9-0.5	0.5	11:21	JO	#697 7th St NE Corner
30	JON-10-4	4	11:38	JS	
31	JON-9-2	2	11:40	JO	Stepped out east ~6 inches from surface sample
32	JON-11-0.5	0.5	11:40	JS	~8 ft from S. end (SW) corner of house
33	JON-11-2	2	11:45	JS	stepped out east ~6 inches from surface
34	JON-12-0.5	0.5	11:45	RA	SW Corner
35	JON-11-4	4	11:55	JS	
36	JON-12-2	2	12:01	JO	
37	JON-12-4	4	12:08	JO	
38	JON-13-0.5	0.5	12:18	JO	679 7th St. NE corner
39	JON-EB	NA	12:08	JS	Equipment blank DI water
40	JON-13-2	2	12:20	JO	
41	JON-13-4	4	12:35	JO	
42	JON-14-0.5	0.5	12:21	JS	679 7th St. NW corner
43	JON-14-2	2	12:28	JS	Stepped out 12 inches West from surface
44	JON-13-4 Dup	4	12:36	JO	
45	JON-14-4	4	12:30	JS	
46	JON-15-0.5	0.5	12:30	RA	679 7th St West side of house
47	JON-15-2	2	12:48	RA	Stepped out 6 inches from surface sample
48	JON-15-4	4	12:55	JS	"
49	JON-16-0.5	0.5	12:32	RA	679 7th St. SW Corner 19 ft S of house
~~50~~	~~JON-16-2~~	~~2~~		~~JO~~	~~stepped out 6 inches SW from surface~~
~~51~~	~~JON-16-4~~	~~4~~		~~JO~~	~~" "~~
50	JON-17-0.5	0.5	13:10	JO	Under back porch @ 679 7th St.
51	JON-R	NA	13:13	RM	Rinseate of decon water for waste char.

DTSC Residential Pesticide Study Log Sheet

Site Name: Jones Elementary School

Sampler Name(s): Juan Osornio (JO); Robbie Morris (RM); ~~Jennifer Jones~~ (JJ) Rao Akula

take a dup!

Date: 4-23-03

#	Sample ID	Sample Depth (ft)	Sample Time	Sampler	724 Comments
1	JONB-1-0.5	0.5	9:50	Juan	34.3 West of curb + 11' S. of fence
2	JONB-2-0.5	0.5	9:55	Juan	30.9 West of curb + 13.7 N of fence
3	JONB-3-0.5	0.5	9:58	Juan	28.3 S. of Flag 4 / 5.6 N. of fence
4	JONB-4-0.5	0.5	10:00	Juan	53.9 W. of Flag 1 / 11' S of fence
5	JONB-724 ST	0.5	10:06	Juan	Just inside of foot print of house
6	JONB-5-0.5	0.5	9:53	RAO	41.4 W. of curb / 12.9 S. of fence
7	JONB-6-0.5	0.5	9:55	RAO	31.8 W. of curb / 15.7 N. of fence
8	JONB-7-0.5	0.5	10:00	RAO	41.6 W of curb / 8.8 N. of fence
9	JONB-8-0.5	0.5	10:05	RAO	25' W. of Flag 5 / 12.4 S. of fence
10	JONB-9-0.5	0.5	10:10	RAO	35.5 W. of curb / 11.6 S. of fence
11	JONB-10-0.5	0.5	10:10	~~RAO~~ JO	32.1 West of curb / 10.11 S. of fence
12	JONB-11-0.5	0.5	10:12	Juan	32.6 West of Flag 12 / 5.0 N. of fence
13	JONB-12-0.5	0.5	10:11	RAO	46. West of Flag 9 / 11.3 S. of fence
14	JONB-4-0.5D	0.5	10:00	Juan	
15	JONB-13-0.5	0.5	10:45	RAO	43.8 S of curb / 7' East fence
16	JONB-14-0.5	0.5	10:48	RAO	45.9 S. of curb / at fence line
17	JONB-15-0.5	0.5	11:00	RAO	25.5 S of Flag 14 "
18	JONB-16-0.5	0.5	11:01	RAO	18.10 S. of Flag 13 / 7 east fence
19	JONB-17-0.5	0.5	10:51	Juan	44. S. of curb / 46 SE of TP
20	JONB-17-0.5D	0.5	10:50	Juan	
21	JONB-18-0.5	0.5	11:01	Juan	43.3 S of curb / 5' E of Flag 17
22	JONB-19-0.5	0.5	11:02	Juan	26.2 S of Flag 17 / 70.6 SE TP
23	JONB-20-0.5	0.5	11:05	Juan	43.1 S. of Flag 17
~~24~~	~~JONB-21-0.5~~				
~~25~~	~~JONB-22-0.5~~				
~~26~~	~~JONB-23-0.5~~				
~~27~~	~~JONB-24-0.5~~				

Appendix B

Organochlorine Pesticide Analytical Results

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT Dept. of Toxic Substances (9290)
ATTN: Robbie Morris
1011 N. Grandview Ave.
Glendale, CA 91201

LAB REQUEST 106849
REPORTED 03/19/2003
RECEIVED 02/20/2003

PROJECT Jones Pesticide Study

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
413515	JON-1-0.5
413516	JON-1-2
413517	JON-1-4
413518	JON-2-0.5
413519	JON-2-2
413520	JON-2-4
413521	JON-3-0.5
413522	JON-3-2
413523	JON-3-4
413524	JON-4-0.5
413525	JON-4-2
413526	JON-4-4
413527	JON-5-0.5

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

CLIENT Dept. of Toxic Substances (9290)
ATTN: Robbie Morris
1011 N. Grandview Ave.
Glendale, CA 91201

LAB REQUEST 106849

REPORTED 03/19/2003
RECEIVED 02/20/2003

PROJECT Jones Pesticide Study

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
413528	JON-5-0.5 Dup
413529	JON-746-ST
413530	JON-5-2
413531	JON-5-4
413532	JON-6-0.5
413533	JON-6-2
413534	JON-6-4
413535	JON-7-0.5
413536	JON-7-2
413537	JON-7-4
413538	JON-8-0.5
413539	JON-8-2
413540	JON-8-4
413541	JON-9-0.5
413542	JON-9-2
413543	JON-10-0.5
413544	JON-10-2
413545	JON-10-4
413546	JON-11-0.5
413547	JON-11-2
413548	JON-11-4

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph D
Vice President

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

CLIENT Dept. of Toxic Substances (9290)
ATTN: Robbie Morris
1011 N. Grandview Ave.
Glendale, CA 91201

LAB REQUEST 106849

REPORTED 03/19/2003
RECEIVED 02/20/2003

PROJECT Jones Pesticide Study

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
413549	JON-12-0.5
413550	JON-12-4
413551	JON-12-2
413552	JON-EB
413553	JON-13-0.5
413554	JON-13-2
413555	JON-13-4
413556	JON-13-4 Dup
413557	JON-14-0.5
413558	JON-14-2
413559	JON-14-4
413560	JON-15-0.5
413561	JON-15-2
413562	JON-15-4
413563	JON-17-0.5
413564	JON-R
413565	Laboratory Method Blank-S
413566	Laboratory Method Blank-W

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Benare, Ph.D
Vice President

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Environmental

Order #: 413515 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-1-0.5
Date Sampled: 02/19/2003
Time Sampled: 09:15
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.900	25	0.125	mg/Kg	03/17/03	SD
4,4-DDE	0.323	25	0.1	mg/Kg	03/17/03	SD
4,4-DDT	0.180	25	0.125	mg/Kg	03/17/03	SD
Aldrin	ND	25	0.1	mg/Kg	03/17/03	SD
Alpha BHC	ND	25	0.05	mg/Kg	03/17/03	SD
Beta BHC	ND	25	0.075	mg/Kg	03/17/03	SD
Chlordane	19.5	25	0.625	mg/Kg	03/17/03	SD
Delta BHC	ND	25	0.125	mg/Kg	03/17/03	SD
Dieldrin	2.58	25	0.075	mg/Kg	03/17/03	SD
Endosulfan I	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan II	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	25	0.075	mg/Kg	03/17/03	SD
Lindane	ND	25	0.075	mg/Kg	03/17/03	SD
Methoxychlor	ND	25	0.625	mg/Kg	03/17/03	SD
Toxaphene	ND	25	6.25	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	166	%	55 - 130
TCMX (Sur1)	88	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413516
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 09:19
Sampled By:

Client: Dept of Toxic Substances
Client Sample ID: JON-1-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	0.011	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	0.008	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.773	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.156	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	103	%	55 - 130
TCMX (Sur1)	95	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413517 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-1-4
Date Sampled: 02/19/2003
Time Sampled: 09:28
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.050	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.011	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	121	%	55 - 130
TCMX (Sur1)	103	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413518 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-2-0.5
Date Sampled: 02/19/2003
Time Sampled: 09:21
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	25	0.125	mg/Kg	03/17/03	SD
4,4-DDE	ND	25	0.1	mg/Kg	03/17/03	SD
4,4-DDT	ND	25	0.125	mg/Kg	03/17/03	SD
Aldrin	ND	25	0.1	mg/Kg	03/17/03	SD
Alpha BHC	ND	25	0.05	mg/Kg	03/17/03	SD
Beta BHC	ND	25	0.075	mg/Kg	03/17/03	SD
Chlordane	22.2	25	0.625	mg/Kg	03/17/03	SD
Delta BHC	ND	25	0.125	mg/Kg	03/17/03	SD
Dieldrin	2.58	25	0.075	mg/Kg	03/17/03	SD
Endosulfan I	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan II	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	25	0.075	mg/Kg	03/17/03	SD
Lindane	ND	25	0.075	mg/Kg	03/17/03	SD
Methoxychlor	ND	25	0.625	mg/Kg	03/17/03	SD
Toxaphene	ND	25	6.25	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	185	%	55 - 130
TCMX (Sur1)	84	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413519 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-2-2
Date Sampled: 02/19/2003
Time Sampled: 09:30
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.104	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.016	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	114	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413520
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 09:45
Sampled By:

Client: Dept of Toxic Substances
Client Sample ID: JON-2-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	119	%	55 - 130
TCMX (Sur1)	82	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413521 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-3-0 5
Date Sampled: 02/19/2003
Time Sampled: 09:50
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	25	0.125	mg/Kg	03/17/03	SD
4,4-DDE	ND	25	0.1	mg/Kg	03/17/03	SD
4,4-DDT	ND	25	0.125	mg/Kg	03/17/03	SD
Aldrin	ND	25	0.1	mg/Kg	03/17/03	SD
Alpha BHC	ND	25	0.05	mg/Kg	03/17/03	SD
Beta BHC	ND	25	0.075	mg/Kg	03/17/03	SD
Chlordane	9.67	25	0.625	mg/Kg	03/17/03	SD
Delta BHC	ND	25	0 125	mg/Kg	03/17/03	SD
Dieldrin	2.38	25	0.075	mg/Kg	03/17/03	SD
Endosulfan I	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan II	ND	25	0.1	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin	ND	25	0.1	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor	ND	25	0.1	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	25	0.075	mg/Kg	03/17/03	SD
Lindane	ND	25	0.075	mg/Kg	03/17/03	SD
Methoxychlor	ND	25	0.625	mg/Kg	03/17/03	SD
Toxaphene	ND	25	6.25	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	126	%	55 - 130
TCMX (Sur1)	84	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413522 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-3-2
Date Sampled: 02/19/2003
Time Sampled: 09:58
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.559	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.072	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	117	%	55 - 130
TCMX (Sur1)	91	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413523
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:05
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-3-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.229	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.037	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	111	%	55 - 130
TCMX (Sur1)	89	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413524 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-4-0.5
Date Sampled: 02/19/2003
Time Sampled: 09:38
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	4.45	250	1.25	mg/Kg	03/18/03	SD
4,4-DDE	3.36	250	1.0	mg/Kg	03/18/03	SD
4,4-DDT	9.65	250	1.25	mg/Kg	03/18/03	SD
Aldrin	ND	250	1.0	mg/Kg	03/18/03	SD
Alpha BHC	ND	250	0.5	mg/Kg	03/18/03	SD
Beta BHC	ND	250	0.75	mg/Kg	03/18/03	SD
Chlordane	336	250	6.25	mg/Kg	03/18/03	SD
Delta BHC	ND	250	1.25	mg/Kg	03/18/03	SD
Dieldrin	24	250	0.75	mg/Kg	03/18/03	SD
Endosulfan I	ND	250	1.0	mg/Kg	03/18/03	SD
Endosulfan II	ND	250	1.0	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	250	1.0	mg/Kg	03/18/03	SD
Endrin	ND	250	1.0	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	250	1.0	mg/Kg	03/18/03	SD
Heptachlor	ND	250	1.0	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	250	0.75	mg/Kg	03/18/03	SD
Lindane	ND	250	0.75	mg/Kg	03/18/03	SD
Methoxychlor	ND	250	6.25	mg/Kg	03/18/03	SD
Toxaphene	ND	250	62.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	507	%	55 - 130
TCMX (Sur1)	75	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413525
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 09:42
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-4-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	0.006	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	0.011	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.294	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.020	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	117	%	55 - 130
TCMX (Sur1)	88	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413526 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-4-4
Date Sampled: 02/19/2003
Time Sampled: 09:51
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.247	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	0.048	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	113	%	55 - 130
TCMX (Sur1)	91	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413527 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-5-0 5
Date Sampled: 02/19/2003
Time Sampled: 10:08
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.020	5	0.025	mg/Kg	03/18/03	SD
4,4-DDE	0 192	5	0.02	mg/Kg	03/18/03	SD
4,4-DDT	0.155	5	0.025	mg/Kg	03/18/03	SD
Aldrin	ND	5	0.02	mg/Kg	03/18/03	SD
Alpha BHC	ND	5	0.01	mg/Kg	03/18/03	SD
Beta BHC	ND	5	0.015	mg/Kg	03/18/03	SD
Chlordane	2.05	5	0.125	mg/Kg	03/18/03	SD
Delta BHC	ND	5	0.025	mg/Kg	03/18/03	SD
Dieldrin	0.162	5	0.015	mg/Kg	03/18/03	SD
Endosulfan I	ND	5	0.02	mg/Kg	03/18/03	SD
Endosulfan II	ND	5	0 02	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	5	0.02	mg/Kg	03/18/03	SD
Endrin	ND	5	0.02	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	5	0.02	mg/Kg	03/18/03	SD
Heptachlor	ND	5	0.02	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	5	0.015	mg/Kg	03/18/03	SD
Lindane	ND	5	0.015	mg/Kg	03/18/03	SD
Methoxychlor	ND	5	0.125	mg/Kg	03/18/03	SD
Toxaphene	ND	5	1.25	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	144	%	55 - 130
TCMX (Sur1)	104	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413528
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:10
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-5-0.5 Dup

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.022	5	0.025	mg/Kg	03/18/03	SD
4,4-DDE	0.197	5	0.02	mg/Kg	03/18/03	SD
4,4-DDT	0.249	5	0.025	mg/Kg	03/18/03	SD
Aldrin	ND	5	0.02	mg/Kg	03/18/03	SD
Alpha BHC	ND	5	0.01	mg/Kg	03/18/03	SD
Beta BHC	ND	5	0.015	mg/Kg	03/18/03	SD
Chlordane	2.60	5	0.125	mg/Kg	03/18/03	SD
Delta BHC	ND	5	0.025	mg/Kg	03/18/03	SD
Dieldrin	0.240	5	0.015	mg/Kg	03/18/03	SD
Endosulfan I	ND	5	0.02	mg/Kg	03/18/03	SD
Endosulfan II	ND	5	0.02	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	5	0.02	mg/Kg	03/18/03	SD
Endrin	ND	5	0.02	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	5	0.02	mg/Kg	03/18/03	SD
Heptachlor	ND	5	0.02	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	5	0.015	mg/Kg	03/18/03	SD
Lindane	ND	5	0.015	mg/Kg	03/18/03	SD
Methoxychlor	ND	5	0.125	mg/Kg	03/18/03	SD
Toxaphene	ND	5	1.25	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	148	%	55 - 130
TCMX (Sur1)	111	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413529
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:10
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-746-SI

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	10	0 05	mg/Kg	03/18/03	SD
4,4-DDE	0.046	10	0.04	mg/Kg	03/18/03	SD
4,4-DDT	0 272	10	0 05	mg/Kg	03/18/03	SD
Aldrin	ND	10	0.04	mg/Kg	03/18/03	SD
Alpha BHC	ND	10	0.02	mg/Kg	03/18/03	SD
Beta BHC	ND	10	0.03	mg/Kg	03/18/03	SD
Chlordane	17.6	10	0.25	mg/Kg	03/18/03	SD
Delta BHC	ND	10	0.05	mg/Kg	03/18/03	SD
Dieldrin	0.151	10	0.03	mg/Kg	03/18/03	SD
Endosulfan I	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan II	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	10	0.04	mg/Kg	03/18/03	SD
Heptachlor	ND	10	0 04	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	10	0.03	mg/Kg	03/18/03	SD
Lindane	ND	10	0.03	mg/Kg	03/18/03	SD
Methoxychlor	ND	10	0.25	mg/Kg	03/18/03	SD
Toxaphene	ND	10	2 5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	134	%	55 - 130
TCMX (Sur1)	120	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413530
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:20
Sampled By:

Client: Dept of Toxic Substances
Client Sample ID: JON-5-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	115	%	55 - 130
TCMX (Sur1)	91	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413531
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:30
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-5-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	111	%	55 - 130
TCMX (Sur1)	89	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413532
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:15
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-6-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.035	10	0.05	mg/Kg	03/14/03	SD
4,4-DDE	0.107	10	0.04	mg/Kg	03/14/03	SD
4,4-DDT	0.207	10	0.05	mg/Kg	03/14/03	SD
Aldrin	ND	10	0.04	mg/Kg	03/14/03	SD
Alpha BHC	ND	10	0.02	mg/Kg	03/14/03	SD
Beta BHC	ND	10	0.03	mg/Kg	03/14/03	SD
Chlordane	7.00	10	0.25	mg/Kg	03/14/03	SD
Delta BHC	ND	10	0.05	mg/Kg	03/14/03	SD
Dieldrin	0.362	10	0.03	mg/Kg	03/14/03	SD
Endosulfan I	ND	10	0.04	mg/Kg	03/14/03	SD
Endosulfan II	ND	10	0.04	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	10	0.04	mg/Kg	03/14/03	SD
Endrin	ND	10	0.04	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	10	0.04	mg/Kg	03/14/03	SD
Heptachlor	ND	10	0.04	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	10	0.03	mg/Kg	03/14/03	SD
Lindane	ND	10	0.03	mg/Kg	03/14/03	SD
Methoxychlor	ND	10	0.25	mg/Kg	03/14/03	SD
Toxaphene	ND	10	2.5	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	96	%	55 - 130
TCMX (Sur1)	80	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413533
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:23
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-6-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	116	%	55 - 130
TCMX (Sur1)	95	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413534 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-6-4
Date Sampled: 02/19/2003
Time Sampled: 10:28
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/14/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/14/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/14/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/14/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/14/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/14/03	SD
Chlordane	0.044	1	0.025	mg/Kg	03/14/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/14/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/14/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/14/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin	ND	1	0.004	mg/Kg	03/14/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/14/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/14/03	SD
Lindane	ND	1	0.003	mg/Kg	03/14/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/14/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/14/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	114	%	55 - 130
TCMX (Sur1)	94	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413535 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-7-0 5
Date Sampled: 02/19/2003
Time Sampled: 10:33
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	10	0.05	mg/Kg	03/18/03	SD
4,4-DDE	0.040	10	0.04	mg/Kg	03/18/03	SD
4,4-DDT	0.131	10	0.05	mg/Kg	03/18/03	SD
Aldrin	ND	10	0.04	mg/Kg	03/18/03	SD
Alpha BHC	ND	10	0.02	mg/Kg	03/18/03	SD
Beta BHC	ND	10	0.03	mg/Kg	03/18/03	SD
Chlordane	6.42	10	0.25	mg/Kg	03/18/03	SD
Delta BHC	ND	10	0.05	mg/Kg	03/18/03	SD
Dieldrin	0.377	10	0.03	mg/Kg	03/18/03	SD
Endosulfan I	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan II	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	10	0.04	mg/Kg	03/18/03	SD
Heptachlor	ND	10	0.04	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	10	0.03	mg/Kg	03/18/03	SD
Lindane	ND	10	0.03	mg/Kg	03/18/03	SD
Methoxychlor	ND	10	0.25	mg/Kg	03/18/03	SD
Toxaphene	ND	10	2.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	302	%	55 - 130
TCMX (Sur1)	98	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413536 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-7-2
Date Sampled: 02/19/2003
Time Sampled: 10:46
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.039	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	103	%	55 - 130
TCMX (Sur1)	95	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413537 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-7-4
Date Sampled: 02/19/2003
Time Sampled: 11:00
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.037	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	99	%	55 - 130
TCMX (Sur1)	96	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413538 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-8-0.5
Date Sampled: 02/19/2003
Time Sampled: 10:40
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.100	10	0.05	mg/Kg	03/18/03	SD
4,4-DDE	0.859	10	0.04	mg/Kg	03/18/03	SD
4,4-DDT	0.654	10	0.05	mg/Kg	03/18/03	SD
Aldrin	ND	10	0.04	mg/Kg	03/18/03	SD
Alpha BHC	ND	10	0.02	mg/Kg	03/18/03	SD
Beta BHC	ND	10	0.03	mg/Kg	03/18/03	SD
Chlordane	11.9	10	0.25	mg/Kg	03/18/03	SD
Delta BHC	ND	10	0.05	mg/Kg	03/18/03	SD
Dieldrin	0.728	10	0.03	mg/Kg	03/18/03	SD
Endosulfan I	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan II	ND	10	0.04	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin	ND	10	0.04	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	10	0.04	mg/Kg	03/18/03	SD
Heptachlor	ND	10	0.04	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	10	0.03	mg/Kg	03/18/03	SD
Lindane	ND	10	0.03	mg/Kg	03/18/03	SD
Methoxychlor	ND	10	0.25	mg/Kg	03/18/03	SD
Toxaphene	ND	10	2.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	211	%	55 - 130
TCMX (Sur1)	87	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413539 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-8-2
Date Sampled: 02/19/2003
Time Sampled: 10:45
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	0.006	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.051	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.008	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	104	%	55 - 130
TCMX (Sur1)	94	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413540
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 10:49
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-8-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.030	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.007	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	88	%	55 - 130
TCMX (Sur1)	87	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413541 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-9-0.5
Date Sampled: 02/19/2003
Time Sampled: 11:21
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.011	2	0.01	mg/Kg	03/18/03	SD
4,4-DDE	0.021	2	0.008	mg/Kg	03/18/03	SD
4,4-DDT	0.073	2	0.01	mg/Kg	03/18/03	SD
Aldrin	ND	2	0.008	mg/Kg	03/18/03	SD
Alpha BHC	ND	2	0.004	mg/Kg	03/18/03	SD
Beta BHC	ND	2	0.006	mg/Kg	03/18/03	SD
Chlordane	1.11	2	0.05	mg/Kg	03/18/03	SD
Delta BHC	ND	2	0.01	mg/Kg	03/18/03	SD
Dieldrin	0.745	2	0.006	mg/Kg	03/18/03	SD
Endosulfan I	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan II	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	2	0.006	mg/Kg	03/18/03	SD
Lindane	ND	2	0.006	mg/Kg	03/18/03	SD
Methoxychlor	ND	2	0.05	mg/Kg	03/18/03	SD
Toxaphene	ND	2	0.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	108	%	55 - 130
TCMX (Sur1)	95	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413542
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:40
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-9-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.034	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.037	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	106	%	55 - 130
TCMX (Sur1)	88	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413543 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-10-0.5
Date Sampled: 02/19/2003
Time Sampled: 11:20
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	2	0.01	mg/Kg	03/18/03	SD
4,4-DDE	0.011	2	0.008	mg/Kg	03/18/03	SD
4,4-DDT	0.073	2	0.01	mg/Kg	03/18/03	SD
Aldrin	ND	2	0.008	mg/Kg	03/18/03	SD
Alpha BHC	ND	2	0.004	mg/Kg	03/18/03	SD
Beta BHC	ND	2	0.006	mg/Kg	03/18/03	SD
Chlordane	0.945	2	0.05	mg/Kg	03/18/03	SD
Delta BHC	ND	2	0.01	mg/Kg	03/18/03	SD
Dieldrin	0.496	2	0.006	mg/Kg	03/18/03	SD
Endosulfan I	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan II	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	2	0.006	mg/Kg	03/18/03	SD
Lindane	ND	2	0.006	mg/Kg	03/18/03	SD
Methoxychlor	ND	2	0.05	mg/Kg	03/18/03	SD
Toxaphene	ND	2	0.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	122	%	55 - 130
TCMX (Sur1)	103	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413544
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:24
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-10-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.009	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	105	%	55 - 130
TCMX (Sur1)	94	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413545
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:32
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-10-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	113	%	55 - 130
TCMX (Sur1)	101	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413546
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:40
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-11-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	2	0.01	mg/Kg	03/18/03	SD
4,4-DDE	0.009	2	0.008	mg/Kg	03/18/03	SD
4,4-DDT	0 039	2	0.01	mg/Kg	03/18/03	SD
Aldrin	ND	2	0.008	mg/Kg	03/18/03	SD
Alpha BHC	ND	2	0 004	mg/Kg	03/18/03	SD
Beta BHC	ND	2	0.006	mg/Kg	03/18/03	SD
Chlordane	0 428	2	0.05	mg/Kg	03/18/03	SD
Delta BHC	ND	2	0.01	mg/Kg	03/18/03	SD
Dieldrin	0 179	2	0.006	mg/Kg	03/18/03	SD
Endosulfan I	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan II	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	2	0.006	mg/Kg	03/18/03	SD
Lindane	ND	2	0.006	mg/Kg	03/18/03	SD
Methoxychlor	ND	2	0.05	mg/Kg	03/18/03	SD
Toxaphene	ND	2	0.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	121	%	55 - 130
TCMX (Sur1)	91	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413547
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:45
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-11-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	0.030	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.008	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	101	%	55 - 130
TCMX (Sur1)	65	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413548 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-11-4
Date Sampled: 02/19/2003
Time Sampled: 11:55
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	108	%	55 - 130
TCMX (Sur1)	64	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413549
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 11:45
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-12-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	2	0.01	mg/Kg	03/18/03	SD
4,4-DDE	0.012	2	0.008	mg/Kg	03/18/03	SD
4,4-DDT	0.041	2	0.01	mg/Kg	03/18/03	SD
Aldrin	ND	2	0.008	mg/Kg	03/18/03	SD
Alpha BHC	ND	2	0.004	mg/Kg	03/18/03	SD
Beta BHC	ND	2	0.006	mg/Kg	03/18/03	SD
Chlordane	0.244	2	0.05	mg/Kg	03/18/03	SD
Delta BHC	ND	2	0.01	mg/Kg	03/18/03	SD
Dieldrin	0.569	2	0.006	mg/Kg	03/18/03	SD
Endosulfan I	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan II	ND	2	0.008	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin	ND	2	0.008	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor	ND	2	0.008	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	2	0.006	mg/Kg	03/18/03	SD
Lindane	ND	2	0.006	mg/Kg	03/18/03	SD
Methoxychlor	ND	2	0.05	mg/Kg	03/18/03	SD
Toxaphene	ND	2	0.5	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	131	%	55 - 130
TCMX (Sur1)	100	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413550
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:08
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-12-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	105	%	55 - 130
TCMX (Sur1)	70	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413551
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:01
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-12-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	0.009	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	114	%	55 - 130
TCMX (Sur1)	74	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413552
Matrix: WATER
Date Sampled: 02/19/2003
Time Sampled: 12:08
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-EB

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.06	ug/L	03/03/03	SD
4,4-DDE	ND	1	0.05	ug/L	03/03/03	SD
4,4-DDT	ND	1	0.06	ug/L	03/03/03	SD
Aldrin	ND	1	0.11	ug/L	03/03/03	SD
Alpha BHC	ND	1	0.04	ug/L	03/03/03	SD
Beta BHC	ND	1	0.03	ug/L	03/03/03	SD
Chlordane	ND	1	0.31	ug/L	03/03/03	SD
Delta BHC	ND	1	0.03	ug/L	03/03/03	SD
Dieldrin	ND	1	0.06	ug/L	03/03/03	SD
Endosulfan I	ND	1	0.03	ug/L	03/03/03	SD
Endosulfan II	ND	1	0.06	ug/L	03/03/03	SD
Endosulfan sulfate	ND	1	0.06	ug/L	03/03/03	SD
Endrin	ND	1	0.06	ug/L	03/03/03	SD
Endrin aldehyde	ND	1	0.13	ug/L	03/03/03	SD
Heptachlor	ND	1	0.08	ug/L	03/03/03	SD
Heptachlor epoxide	ND	1	0.05	ug/L	03/03/03	SD
Lindane	ND	1	0.03	ug/L	03/03/03	SD
Methoxychlor	ND	1	0.57	ug/L	03/03/03	SD
Toxaphene	ND	1	3.13	ug/L	03/03/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	117	%	55 - 125
TCMX (Sur1)	83	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413553 **Client:** Dept of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-13-0 5
Date Sampled: 02/19/2003
Time Sampled: 12:18
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.042	1	0 005	mg/Kg	03/18/03	SD
4,4-DDE	0.716	1	0.004	mg/Kg	03/18/03	SD
4,4-DDT	0.758	1	0.005	mg/Kg	03/18/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/18/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/18/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/18/03	SD
Chlordane	0.053	1	0.025	mg/Kg	03/18/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/18/03	SD
Dieldrin	0.008	1	0.003	mg/Kg	03/18/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan II	ND	1	0 004	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/18/03	SD
Lindane	ND	1	0.003	mg/Kg	03/18/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/18/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	113	%	55 - 130
TCMX (Sur1)	92	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413554
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:20
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-13-2

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	0.032	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	0.034	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	104	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413555
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:35
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-13-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/15/03	SD
4,4-DDE	0.019	1	0.004	mg/Kg	03/15/03	SD
4,4-DDT	0.021	1	0.005	mg/Kg	03/15/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/15/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/15/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/15/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/15/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/15/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/15/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/15/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin	ND	1	0.004	mg/Kg	03/15/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/15/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/15/03	SD
Lindane	ND	1	0.003	mg/Kg	03/15/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/15/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/15/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	109	%	55 - 130
TCMX (Sur1)	80	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413556
Client: Dept of Toxic Substances
Matrix: SOLID
Client Sample ID: JON-13-4 Dup
Date Sampled: 02/19/2003
Time Sampled: 12:36
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	0.024	1	0 004	mg/Kg	03/17/03	SD
4,4-DDT	0 025	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0 004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0 002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0 025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	122	%	55 - 130
TCMX (Sur1)	80	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413557
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:21
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-14-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.028	1	0.005	mg/Kg	03/18/03	SD
4,4-DDE	0.650	1	0.004	mg/Kg	03/18/03	SD
4,4-DDT	0.700	1	0.005	mg/Kg	03/18/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/18/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/18/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/18/03	SD
Chlordane	0 223	1	0.025	mg/Kg	03/18/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/18/03	SD
Dieldrin	0.011	1	0.003	mg/Kg	03/18/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/18/03	SD
Lindane	ND	1	0.003	mg/Kg	03/18/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/18/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	98	%	55 - 130
TCMX (Sur1)	95	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413558 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-14-2
Date Sampled: 02/19/2003
Time Sampled: 12:28
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	0.021	1	0.004	mg/Kg	03/17/03	SD
4,4-DDT	0.013	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	109	%	55 - 130
TCMX (Sur1)	85	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413559
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:30
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-14-4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	0.035	1	0.004	mg/Kg	03/17/03	SD
4,4-DDT	0.026	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	97	%	55 - 130
TCMX (Sur1)	74	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413560
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 12:30
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-15-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.29	1	0.005	mg/Kg	03/18/03	SD
4,4-DDE	0.332	1	0.004	mg/Kg	03/18/03	SD
4,4-DDT	0.433	1	0.005	mg/Kg	03/18/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/18/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/18/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/18/03	SD
Chlordane	0.416	1	0.025	mg/Kg	03/18/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/18/03	SD
Dieldrin	0.011	1	0.003	mg/Kg	03/18/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/18/03	SD
Lindane	ND	1	0.003	mg/Kg	03/18/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/18/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	102	%	55 - 130
TCMX (Sur1)	91	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413561 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-15-2
Date Sampled: 02/19/2003
Time Sampled: 12:48
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/17/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	116	%	55 - 130
TCMX (Sur1)	85	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413562 **Client:** Dept of Toxic Substances
Matrix: SOLID **Client Sample ID:** JON-15-4
Date Sampled: 02/19/2003
Time Sampled: 12:55
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/17/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	113	%	55 - 130
TCMX (Sur1)	68	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413563
Matrix: SOLID
Date Sampled: 02/19/2003
Time Sampled: 13:10
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JON-17-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.116	1	0.005	mg/Kg	03/18/03	SD
4,4-DDE	0.434	1	0.004	mg/Kg	03/18/03	SD
4,4-DDT	0.900	1	0.005	mg/Kg	03/18/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/18/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/18/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/18/03	SD
Chlordane	0.071	1	0.025	mg/Kg	03/18/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/18/03	SD
Dieldrin	0.033	1	0.003	mg/Kg	03/18/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/18/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin	ND	1	0.004	mg/Kg	03/18/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/18/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/18/03	SD
Lindane	0.036	1	0.003	mg/Kg	03/18/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/18/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/18/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	105	%	55 - 130
TCMX (Sur1)	105	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413564 **Client:** Dept. of Toxic Substances
Matrix: WATER **Client Sample ID:** JON-R
Date Sampled: 02/19/2003
Time Sampled: 13:13
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.06	ug/L	03/06/03	SD
4,4-DDE	0.18	1	0 05	ug/L	03/06/03	SD
4,4-DDT	0.13	1	0.06	ug/L	03/06/03	SD
Aldrin	ND	1	0.11	ug/L	03/06/03	SD
Alpha BHC	ND	1	0.04	ug/L	03/06/03	SD
Beta BHC	ND	1	0.03	ug/L	03/06/03	SD
Chlordane	2.5	1	0.31	ug/L	03/06/03	SD
Delta BHC	ND	1	0.03	ug/L	03/06/03	SD
Dieldrin	0 54	1	0 06	ug/L	03/06/03	SD
Endosulfan I	ND	1	0.03	ug/L	03/06/03	SD
Endosulfan II	ND	1	0 06	ug/L	03/06/03	SD
Endosulfan sulfate	ND	1	0.06	ug/L	03/06/03	SD
Endrin	ND	1	0.06	ug/L	03/06/03	SD
Endrin aldehyde	ND	1	0.13	ug/L	03/06/03	SD
Heptachlor	ND	1	0.08	ug/L	03/06/03	SD
Heptachlor epoxide	ND	1	0.05	ug/L	03/06/03	SD
Lindane	ND	1	0.03	ug/L	03/06/03	SD
Methoxychlor	ND	1	0.57	ug/L	03/06/03	SD
Toxaphene	ND	1	3.13	ug/L	03/06/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	55	%	55 - 125
TCMX (Sur1)	80	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413565
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: Laboratory Method Blank-S

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	03/17/03	SD
4,4-DDE	ND	1	0.004	mg/Kg	03/17/03	SD
4,4-DDT	ND	1	0.005	mg/Kg	03/17/03	SD
Aldrin	ND	1	0.004	mg/Kg	03/17/03	SD
Alpha BHC	ND	1	0.002	mg/Kg	03/17/03	SD
Beta BHC	ND	1	0.003	mg/Kg	03/17/03	SD
Chlordane	ND	1	0.025	mg/Kg	03/17/03	SD
Delta BHC	ND	1	0.005	mg/Kg	03/17/03	SD
Dieldrin	ND	1	0.003	mg/Kg	03/17/03	SD
Endosulfan I	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan II	ND	1	0.004	mg/Kg	03/17/03	SD
Endosulfan sulfate	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin	ND	1	0.004	mg/Kg	03/17/03	SD
Endrin aldehyde	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor	ND	1	0.004	mg/Kg	03/17/03	SD
Heptachlor epoxide	ND	1	0.003	mg/Kg	03/17/03	SD
Lindane	ND	1	0.003	mg/Kg	03/17/03	SD
Methoxychlor	ND	1	0.025	mg/Kg	03/17/03	SD
Toxaphene	ND	1	0.250	mg/Kg	03/17/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	115	%	55 - 130
TCMX (Sur1)	89	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 413566 **Client:** Dept. of Toxic Substances
Matrix: WATER **Client Sample ID:** Laboratory Method Blank-W
Date Sampled:
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.06	ug/L	02/24/03	SD
4,4-DDE	ND	1	0.05	ug/L	02/24/03	SD
4,4-DDT	ND	1	0.06	ug/L	02/24/03	SD
Aldrin	ND	1	0.11	ug/L	02/24/03	SD
Alpha BHC	ND	1	0.04	ug/L	02/24/03	SD
Beta BHC	ND	1	0.03	ug/L	02/24/03	SD
Chlordane	ND	1	0.31	ug/L	02/24/03	SD
Delta BHC	ND	1	0.03	ug/L	02/24/03	SD
Dieldrin	ND	1	0.06	ug/L	02/24/03	SD
Endosulfan I	ND	1	0.03	ug/L	02/24/03	SD
Endosulfan II	ND	1	0.06	ug/L	02/24/03	SD
Endosulfan sulfate	ND	1	0.06	ug/L	02/24/03	SD
Endrin	ND	1	0.06	ug/L	02/24/03	SD
Endrin aldehyde	ND	1	0.13	ug/L	02/24/03	SD
Heptachlor	ND	1	0.08	ug/L	02/24/03	SD
Heptachlor epoxide	ND	1	0.05	ug/L	02/24/03	SD
Lindane	ND	1	0.03	ug/L	02/24/03	SD
Methoxychlor	ND	1	0.57	ug/L	02/24/03	SD
Toxaphene	ND	1	3.13	ug/L	02/24/03	SD

Surrogates		Units	Control Limits
DCB(Sur2)	108	%	55 - 125
TCMX (Sur1)	60	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES
QA REPORT FORM

Method : EPA 8081/608

QC Sample: LCS / LCSD

Matrix: WATER

Analysis Date: 02/24/03

Batch Date: 02/26/03 (pest 022603w)

Applies to: LR 106704; LR 106649 and LR 106849

LAB CONTROL SPIKE / LAB CONTROL SPIKE DUPLICATE RESULTS

REPORTING UNITS = µg/L

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			LCS	LCSD	LCS	LCSD		RPD	% Rec
gamma-BHC (Lindane)	ND	1.00	0.84	0.84	84	84	0	35	55-130
Heptachlor	ND	1.00	0.89	0.90	89	90	1	35	55-130
Aldrin	ND	1.00	0.75	0.74	75	74	1	35	55-130
Dieldrin	ND	1.00	1.08	1.05	108	105	3	35	55-130
Endrin	ND	1.00	1.13	1.11	113	111	2	35	55-130
DDT	ND	1.00	1.14	1.11	114	111	2	35	55-130

Method Blank = All Non-Detect

% Rec - LCS & LCSD = Percent Recovery from Lab Control Spike & Lab Control Spike Duplicate

RPD = Relative Percent Difference of Lab Control Spike and Lab Control Spike Duplicate recoveries

ASSOCIATED LABORATORIES
QA REPORT FORM

Method : EPA 8081

QC Sample: 106849-413517

Matrix: SOLID

Analysis Date: 03/14/03

Batch Date: 2/27/03 (pest 022703s)

Applies to: LR 106849 (samples 413515 through 413534)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS

REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
gamma-BHC (Lindane)	ND	0.100	0.100	0.100	100	100	0	35	50-135
Heptachlor	ND	0.100	0.107	0.117	107	117	8	35	50-135
Aldrin	ND	0.100	0.092	0.094	92	94	2	35	50-135
Dieldrin	0.011	0.100	0.140	0.140	129	128	0	35	50-135
Endrin	ND	0.100	0.098	0.103	98	103	5	35	50-135
DDT	ND	0.100	0.102	0.099	102	99	3	35	50-135

ND = Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE RECOVERY / METHOD BLANK

REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits % Rec
gamma-BHC (Lindane)	0.100	0.089	89	55-130
Heptachlor	0.100	0.095	95	55-130
Aldrin	0.100	0.082	82	55-130
Dieldrin	0.100	0.101	101	55-130
Endrin	0.100	0.103	103	55-130
DDT	0.100	0.103	103	55-130

Method Blank = All ND
% Rec - LCS = Percent Recovery from Lab Control Spike

ASSOCIATED LABORATORIES
QA REPORT FORM

Method : EPA 8081

QC Sample: 106849-413537

Matrix: SOLID

Analysis Date: 03/14/03

Batch Date: 2/28/03 (pest 022803s)

Applies to: LR 106849 (samples 413535 through 413555)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS

REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
gamma-BHC (Lindane)	ND	0.100	0.083	0.092	83	92	10	35	50-135
Heptachlor	ND	0.100	0.086	0.098	86	98	13	35	50-135
Aldrin	ND	0.100	0.076	0.085	76	85	11	35	50-135
Dieldrin	ND	0.100	0.102	0.114	102	114	11	35	50-135
Endrin	ND	0.100	0.098	0.112	98	112	13	35	50-135
DDT	ND	0.100	0.098	0.117	98	117	17	35	50-135

ND = Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE RECOVERY / METHOD BLANK

REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits % Rec
gamma-BHC (Lindane)	0.100	0.091	91	55-130
Heptachlor	0.100	0.092	92	55-130
Aldrin	0.100	0.083	83	55-130
Dieldrin	0.100	0.104	104	55-130
Endrin	0.100	0.099	99	55-130
DDT	0.100	0.098	98	55-130

Method Blank = All ND
% Rec - LCS = Percent Recovery from Lab Control Spike

ASSOCIATED LABORATORIES
QA REPORT FORM

Method : EPA 8081

QC Sample: 106849-413562

Matrix: SOLID

Analysis Date: 03/17/03

Batch Date: 3/03/03 (pest 030303s)

Applies to: LR 106849 (samples 413556 through 413562)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS

REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
gamma-BHC (Lindane)	ND	0.100	0.073	0.080	73	80	10	35	50-135
Heptachlor	ND	0.100	0.082	0.087	82	87	6	35	50-135
Aldrin	ND	0.100	0.073	0.077	73	77	6	35	50-135
Dieldrin	ND	0.100	0.096	0.099	96	99	3	35	50-135
Endrin	ND	0.100	0.100	0.101	100	101	1	35	50-135
DDT	ND	0.100	0.113	0.109	113	109	4	35	50-135

ND = Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE RECOVERY / METHOD BLANK

REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits % Rec
gamma-BHC (Lindane)	0.100	0.091	91	55-130
Heptachlor	0.100	0.095	95	55-130
Aldrin	0.100	0.085	85	55-130
Dieldrin	0.100	0.106	106	55-130
Endrin	0.100	0.107	107	55-130
DDT	0.100	0.109	109	55-130

Method Blank = All ND
% Rec - LCS = Percent Recovery from Lab Control Spike

Associated Laboratories

NON-CONFORMANCE DOCUMENTATION

DATE: 03/19/03

DOCUMENT #:

LABID: LR 106849

TYPE OF NC:

CLIENT ID: 9290

(QA Limits Client Req. Other)

DEPARTMENT: Pesticides

Description of Non-Conformance: 8081/608

DCB surrogate recovery outside control limits for samples 413515, 413518, 413524, 413527, 413528, 413535, and 413538.

This was due to matrix interference.

Signed (Initiator): _____ **Date:** 3/19/03

Description of Corrective Action:

No Additional action taken - Blanks, LCS's and MS/MSD's all conform.

Surrogate recoveries for balance of samples in QC lots also conformed.

Methodology and extraction Valid.

Signed (Supervisor): _____ **Date:** 3/19/03

QA Manager Approval:

Signed(QA Manager): _____ **Date:** _____

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT Dept of Toxic Substances (9290)
ATTN: Robbie Morris
1011 N Grandview Ave.
Glendale, CA 91201

LAB REQUEST 109785
REPORTED 05/02/2003
RECEIVED 04/23/2003

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
426808	JONB-1-0.5
426809	JONB-2-0.5
426810	JONB-3-0.5
426811	JONB-4-0.5
426812	JONB-5-0.5
426813	JONB-724-ST
426814	JONB-6-0.5
426815	JONB-7-0.5
426816	JONB-8-0.5
426817	JONB-9-0.5
426818	JONB-10-0.5
426819	JONB-11-0.5
426820	JONB-12-0.5
426821	JONB-4-0.5D

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

CLIENT Dept. of Toxic Substances (9290)
ATTN: Robbie Morris
1011 N. Grandview Ave
Glendale, CA 91201

LAB REQUEST 109785

REPORTED 05/02/2003
RECEIVED 04/23/2003

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
426822	JONB-13-0.5
426823	JONB-14-0.5
426824	JONB-15-0.5
426825	JONB-16-0.5
426826	JONB-17-0.5
426827	JONB-17-0.5D
426828	JONB-18-0.5
426829	JONB-19-0.5
426830	JONB-20-0.5
426831	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

Order #: 426808
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 09:50
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-1-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0 005	mg/Kg	04/29/03	RB
4,4-DDE	0.15	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.60	10	0.05	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	7 2	10	0.25	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.15	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	10	0 04	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0 004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.019	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	10	0.03	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	102	%	55 - 130
TCMX (Sur1)	87	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426809
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 09:55
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-2-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.10	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.19	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	2.3	5	0.125	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	135	%	55 - 130
TCMX (Sur1)	82	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426810
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 09:58
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-3-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.17	10	0.04	mg/Kg	04/29/03	RB
4,4-DDT	0.19	10	0.05	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	80	50	1.25	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.59	10	0.03	mg/Kg	04/29/03	RB
Endosulfan I	ND	10	0.04	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.22	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	10	0.03	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	128	%	55 - 130
TCMX (Sur1)	84	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426811
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:00
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-4-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.096	10	0.04	mg/Kg	04/30/03	RB
4,4-DDT	0.19	10	0.05	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	86	50	1.25	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	0.70	10	0.03	mg/Kg	04/30/03	RB
Endosulfan I	ND	10	0.04	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	0.27	10	0.04	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	10	0.03	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	119	%	55 - 130
TCMX (Sur1)	82	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426812 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-5-0.5
Date Sampled: 04/23/2003
Time Sampled: 09:53
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.039	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.17	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	2.8	5	0.125	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.082	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.043	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	0.10	5	0.015	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	106	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426813
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:06
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-724-SI

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	20	0.1	mg/Kg	04/30/03	RB
4,4-DDE	ND	20	0.08	mg/Kg	04/30/03	RB
4,4-DDT	ND	20	0.1	mg/Kg	04/30/03	RB
Aldrin	ND	20	0.08	mg/Kg	04/30/03	RB
Alpha BHC	ND	20	0.04	mg/Kg	04/30/03	RB
Beta BHC	ND	20	0.06	mg/Kg	04/30/03	RB
Chlordane	320	200	5.0	mg/Kg	04/30/03	RB
Delta BHC	ND	20	0.1	mg/Kg	04/30/03	RB
Dieldrin	4.3	10	0.03	mg/Kg	04/30/03	RB
Endosulfan I	ND	20	0.08	mg/Kg	04/30/03	RB
Endosulfan II	ND	20	0.08	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	20	0.08	mg/Kg	04/30/03	RB
Endrin	ND	20	0.08	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	20	0.08	mg/Kg	04/30/03	RB
Heptachlor	0.92	10	0.04	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	20	0.06	mg/Kg	04/30/03	RB
Lindane	ND	20	0.06	mg/Kg	04/30/03	RB
Methoxychlor	ND	20	0.5	mg/Kg	04/30/03	RB
Toxaphene	ND	20	5.0	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	283	%	55 - 130
TCMX (Sur1)	75	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426814
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 09:55
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-6-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.027	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.073	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	11	10	0.25	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.53	10	0.03	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.12	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	0.78	10	0.03	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	109	%	55 - 130
TCMX (Sur1)	80	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426815
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:00
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-7-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.016	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.063	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	3.8	5	0.125	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.17	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.047	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	0.111	5	0.015	mg/Kg	04/29/03	RB
Lindane	0.007	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	124	%	55 - 130
TCMX (Sur1)	67	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426816 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-8-0.5
Date Sampled: 04/23/2003
Time Sampled: 10:05
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.15	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.35	5	0.025	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	0.90	5	0.125	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.060	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	0.022	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	0.043	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	70	%	55 - 130
TCMX (Sur1)	79	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426817
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:10
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-9-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.004	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.013	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	0.060	1	0.025	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	0.042	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	137	%	55 - 130
TCMX (Sur1)	79	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426818 **Client:** Dept of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-10-0 5
Date Sampled: 04/23/2003
Time Sampled: 10:10
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	ND	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.007	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.089	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	0.028	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	117	%	55 - 130
TCMX (Sur1)	83	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426819
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:12
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-11-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.041	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.20	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.54	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.34	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	0.17	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	117	%	55 - 130
TCMX (Sur1)	84	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426820 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-12-0.5
Date Sampled: 04/23/2003
Time Sampled: 10:11
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.026	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.051	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.70	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	0.53	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	0.005	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	89	%	55 - 130
TCMX (Sur1)	83	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426821
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:00
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-4-0 5D

Analyte	Result	DF	DLR	Units	Date/Analyst	
081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	10	0.05	mg/Kg	04/30/03	RB
4,4-DDE	ND	10	0.04	mg/Kg	04/30/03	RB
4,4-DDT	ND	10	0.05	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	70	50	1.25	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	0.61	10	0.03	mg/Kg	04/30/03	RB
Endosulfan I	ND	10	0.04	mg/Kg	04/30/03	RB
Endosulfan II	ND	10	0.04	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	10	0.04	mg/Kg	04/30/03	RB
Endrin	ND	10	0.04	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	0 19	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	10	0.03	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	10	2 5	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	106	%	55 - 130
TCMX (Sur1)	73	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426822 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-13-0 5
Date Sampled: 04/23/2003
Time Sampled: 10:45
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.017	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.068	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.094	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	92	%	55 - 130
TCMX (Sur1)	79	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426823
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:48
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-14-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.005	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.016	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	ND	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	96	%	55 - 130
TCMX (Sur1)	74	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426824 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-15-0.5
Date Sampled: 04/23/2003
Time Sampled: 11:00
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	0.005	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.009	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.089	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.10	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	115	%	55 - 130
TCMX (Sur1)	79	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426825
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 11:01
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-16-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.019	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.063	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.077	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	90	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426826 **Client:** Dept. of Toxic Substances
Matrix: SOLID **Client Sample ID:** JONB-17-0.5
Date Sampled: 04/23/2003
Time Sampled: 10:51
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.10	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.44	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	0.65	1	0.025	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	92	%	55 - 130
TCMX (Sur1)	62	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426827
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 10:50
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-17-0.5D

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	0.14	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	0.55	5	0.025	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	0.78	1	0.025	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	0.010	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	99	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426828
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 11:01
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-18-0.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.26	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.90	20	0.1	mg/Kg	04/30/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	1.5	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	84	%	55 - 130
TCMX (Sur1)	89	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426829
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 11:02
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-19-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	05/01/03	RB
4,4-DDE	0.029	1	0.004	mg/Kg	05/01/03	RB
4,4-DDT	0.27	1	0.005	mg/Kg	05/01/03	RB
Aldrin	ND	1	0.004	mg/Kg	05/01/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	05/01/03	RB
Beta BHC	ND	1	0.003	mg/Kg	05/01/03	RB
Chlordane	0.68	1	0.025	mg/Kg	05/01/03	RB
Delta BHC	ND	1	0.005	mg/Kg	05/01/03	RB
Dieldrin	ND	1	0.003	mg/Kg	05/01/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	05/01/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	05/01/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	05/01/03	RB
Endrin	ND	1	0.004	mg/Kg	05/01/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	05/01/03	RB
Heptachlor	ND	1	0.004	mg/Kg	05/01/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	05/01/03	RB
Lindane	0.007	1	0.003	mg/Kg	05/01/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	05/01/03	RB
Toxaphene	ND	1	0.250	mg/Kg	05/01/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	186	%	55 - 130
TCMX (Sur1)	78	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426830
Matrix: SOLID
Date Sampled: 04/23/2003
Time Sampled: 11:05
Sampled By:

Client: Dept. of Toxic Substances
Client Sample ID: JONB-20-0 5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/30/03	RB
4,4-DDE	0.005	1	0.004	mg/Kg	04/30/03	RB
4,4-DDT	0.037	1	0.005	mg/Kg	04/30/03	RB
Aldrin	ND	1	0 004	mg/Kg	04/30/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/30/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/30/03	RB
Chlordane	0.076	1	0.025	mg/Kg	04/30/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/30/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/30/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/30/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin	ND	1	0.004	mg/Kg	04/30/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/30/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/30/03	RB
Lindane	ND	1	0.003	mg/Kg	04/30/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/30/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/30/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	95	%	55 - 130
TCMX (Sur1)	93	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 426831
Matrix: SOLID
Date Sampled:
Time Sampled:
Sampled By:

Client: Dept of Toxic Substances
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst	
8081A - Organochlorine Pesticides by GC						
4,4-DDD	ND	1	0.005	mg/Kg	04/29/03	RB
4,4-DDE	ND	1	0.004	mg/Kg	04/29/03	RB
4,4-DDT	ND	1	0.005	mg/Kg	04/29/03	RB
Aldrin	ND	1	0.004	mg/Kg	04/29/03	RB
Alpha BHC	ND	1	0.002	mg/Kg	04/29/03	RB
Beta BHC	ND	1	0.003	mg/Kg	04/29/03	RB
Chlordane	ND	1	0.025	mg/Kg	04/29/03	RB
Delta BHC	ND	1	0.005	mg/Kg	04/29/03	RB
Dieldrin	ND	1	0.003	mg/Kg	04/29/03	RB
Endosulfan I	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan II	ND	1	0.004	mg/Kg	04/29/03	RB
Endosulfan sulfate	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin	ND	1	0.004	mg/Kg	04/29/03	RB
Endrin aldehyde	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor	ND	1	0.004	mg/Kg	04/29/03	RB
Heptachlor epoxide	ND	1	0.003	mg/Kg	04/29/03	RB
Lindane	ND	1	0.003	mg/Kg	04/29/03	RB
Methoxychlor	ND	1	0.025	mg/Kg	04/29/03	RB
Toxaphene	ND	1	0.250	mg/Kg	04/29/03	RB

Surrogates		Units	Control Limits
DCB(Sur2)	114	%	55 - 130
TCMX (Sur1)	96	%	50 - 125

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES
QA REPORT FORM

Determinative Method : EPA 8081 Preparative Method: EPA 3545

QC Sample: 109785-426819

Matrix: SOLID

Analysis Date: 04/29/03

Batch Date: 4/24/03 (pest 042403s)

Applies to: LR 109875 (samples 426808 through 426827)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
gamma-BHC (Lindane)	ND	0.100	0.082	0.090	82	90	9	35	50-135
Heptachlor	ND	0.100	0.094	0.105	94	105	11	35	50-135
Aldrin	ND	0.100	0.072	0.079	72	79	9	35	50-135
Dieldrin	0.172	0.100	0.237	0.249	65	78	5	35	50-135
Endrin	ND	0.100	0.094	0.088	94	88	6	35	50-135
DDT	0.545	0.100	0.611	0.615	66	70	1	35	50-135

ND = Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE RECOVERY / METHOD BLANK
REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits % Rec
gamma-BHC (Lindane)	0.100	0.092	92	55-130
Heptachlor	0.100	0.099	99	55-130
Aldrin	0.100	0.084	84	55-130
Dieldrin	0.100	0.109	109	55-130
Endrin	0.100	0.112	112	55-130
DDT	0.100	0.122	122	55-130

Method Blank = All ND
% Rec - LCS = Percent Recovery from Lab Control Spike

ASSOCIATED LABORATORIES
QA REPORT FORM

Determinative Method : EPA 8081 Preparative Method: EPA 3545

QC Sample: 109785-426829

Matrix: SOLID

Analysis Date: 04/30/03

Batch Date: 4/25/03 (pest 042503s)

Applies to: LR 109785 (samples 426828 through 426830)

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
gamma-BHC (Lindane)	ND	0.100	0.102	0.094	102	94	8	35	50-135
Heptachlor	ND	0.100	0.117	0.115	117	115	2	35	50-135
Aldrin	ND	0.100	0.083	0.097	83	97	16	35	50-135
Dieldrin	ND	0.100	0.054	0.033	54	33 *	48 *	35	50-135
Endrin	ND	0.100	0.099	0.097	99	97	2	35	50-135
DDT	0.266	0.100	0.405	0.380	139 *	114	6	35	50-135

** Outside Control Limits due to matrix interference*

ND = Not Detected

% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate

RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE RECOVERY / METHOD BLANK
REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits % Rec
gamma-BHC (Lindane)	0.100	0.088	88	55-130
Heptachlor	0.100	0.099	99	55-130
Aldrin	0.100	0.074	74	55-130
Dieldrin	0.100	0.108	108	55-130
Endrin	0.100	0.111	111	55-130
DDT	0.100	0.105	105	55-130

Method Blank = All ND

% Rec - LCS = Percent Recovery from Lab Control Spike

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868-1225 - 714/771-6900 FAX 714/538-1209

Cooler Receipt Form

Client: DTSC Project: _____

Date Cooler Received: 4/23/03 Date Cooler Opened: 4/24/03

Was cooler scanned for presence of radioactivity ? Yes/No
If yes was radioactivity results above 25 cpm ? Yes/No

Was a shipper's packing slip attached to the cooler ? Yes/No

If the cooler had custody seal(s), were thy signed and intact ? Yes/No/Na

Was the cooler packed with: Ice X Ice Packs ____ Bubble wrap ____
Styrofoam ____ Paper ____ None ____ Other ____

Cooler Temperature: 2.0° *
*cooler needs to be received @ 4°C with an acceptable range of 2°- 6 °C

If samples were hand delivered do they meet the temp. criteria, which should be @ 4°C with an acceptable range of 2°- 6 °C ? Yes/No

If no explain: _____

Were all samples sealed in plastic bags ? Yes/No

Did all samples arrive intact ? If no, indicate below. Yes/No

Were all samples labeled correctly ? (ID's Dates, Times) If no, indicate below. Yes/No

Can the tests required be ran with the provided containers, If no indicate below. Yes/No

Was sufficient sample volume sent for all containers ? Yes/No

Were any VOA vials received with head space ? Yes/No/Na

Was the correct preservatives used ? Yes/No/Na
If no, see the pH log for a list of samples containers regarding pH

Any other important information: _____

Associated Laboratories

NON-CONFORMANCE DOCUMENTATION

DATE: May 2, 2003	**DOCUMENT # :**
LAB ID: LR 109785	**TYPE OF NC:**
CLIENT ID: 9290	*(QA Limits Client Req. Other)*
DEPARTMENT: *Pesticides*	

Description of Non-Conformance: Method 8081 – Chlorinated Pesticides

Recoveries of DCB surrogate from samples 426813, 426817, 426829, 426829 MS-2 and 426829 MSD-2 were outside control limits due to matrix interference

Recovery of DDT spike from the MS-2 sample was outside control limits due to matrix interference.

Recovery of Dieldrin spike from the MSD-2 sample was outside control limits due to matrix interference

Signed (Initiator): K Brown **Date:** 5-2-03

Description of Corrective Action:

None – All other surrogate recoveries and all other spike recoveries in both QC batches conformed.

The extraction and analysis methodologies are valid

Signed (Supervisor): **Date:** 5/3/03

QA Manager Approval:

Signed(QA Manager): **Date:**

Appendix C

Detailed Risk and Hazard Calculations

Incidental Ingestion of Soil
(Surface Soils, 0- to 0.5-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Residential Lifetime Average Daily Intake (mg/kg-day)	Oral Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Oral RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides								
Chlordane	336	5.28E-04	1.30E+00	6.86E-04		4.30E-03	5.00E-04	8.60E+00
4,4'-DDD	4.45	6.99E-06	2.40E-01	1.68E-06		5.70E-05	5.00E-04	1.14E-01
4,4'-DDE	3.36	5.28E-06	3.40E-01	1.79E-06		4.30E-05	5.00E-04	8.60E-02
4,4'-DDT	9.65	1.52E-05	3.40E-01	5.15E-06		1.24E-04	5.00E-04	2.47E-01
Dieldrin	24	3.77E-05	1.60E+01	6.03E-04		3.07E-04	5.00E-05	6.14E+00
Endrin	0.005	7.85E-09	N/A	N/A		6.40E-08	3.00E-04	2.13E-04
Heptachlor	0.92	1.44E-06	4.10E+00	5.92E-06		1.18E-05	5.00E-04	2.36E-02
Heptachlor epoxide	0.78	1.22E-06	5.50E+00	6.74E-06		9.98E-06	1.30E-05	7.68E-01
Lindane (γ–Hexachlorocyclohexane)	0.036	5.65E-08	1.10E+00	6.22E-08		4.61E-07	3.00E-04	1.54E-03
			Total Risk	**1.3E-03**			**Hazard Index**	**1.6E+01**

Dermal Contact with Soil
(Surface Soils, 0- to 0.5-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Dermal Absorption Factor	Residential Lifetime Average Daily Intake (mg/kg-day)	Dermal Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Dermal RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
Chlordane	336	0.05	6.23E-05	1.30E+00	8.10E-05		6.48E-04	5.00E-04	1.30E+00
4,4'-DDD	4.45	0.05	8.25E-07	2.40E-01	1.98E-07		8.59E-06	5.00E-04	1.72E-02
4,4'-DDE	3.36	0.05	6.23E-07	3.40E-01	2.12E-07		6.48E-06	5.00E-04	1.30E-02
4,4'-DDT	9.65	0.05	1.79E-06	3.40E-01	6.09E-07		1.86E-05	5.00E-04	3.72E-02
Dieldrin	24	0.05	4.45E-06	1.60E+01	7.12E-05		4.63E-05	5.00E-05	9.26E-01
Endrin	0.005	0.05	9.28E-10	N/A	N/A		9.65E-09	3.00E-04	3.22E-05
Heptachlor	0.92	0.05	1.71E-07	4.10E+00	7.00E-07		1.78E-06	5.00E-04	3.55E-03
Heptachlo epoxide	0.78	0.05	1.45E-07	5.50E+00	7.96E-07		1.51E-06	1.30E-05	1.16E-01
Lindane (γ–Hexachlorocyclohexane)	0.036	0.05	6.68E-09	1.10E+00	7.35E-09		6.95E-08	3.00E-04	2.32E-04
				Total Risk	**1.5E-04**			**Hazard Index**	**2.4E+00**

Inhalation of Suspended Soil Particulates
(Surface Soils, 0- to 0.5-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Air Concentration of Suspended Particulate (mg/m^3)	Residential Lifetime Average Daily Intake (mg/kg-day)	Inhalation Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Inhalation RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
Chlordane	336	3.36E-07	5.01E-08	1.20E+00	6.01E-08		2.15E-07	2.00E-04	1.07E-03
4,4'-DDD	4.45	4.45E-09	6.63E-10	2.40E-01	1.59E-10		2.84E-09	5.00E-04	5.69E-06
4,4'-DDE	3.36	3.36E-09	5.01E-10	3.40E-01	1.70E-10		2.15E-09	5.00E-04	4.29E-06
4,4'-DDT	9.65	9.65E-09	1.44E-09	3.40E-01	4.89E-10		6.17E-09	5.00E-04	1.23E-05
Dieldrin	24	2.40E-08	3.58E-09	1.60E+01	5.72E-08		1.53E-08	5.00E-05	3.07E-04
Endrin	0.005	5.00E-12	7.45E-13	N/A	N/A		3.20E-12	3.00E-04	1.07E-08
Heptachlor	0.92	9.20E-10	1.37E-10	4.10E+00	5.62E-10		5.88E-10	5.00E-04	1.18E-06
Heptachlor epoxide	0.78	7.80E-10	1.16E-10	5.50E+00	6.39E-10		4.98E-10	1.30E-05	3.83E-05
Lindane (γ–Hexachlorocyclohexane)	0.036	3.60E-11	5.36E-12	1.10E+00	5.90E-12		2.30E-11	3.00E-04	7.67E-08
				Total Risk	**1.2E-07**			**Hazard Index**	**1.4E-03**

Incidental Ingestion of Soil
(Subsurface Soils, 2-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Residential Lifetime Average Daily Intake (mg/kg-day)	Oral Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Oral RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides								
Chlordane	0.773	1.21E-06	1.30E+00	1.58E-06		9.89E-06	5.00E-04	1.98E-02
4,4'-DDE	0.032	5.02E-08	3.40E-01	1.71E-08		4.10E-07	5.00E-04	8.19E-04
4,4'-DDT	0.034	5.34E-08	3.40E-01	1.81E-08		4.35E-07	5.00E-04	8.70E-04
Dieldrin	0.156	2.45E-07	1.60E+01	3.92E-06		2.00E-06	5.00E-05	3.99E-02
			Total Risk	**5.5E-06**			**Hazard Index**	**6.1E-02**

Dermal Contact with Soil
(Subsurface Soils, 2-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Dermal Absorption Factor	Residential Lifetime Average Daily Intake (mg/kg-day)	Dermal Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Dermal RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
Chlordane	0.773	0.05	1.43E-07	1.30E+00	1.86E-07		1.49E-06	5.00E-04	2.98E-03
4,4'-DDE	0.032	0.05	5.94E-09	3.40E-01	2.02E-09		6.18E-08	5.00E-04	1.24E-04
4,4'-DDT	0.034	0.05	6.31E-09	3.40E-01	2.14E-09		6.56E-08	5.00E-04	1.31E-04
Dieldrin	0.156	0.05	2.89E-08	1.60E+01	4.63E-07		3.01E-07	5.00E-05	6.02E-03
				Total Risk	**6.5E-07**			**Hazard Index**	**9.3E-03**

Inhalation of Suspended Soil Particulates
(Subsurface Soils, 2-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Air Concentration of Suspended Particulate (mg/m^3)	Residential Lifetime Average Daily Intake (mg/kg-day)	Inhalation Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Inhalation RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
Chlordane	0.773	7.73E-10	1.15E-10	1.20E+00	1.38E-10		4.94E-10	2.00E-04	2.47E-06
4,4'-DDE	0.032	3.20E-11	4.77E-12	3.40E-01	1.62E-12		2.04E-11	5.00E-04	4.09E-08
4,4'-DDT	0.034	3.40E-11	5.07E-12	3.40E-01	1.72E-12		2.17E-11	5.00E-04	4.35E-08
Dieldrin	0.156	1.56E-10	2.32E-11	1.60E+01	3.72E-10		9.97E-11	5.00E-05	1.99E-06
				Total Risk	**5.1E-10**			**Hazard Index**	**4.5E-06**

Incidental Ingestion of Soil
(Subsurface Soils, 4-feet bgs.)

COPC	Maximum Soil Concentration (mg/kg)	Residential Lifetime Average Daily Intake (mg/kg-day)	Oral Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Oral RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides								
Chlordane	0.247	3.88E-07	1.30E+00	5.04E-07		3.16E-06	5.00E-04	6.32E-03
4,4'-DDE	0.035	5.50E-08	3.40E-01	1.87E-08		4.48E-07	5.00E-04	8.96E-04
4,4'-DDT	0.026	4.08E-08	3.40E-01	1.39E-08		3.33E-07	5.00E-04	6.66E-04
Dieldrin	0.048	7.54E-08	1.60E+01	1.21E-06		6.14E-07	5.00E-05	1.23E-02
			Total Risk	**1.7E-06**			**Hazard Index**	**2.0E-02**

Dermal Contact with Soil
(Subsurface Soils, 4-feet bgs.)

OPC	Maximum Soil Concentration (mg/kg)	Dermal Absorption Factor	Residential Lifetime Average Daily Intake (mg/kg-day)	Dermal Slope Factor (mg/kg-day)$^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Dermal RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
hlordane	0.247	0.05	4.58E-08	1.30E+00	5.96E-08		4.77E-07	5.00E-04	9.53E-04
,4'-DDE	0.035	0.05	6.49E-09	3.40E-01	2.21E-09		6.76E-08	5.00E-04	1.35E-04
,4'-DDT	0.026	0.05	4.82E-09	3.40E-01	1.64E-09		5.02E-08	5.00E-04	1.00E-04
ieldrin	0.048	0.05	8.90E-09	1.60E+01	1.42E-07		9.26E-08	5.00E-05	1.85E-03
				Total Risk	**2.1E-07**			**Hazard Index**	**3.0E-03**

Inhalation of Suspended Soil Particulates
(Subsurface Soils, 4-feet bgs.)

OPC	Maximum Soil Concentration (mg/kg)	Air Concentration of Suspended Particulate (mg/m^3)	Residential Lifetime Average Daily Intake (mg/kg-day)	Inhalation Slope Factor $(mg/kg\text{-}day)^{-1}$	Incremental Carcinogenic Risk		Residential Average Daily Intake (mg/kg-day)	Inhalation RfD (mg/kg-day)	Noncarcinogenic Hazard Quotient
Organochlorine Pesticides									
hlordane	0.247	2.47E-10	3.68E-11	1.20E+00	4.42E-11		1.58E-10	2.00E-04	7.89E-07
,4'-DDE	0.035	3.50E-11	5.22E-12	3.40E-01	1.77E-12		2.24E-11	5.00E-04	4.47E-08
,4'-DDT	0.026	2.60E-11	3.87E-12	3.40E-01	1.32E-12		1.66E-11	5.00E-04	3.32E-08
ieldrin	0.048	4.80E-11	7.15E-12	1.60E+01	1.14E-10		3.07E-11	5.00E-05	6.13E-07
				Total Risk	**1.6E-10**			**Hazard Index**	**1.5E-06**