

**Capital Industries, Inc.**

**Soil Vapor and  
Construction Monitoring Report**

**Prepared for**

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**July 6, 2004**

**Final**

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## 1.0 Executive Summary

Phillip Services Corporation (PSC) has prepared a Remedial Investigation (RI) report as part of its work to clean up its facility located at 734 S. Lucile Street in Seattle, Washington (PSC 2003). PSC released solvents to the soil and groundwater at this facility. The general flow direction of the groundwater below this facility is believed to be toward the Duwamish River. Allegedly, some of this groundwater flows below the Capital Industries, Inc. (CII) site. The groundwater is reported to contain low concentrations of solvents such as tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE), as well as benzene and related chemicals. The Washington State Department of Ecology (Ecology) is concerned that these solvents, benzene, and related chemicals (such as BTEX) may volatilize from the groundwater and enter the breathing zone of site workers. Ecology has therefore requested that CII undertake appropriate testing to make an actual determination of the impact of the groundwater on the CII operations.

CII's Plant 2 was destroyed by fire on January 18, 2004. CII is in the process of rebuilding Plant 2. The groundwater under Plant 2 was expected to be present at about 7 to 10 feet below ground surface (bgs). CII is not aware of the presence of solvents, benzene, or related chemicals in the soils below Plant 2. The upper 2 to 4 feet of surface soil at the site was placed to raise the floor elevation of the facility above the elevation of the adjacent street. The fill was placed in the 1960s when Plant 2 was originally constructed.

This report summarizes the actions taken by CII to achieve the following results:

- Ensure that volatile chemicals do not enter the breathing zone of site workers in the new Plant 2.
- Monitor soils encountered during the construction of the new Plant 2.
- Ensure that debris and soils that were excavated and removed from the site did not contain detectable concentrations of volatile contaminants.
- Verify that soil excavated and used as backfill at the site was suitable for that use.

### 1.1 POTENTIAL FOR THE MIGRATION OF VOLATILE COMPOUNDS FROM SOIL GAS TO THE BREATHING SPACES OF SITE WORKERS

CII asked Floyd Snider McCarthy, Inc. (FSM) to investigate the possibility that volatile solvents and BTEX originating in the groundwater may be present in the soil below the cement pad of Plant 2. FSM was also asked to determine whether these compounds would be present in the breathing zone of workers in the office and shop areas of the rebuilt Plant 2 at concentrations greater than levels of concern. Soil vapor samples were collected from 12 locations below the slab of the old Plant 2 on April 19, 2004. An on-site laboratory analyzed some samples. Other samples were collected in Summa canisters and sent to an off-site laboratory for analysis.

The results reported by the on-site laboratory are summarized in Table 1.1. Vapor samples were collected from locations throughout the Plant 2 footprint. Two samples (VP-1, VP-2) were collected in the northeast portion of the Plant 2 footprint in the area where the offices of the new Plant 2 will be located. These two samples did not contain PCE, TCE, DCE, vinyl chloride (VC)

or BTEX at levels greater than on-site laboratory detection limits. None of the 12 samples collected from within the footprint contained benzene at concentrations greater than the detection limits (Table 1.1). TCE was detected in two of the 12 samples collected (VP-7, VP-11). These samples were collected from locations in the western portion of the Plant 2 footprint. PCE was detected in 10 of the 12 samples analyzed (all samples except VP-1 and VP-2). This was an unexpected result, as CII reports that PCE was never used during the operation of its facility, and PCE levels reported by PSC to be present in the groundwater below the CII facility were low.

The analytical results from the Summa canisters and from the on-site laboratory were judged to be in general agreement. In some instances, higher concentrations of some constituents were detected in the Summa canisters, while in other instances the on-site laboratory reported higher concentrations than were detected in the Summa canisters.

A mathematical model was used to evaluate the potential for the compounds present in the soil gas to accumulate in the breathing spaces of future office and shop area workers in the new Plant 2. The model was based on the Johnson & Ettinger (J&E) Model (Environmental Quality Management 2000) and Excel spreadsheets provided by the U.S. Environmental Protection Agency (USEPA) for the J&E model (USEPA 2002).

The predicted PCE, TCE, DCE, VC, and BTEX concentrations in the office and shop areas of the new Plant 2 are summarized in Table 1.2. The Model Toxics Control Act (MTCA) Method B cleanup level (CUL) for each constituent is also included in Table 1.2. When the predicted concentration is divided by the MTCA Method B CUL for the constituent, a safety factor is calculated. The lowest safety factor calculated using the conservative 95 percent upper confidence limit of the mean value of the measured concentrations in soil gas, in the shop area of the new Plant 2 is 16 (for PCE). The lowest safety factor calculated using the 95 percent upper confidence limit in the office area of the new Plant 2 is 20 (for PCE).

Thus, the predicted concentration of the volatile constituents evaluated in the breathing spaces of future shop and office workers is significantly less than MTCA Method B CULs. Based on these results, CII determined that the volatile solvents and BTEX in the groundwater will not impact the air in Plant 2.

## 1.2 MONITORING SOIL AND GROUNDWATER DURING THE RECONSTRUCTION OF PLANT 2

CII began rebuilding Plant 2 beginning in May 2004. The existing cement slab was removed. A storage vault to contain rain runoff from the roof, footings to support the walls and ceiling of the new facility and utility trenches were installed. The installation of these features involved the excavation of soils.

A Soil and Groundwater Monitoring Plan (SGWMP) was prepared as part of the effort by CII to properly characterize and manage potentially contaminated soil and groundwater that could have been encountered during construction. The SCWMP is provided as Appendix B of this report. The SWGMP described acceptable soil management practices to be followed during trenching, excavation, and grading at the site, soil stockpile management, transportation and appropriate disposal of soil determined to be impacted by volatile contaminants, transportation and appropriate disposal of non-impacted soil, and soil reuse criteria.

A key element of the approach to soil monitoring was the use of a photoionization detector (PID) to screen excavated soils for the presence of volatile substances. A three-foot length of rebar was used to create a vapor pathway in the soils that were tested. The tip of the PID was placed from 4 to 6 inches into the pathway created by the rebar. Soils were also placed in a plastic bag. The tip of the PID was also placed in the bag. The bag was sealed and allowed to sit for approximately five minutes. The readings obtained at five minutes were recorded.

The PID was calibrated regularly with both a gas of known composition (isobutylene at 100 parts per million by volume [ppmv]), and by chemically analyzing soil samples that adhered to the slab rubble that was exported from the site, and with excavated soil. A total of six soil samples were obtained from soil that the PID identified as having background concentrations (a PID reading of 0.1 ppmv) of volatile compounds. PCE, TCE, DCE, VC, and BTEX were not detected in any of these soil samples.

The plan also addressed acceptable groundwater management practices. However, groundwater was not encountered during the earthwork that was conducted at the site.

The removal of the concrete pad below Plant 2 began on May 11 and concluded on May 24, 2004. There was an approximately 3-foot-thick layer of sand below the pad. The sand was dry and did not adhere well to the pad rubble. Only incidental amounts of sand were associated with the pad rubble that was placed in trucks for export from the site. A PID was used to monitor all of the sand associated with pad rubble that was exported from the site. All of the PID readings (direct PID reading or PID reading of bagged soil) obtained were at background levels. A total of 1068 cubic yards (cy) of pad rubble were removed from the site and taken to Building Busters, Inc. in Seattle, Washington for recycling.

Excavation of the soils below the pad began on May 19 and concluded on June 18, 2004. A PID was used to monitor the soil that was excavated within the footprint of Plant 2. Underlying the concrete pad was approximately 3 feet of fine to medium grained sand. Below the sand was a silty sand locally imbedded with organic rich silt. This soil appears to be the native soil upon which Plant 2 was erected.

Nearly all of the soil excavated resulted in a background reading on the PID (direct PID reading or PID reading of bagged soil). This background reading was supported by analyzing two soil samples that provided background PID readings for the presence of PCE, TCE, DCE, VC and BTEX. The two soil samples were collected on May 11 and 12, 2004 and analyzed. The samples did not contain detectable concentrations of PCE, TCE, DCE, VC or BTEX. The chain of custody and analytical results forms for these samples are provided in Appendix C.

The SGWMP calls for the placement of excavated soil that exhibits a PID reading greater than 5 ppmv in a suspect soil stockpile. Approximately 2 cy of suspect soil were encountered during the excavation of the rainwater vault on May 19, 2004. The suspect soil was obtained at the easternmost end of the excavation for the vault. It is possible that this soil caused an elevated PID reading due to the fact the some of the paint used to identify the excavation boundary was present in the backhoe bucket from which samples were taken. This suspect soil was placed on polyethylene sheeting and covered with polyethylene sheeting.

Approximately 10 cy of suspect soil was encountered during the installation of two footings along the south wall of Plant 2. These footings were excavated on May 21, 2004. This suspect soil was added to the stockpile of soil identified as suspect on May 19, 2004.

Approximately 7 cy of suspect soil was encountered on June 10, 2004 during the excavation for an internal footing in the southeast corner of Plant 2. This suspect soil was placed in a second suspect soil stockpile.

FSM was at the site each day that pad removal or soil excavation work was conducted. There were more than 500 PID readings obtained as soil was excavated at the site. As discussed previously, a total of approximately 19 cy of suspect soil was encountered during excavation activities on May 19, May 21, and June 10, 2004. This soil exhibited initial PID readings greater than 5 ppmv. On May 21, 2004 some soil that was excavated to create a footing in the southeast corner of the site caused a momentary reading of 1.7 ppmv on the PID. This reading rapidly fell to background levels. This soil was used as backfill on the site. All of the other soils excavated during construction work at the site exhibited background (0.1 ppmv) PID readings.

Three samples of the soil from each of the two suspect soil stockpiles were collected on June 11, 2004. The samples were analyzed for PCE, TCE, DCE, VC, and BTEX. These constituents were not detected in the soil samples. The soil in both suspect soil stockpiles was judged to be clean. This soil was used as backfill on the site, or disposed of at an offsite facility.

A total of 328 cy of excavated soil was exported as construction work progressed at the site. All of the PID readings obtained for this soil were at background levels (direct PID readings or PID reading of bagged soil). The exported soil was delivered to Rio's Sunnydale Construction Inc. in Tukwila, Washington (288 cy), and to Procon, Inc. in Renton, Washington (40 cy).

## 2.0 Introduction

PSC has prepared a remedial investigation report as part of its work to clean up its facility located at 734 S. Lucile Street in Seattle, Washington. PSC released solvents to the soil and groundwater at this facility. The general flow direction of the groundwater below this facility is believed to be toward the Duwamish River. Allegedly, some of this groundwater flows below the CII site. The groundwater was reported to contain low concentrations of solvents such as PCE, TCE, DCE, as well as benzene and related chemicals. Ecology is concerned that these solvents, benzene, and related chemicals may volatilize from the groundwater and enter the breathing zone of site workers. Ecology therefore has requested that CII undertake appropriate testing to make an actual determination of the impact of the groundwater on the CII operations.

A fire destroyed Plant 2 of the CII facility on January 18, 2004. CII has decided to rebuild Plant 2 in its original location. As of early April 2004, only the cement pad that was below Plant 2 and the tilt-up walls that formed its perimeter remained in place. Construction activity associated with the rebuilding of Plant 2 began in May 2004.

This report summarizes the actions taken by CII to achieve the following results:

- Ensure that volatile chemicals do not enter the breathing zone of site workers in the new Plant 2.
- Monitor soils encountered during the construction of the new Plant 2.
- Ensure that debris and soils that were excavated and removed from the site did not contain detectable concentrations of volatile contaminants.
- Verify that soil excavated and used as backfill at the site was suitable for that use.

### 3.0 Soil Vapor Survey and Migration Assessment

The goal of the soil vapor survey and migration assessment conducted by CCI was to screen for the presence of volatile organic vapors in shallow soil under the planned footprint of the new Plant 2. In the RI report PSC identified three organic vapor contaminants of concern (COCs) that could migrate from the alleged groundwater plume beneath the CCI site into buildings at the site. Those contaminants are: benzene, TCE, and VC (PSC 2003).

The specific data needs for this task were to collect screening data to assess:

- the potential for migration of PCE, TCE, DCE, VC and BTEX from the groundwater plume below Plant 2 to the compacted fill soil beneath the pad into breathing spaces in the new building
- the potential for these organic vapor COCs or other harmful vapors to accumulate in enclosed spaces in or beneath the building.

A description of the approach used to collect soil vapor data from below the pad of the old Plant 2, and the results obtained from this effort are described in Section 3.1. The results described in Section 3.1 were used to calculate the likely concentration of these contaminants within the breathing zone of workers in the new Plant 2. The migration model used and the results of the migration assessment are described in Section 3.2

#### 3.1 SOIL VAPOR SURVEY

Soil vapor samples were collected from below the slab of the old Plant 2 on April 19, 2004. The approach used to collect these samples is discussed in Section 3.1.1. Some samples were analyzed by an on-site laboratory. Other samples were collected in Summa canisters and sent to an off-site laboratory for analysis. The results reported by both laboratories are presented in Section 3.1.2.

##### 3.1.1 Sampling Approach

The vapor samples were collected and analyzed on-site by Environmental Services Northwest (ECN) as a subcontractor to FSM. The footprint of Plant 2 measures approximately 220 by 180 feet. A total of 20 grid squares (45 by 44 feet) were established within the footprint. Soil vapor samples were collected from approximately the center of 12 of the 20 grid squares that were identified (Figure 3.1).

A 3/8-inch concrete drill bit was used to drill a hole through the slab at the 12 locations indicated on Figure 3.1 on April 19, 2004. The slab was generally about 5 inches thick. Drilling was halted when the drill bit made contact with the soil beneath the slab. A PVC stopper was placed in the hole as the area adjacent to the hole was cleared. A 1/4-inch-diameter Teflon tube (with a capped upper end) was then placed in the hole with its opening just below the bottom of the slab. Silica sand was then placed in the hole until it reached about 3 inches below the top of the slab. The remainder of the hole was then filled with hydrated bentonite chips.

A 60 ml syringe was then used to withdraw 10 ml of stagnant air from the tubing. This stagnant air was discharged to ambient air. A 60 ml sample of soil vapor was then withdrawn from below

the slab. Two 20 ml glass vials (provided by the lab) were filled from the 60 ml sample extracted from below the slab. The syringe needle punctured a septum that covered each pre-evacuated vial. Chain of custody forms were completed for each sample that was collected. These forms are provided in Appendix A. Sample vials were taken to ESN's on-site mobile laboratory for analysis by USEPA Method 8021B.

Six additional samples were collected in one-liter Summa canisters. Five of the samples were obtained from the same locations as the samples sent to the on-site laboratory (Figure 3.1). The soil vapor in these locations was allowed to equilibrate for approximately 1 to 2 hours before the Summa canisters were filled. The canisters were allowed to fill for 30 minutes. The sampling protocols established by Air Toxics, Ltd. were followed. A sixth Summa canister was allowed to fill for 30 minutes with ambient air located throughout the footprint of Plant 2. All Summa canisters were shipped to the Air Toxics, Ltd. laboratory for analysis by USEPA Method TO-14.

### 3.1.2 Results of the Soil Vapor Survey

The weather conditions on April 19, 2004 were generally overcast with light rain at times. The soil encountered below the slab was dry, light-brown, fine to medium sand. All of the samples were collected as described in Section 3.1.1.

The results reported by ESN's on-site laboratory are summarized in Table 1.1. Vapor samples were collected from locations throughout the Plant 2 footprint. Two samples, VP-1 and VP-2, were collected in the northeast portion of the Plant 2 footprint in the area where the office area of the new Plant 2 will be located. These samples did not contain PCE, TCE, DCE, VC or BTEX at levels greater than laboratory detection limits. None of the 12 samples collected from within the footprint contained benzene at concentrations greater than the detection limits (Table 1.1). TCE was detected in 2 of the 12 samples collected (VP-7 and VP-11). These samples were collected from locations in the western portion of the Plant 2 footprint. PCE was detected in 10 of the 12 samples analyzed (all samples except VP-1, VP-2). This was an unexpected result, as CII reports that PCE was never used during the operation of its facility. Two samples in the southeast corner of the Plant 2 footprint (VP-4 and VP-5) exhibited the highest levels of TEX found during this investigation.

The results reported by Air Toxics, Ltd. for the Summa canisters are presented in Table 3.1. The corresponding results from the on-site laboratory are included in Table 3.1 as well. The results shown in Table 3.1 for the Summa canisters and the on-site laboratory are judged to be in general agreement. In some instances, higher concentrations of some constituents were detected in the Summa canisters, while in other instances the on-site laboratory reported higher concentrations than were detected in the Summa canisters. Only toluene was present at a concentration greater than detection limits (10 ug/m<sup>3</sup> vs. 4.6 ug/m<sup>3</sup>) in the background Summa canister sample.

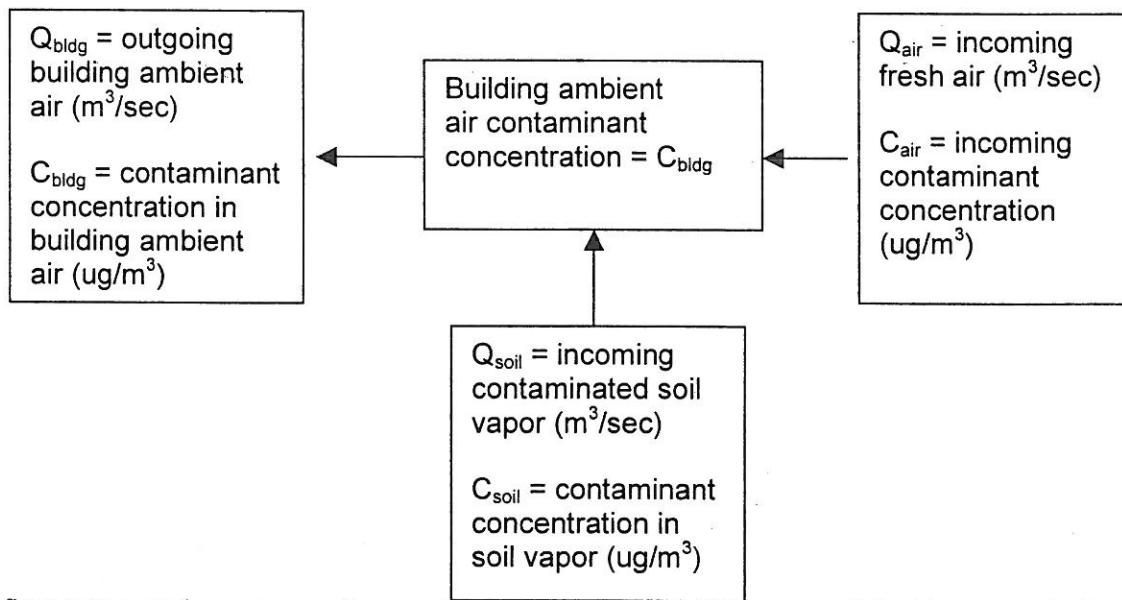
The analytical results were assessed to determine if the constituents detected in the soil gas would be present at concentrations greater than MTCA cleanup levels in the breathing zone of office or shop workers in the rebuilt Plant 2. This assessment is provided in Section 3.2.

### 3.2 MIGRATION ASSESSMENT

A model was developed to estimate the concentration of soil vapor contaminants that could accumulate in the interiors of the rebuilt Plant 2. The rebuilt Plant 2 will include an approximately 40 by 80 foot, two story office area, and a large shop area in a building with an overall floor dimension of 220 by 180 feet. The office area will be located in the northeast corner of the facility (Figure 3.1). Volatile organic compounds were present in the soil gas below the pad of the old Plant 2 (as summarized in Section 3.1.2). A mathematical model was used to evaluate the potential for the compounds present in the soil gas to accumulate in the breathing zone of future office and shop area workers in the new Plant 2. The model is described in Section 3.2.1.

#### 3.2.1 Description of the Migration Model

The migration model is based on a mass balance approach to calculate the interior ambient air concentration of compounds present in soil gas in the breathing spaces of office and shop workers. The model is illustrated below.



The flow rates and corresponding contaminant concentrations are related by mass balance as shown in Equation (1).

$$Q_{bldg} \times C_{bldg} = (Q_{air} \times C_{air}) + (Q_{soil} \times C_{soil}) \quad \text{Equation (1)}$$

The mass balance model assumes that conditions are in a steady state and that complete mixing occurs within the building's interior. The building's outgoing ambient air flow ( $Q_{bldg}$ ) is equal to the sum of the two incoming flows,  $Q_{air}$  and  $Q_{soil}$ . Therefore, Equation (1) can be rewritten as Equation (2).

$$(Q_{air} + Q_{soil}) \times C_{bldg} = (Q_{air} \times C_{air}) + (Q_{soil} \times C_{soil}) \quad \text{Equation (2)}$$

Equation (2) can be solved for the contaminant concentration in the building's ambient air ( $C_{bldg}$ ).

$$C_{bldg} = \frac{(Q_{air} \times C_{air}) + (Q_{soil} \times C_{soil})}{(Q_{air} + Q_{soil})} \quad \text{Equation (3)}$$

The variables on the right side of Equation (3) can be measured or estimated to calculate the contaminant concentration in the building's ambient air.

$C_{air}$  is assumed to be zero. Background air may have some contaminants present, but the intent of this model is to evaluate the incremental risk posed by contaminants originating solely from subsurface soil vapor entering the building.  $Q_{air}$  is the fresh air exchange rate in the building. The higher this variable, the lower the resulting  $C_{bldg}$ .

$C_{soil}$  is measured from site-specific sampling of near surface soil vapor samples.  $Q_{soil}$  is calculated from equations in the J&E model (Environmental Quality Management, 2000). Parameters that affect  $Q_{soil}$  include soil vapor permeability, pressure differential between the soil in contact with the building foundation and the building interior, and effective crack width in the building floor.

The model described is based on the J&E Model (Environmental Quality Management 2000). Excel spreadsheets provided by the USEPA for the J&E model were used (USEPA 2002). A project-specific worksheet called "Building Concentration" was used in conjunction with the USEPA-provided Excel workbook entitled "SL-ADV.xls".

### 3.2.1.1 Model Setup

The model requires several inputs from the user. Architectural input includes building dimensions, floor-wall seam crack width, fresh air exchange rate, and pressure differential between the building's interior and the subgrade soil atmosphere. The architect for Plant 2 provided building dimensions and fresh air exchange rate for these estimates. The overall building footprint is 220 by 180 by 26 feet. The design air exchange rate in the shop area is one air exchange per hour. The design air exchange rate in the office area is 4.5 air exchanges per hour. Floor-wall seam crack width and pressure differential were specified using the USEPA default values of 0.1 cm and 4 Pascals, respectively (Environmental Quality Management 2000).

The J&E Model uses the Soil Conservation Service (SCS) soil classification system to specify the physical characteristics of the underlying soils. The soil in contact with the building foundation is the most critical soil type because its soil vapor permeability has a substantial effect on the amount of soil vapor that can enter the building. Selection of the appropriate SCS soil type should be based on the permeability of the subgrade soil that will be in contact with the building foundation. Higher permeability soils will allow greater amounts of contaminant to enter the building. SCS soil type sand (S) was used in the model because it is a high permeability soil type similar to typical slab foundation aggregate.

Mean values for the 12 on-site soil vapor results and the five Summa canisters that were filled with soil gas were calculated. A concentration value equal to the detection limit was used if a contaminant was not detected at a given location. A 95 percent upper confidence level on the

mean value was then calculated. The 95 percent upper confidence limit on the mean value was used to calculate the expected concentration of a contaminant in the breathing spaces of both office and shop workers in the new Plant 2.

A summary of the model input parameters used is provided as Table 3.2, except for contaminant concentrations. Contaminant concentrations are presented in Table 1.2 and Table 3.1.

### 3.2.2 Results of the Migration Assessment

The predicted PCE, TCE, DCE, VC, and BTEX concentrations in the office and shop areas of the new Plant 2 are summarized in Table 1.2. The MTCA Method B CUL for each constituent is also included in Table 1.2. When the MTCA Method B CUL is divided by the predicted contaminant concentration for the constituent a safety factor is calculated. The lowest safety factor calculated using the 95 percent upper confidence limit in the shop area of the new Plant 2 is 16 (for PCE). The lowest safety factor calculated using the 95 percent upper confidence limit in the office area of the new Plant 2 is 20 (for PCE).

Thus, the predicted concentration of the volatile constituents evaluated, in the breathing spaces of future shop and office workers is significantly less than the MTCA Method B CULs. Based on these results, CII determined that the volatile solvents and BTEX in the groundwater will not impact the air in Plant 2.

## 4.0 Environmental Monitoring During the Reconstruction of Plant 2

CII began rebuilding Plant 2 beginning in May 2004. The existing cement slab was removed. A storage vault to contain rain runoff from the roof, footings to support the walls and ceiling of the new facility, and utility trenches were installed. The installation of these features involved the excavation of soils.

This section describes the environmental monitoring program that was conducted during the earthwork associated with the reconstruction of Plant 2. A Soil and Groundwater Monitoring Plan (SGWMP) was prepared as part of the response by CII to properly characterize and manage potentially contaminated soil and groundwater that may have been encountered during construction.

The SGWMP is described in Section 4.1 and included as Appendix B. The monitoring approach used and the results obtained during the removal of the concrete slab within the old Plant 2 are described in Section 4.2. The monitoring approach used and the results obtained during the excavation of the rainwater collection vault, footings, and utility trenches within the old Plant 2 footprint are described in Section 4.3.

### 4.1 SOIL AND GROUNDWATER MONITORING PLAN

An SGWMP was prepared as part of the effort by CII to properly characterize and manage potentially contaminated soil and groundwater that may be encountered during the reconstruction of Plant 2. This plan is included in Appendix B.

The plan described acceptable soil management practices to be followed during trenching, excavation and grading at the site, soil stockpile management, the transportation and appropriate disposal of soil determined to be impacted by volatile contaminants, the transportation and appropriate disposal of non-impacted soil, and soil reuse criteria.

A key element of the approach to soil monitoring was the use of a photoionization detector (PID) to screen excavated soils for the presence of volatile substances. A three-foot length of rebar was used to create a vapor pathway in the soils that were tested. The tip of the PID was placed from 4 to 6 inches into the pathway created by the rebar. Soils were also placed in a plastic bag. The tip of the PID was also placed in the bag. The bag was sealed and allowed to sit for approximately five minutes. The readings obtained at five minutes were recorded.

The PID was calibrated regularly with both a gas of known composition (isobutylene at 100 ppmv), and by chemically analyzing soil samples that adhered to the slab rubble that was exported from the site, and by chemically analyzing excavated soil. A total of six soil samples were obtained from soil that the PID identified as having background concentrations (a PID reading of 0.1 ppmv) of volatile compounds. PCE, TCE, DCE, VC, and BTEX were not detected in any of these soil samples.

The plan also addressed acceptable groundwater management practices. However, groundwater was not encountered during the earthwork that was conducted at the site.

#### 4.2 REMOVAL OF THE CONCRETE PAD BELOW THE OLD PLANT 2

The removal of the concrete pad below Plant 2 began on May 11 and concluded on May 24, 2004. A chronology of construction activities during this period is provided in Table 4.1. The field log completed by the FSM employee who conducted the monitoring at the site is included in Appendix C. A photo log is included as Appendix D. There was an approximately 3-foot-thick layer of sand below the pad. The sand was dry and did not adhere well to the pad rubble. Only incidental amounts of sand were associated with the pad rubble that was placed in trucks for export from the site.

A PID was used to monitor all of the sand associated with pad rubble that was exported from the site. All of the PID readings (bagged and unbagged samples) obtained were at background levels. Four samples of this soil were collected on May 13, May 18, and May 19, 2004 from pad rubble removed from the north, southeast and center sections of the Plant 2 footprint. The chain of custody and analytical results forms for these samples are provided in Appendix C. None of the samples analyzed contained detectable amounts of PCE, TCE, DCE, VC and BTEX. A total of 1068 cy of pad rubble were removed from the site and taken to Building Buster, Inc. in Seattle, Washington for recycling.

#### 4.3 SOIL EXCAVATION AND DISPOSAL

Excavation of the soils below the pad began on May 19 and concluded on June 18, 2004. A chronology of construction activities during this period is provided in Table 4.1. The field log completed by the FSM employee who conducted the monitoring at the site is included in Appendix C. A photo log is included as Appendix D. A PID was used to monitor the soil that was excavated within the footprint of Plant 2. Underlying the concrete pad was approximately 3 feet of fine to medium grained sand. Below the sand was a silty sand locally imbedded with organic rich silt. This soil appears to be the native soil upon which Plant 2 was erected. Excavations within the Plant 2 footprint encountered this native soil during the excavation of the rainwater collection vault on May 19; the footings along the southern and northern walls on May 21 and 24; the internal footings on June 7 through June 11 and the utility trenches on June 7 through June 10, 2004 (Table 4.1, Appendix C).

Some soil that excavated was placed directly into trucks for transport to on-site stockpiles or to off-site disposal. In these instances approximately every fifth backhoe bucket (.5 cy) was analyzed by the PID. Approximately 20 buckets full of soil were excavated to fill a 10-cy truck. This practice was also frequently used when soil that was excavated was placed into a nearby on-site stockpile.

Nearly all of the soil excavated resulted in a background reading on the PID (bagged and unbagged samples). This background reading was supported by analyzing two soil samples for the presence of PCE, TCE, DCE, VC and BTEX. Two soil samples were collected on May 11 and 12, 2004, and analyzed. The samples did not contain detectable concentrations of PCE, TCE, DCE, VC or BTEX. The chain of custody and analytical results forms for these samples are provided in Appendix C.

The SGWMP calls for the placement of excavated soil that exhibits a PID reading above 5 ppmv in a suspect soil stockpile. Approximately two cy of suspect soil were encountered during the excavation of the rainwater vault on May 19, 2004. The suspect soil was obtained at the

easternmost end of the excavation for the vault. It is possible that this soil caused a PID reading due to the fact the some of the paint used to identify the excavation boundary was present in the backhoe bucket from which samples were taken. This suspect soil was placed on polyethylene sheeting and covered with polyethylene sheeting.

Approximately 10 cy of suspect soil was encountered during the installation of two footings along the south wall of Plant 2. These footings were excavated on May 21, 2004. This suspect soil was added to the stockpile of soil identified as suspect on May 19, 2004.

Approximately 7 cy of suspect soil was encountered on June 10, 2004 during the excavation for an internal footing in the southeast corner of Plant 2. This suspect soil was placed in a second suspect soil stockpile.

FSM was at the site each day that pad removal or soil excavation work was conducted. There were more than 500 PID readings obtained as soil was excavated at the site. As discussed previously, a total of approximately 19 cy of suspect soil was encountered during excavation activities on May 19, May 21, and June 10, 2004. This soil exhibited initial PID readings greater than 5 ppmv. On May 21, 2004 some soil that was excavated to create a footing in the southeast corner of the site cased a momentary reading of 1.7 ppmv on the PID. This reading rapidly fell to background levels. This soil was used as backfill on the site. All of the other soils excavated during construction work at the site exhibited background PID readings.

Three samples of the soil from each of the two suspect soil stockpiles were collected on June 11, 2004. The samples were analyzed for PCE, TCE, DCE, VC, and BTEX. These constituents were not detected in the soil samples. The soil in both suspect soil stockpiles was judged to be clean. This soil was used as backfill on the site, or disposed of at an off-site facility.

A total of 328 cy of excavated soil was exported as construction work progressed at the site. All of the PID readings obtained for this soil were at background levels (direct PID readings or PID reading of bagged soil). The exported soil was delivered to Rio's Sunnydale Construction Inc. in Tukwila, Washington (288 cy), and to Procon, Inc. in Renton, Washington (40 cy).

## 5.0 References

- Environmental Quality Management, Inc. 2000. Users Guide for the Johnson & Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings (Revised). U.S. Environmental Protection Agency, Office of Emergency Response, Washington D. C. December
- Phillip Services Corporation. 2003. Final Comprehensive Remedial Investigation Report. November
- U. S. Environmental Protection Agency. 2002. Johnson & Ettinger Model spreadsheets, SL.ADV.xls and SG-ADV.xls, downloaded from website [http://www.epa.gov/superfund/programs/risk/airmodel/johnson\\_ettinger.htm](http://www.epa.gov/superfund/programs/risk/airmodel/johnson_ettinger.htm)

**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

**Tables**

**Final  
July 6, 2004**

**Table 1.1**  
**Soil Vapor Results from On-Site Laboratory**

Compound	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12	Average
Benzene	4.9	5	5	5	5	5	5	5	5	5	5	5	5
Toluene	5.7	6	6	180	<b>498</b>	6	6	6	6	38	6	6	64
Ethylbenzene	6.6	7	7	<b>530</b>	<b>1236</b>	<b>146</b>	7	7	7	7	7	7	164
Total xylenes	6.6	7	7	<b>1059</b>	<b>5739</b>	7	7	<b>181</b>	7	<b>119</b>	7	7	596
cis1,2DCE	6.0	6	6	<b>76</b>	6	6	6	6	6	6	6	6	12
Trans1,2DE	6.03	6	6	<b>442</b>	6	6	6	6	6	6	6	6	42
TCE	8.19	8	8	8	8	8	60	8	8	36	8	8	15
PCE	10.3	10	<b>83</b>	<b>614</b>	<b>35</b>	<b>248</b>	<b>145</b>	<b>117</b>	<b>214</b>	<b>179</b>	<b>172</b>	<b>165</b>	166
VC	52.0	52	52	52	52	52	52	52	52	52	52	52	52

Notes:

All units are in  $\mu\text{g}/\text{m}^3$ 

Bold numbers = results greater than MDL

Laboratory MDLs are values listed in column VP-1

Refer to Figure 3.1 for sample locations

**Table 1.2. Evaluation of Soil Vapor Concentration on Interior Building Concentration Using Updated Johnson Ettinger Spreadsheets for Soil Contamination**

	AIR EXCH	BUILDING				SAFETY FACTOR				OFFICE			
		INDOOR CONC FR UCLC	SC UCLC	CUL	FR UCLC	SC UCLC	AIR EXCH	FR UCLC	SC UCLC	CUL	FR UCLC	SC UCLC	
PCE	1.00	<b>0.0029</b>	<b>0.0265</b>		<b>144</b>	<b>16</b>	4.50	<b>0.0023</b>	<b>0.0211</b>		<b>181</b>		<b>20</b>
TCE	1.00	<b>0.0003</b>	<b>0.0001</b>		<b>73</b>	<b>220</b>	4.50	<b>0.0002</b>	<b>0.0001</b>		<b>110</b>		<b>220</b>
cis-DCE	1.00	<b>0.0003</b>	<b>0.0001</b>		<b>167</b>	<b>500</b>	4.50	<b>0.0002</b>	<b>0.0000</b>		<b>250</b>		<b>INFIN</b>
trans-DCE	1.00	<b>0.0013</b>	<b>0.0001</b>		<b>38</b>	<b>500</b>	4.50	<b>0.0011</b>	<b>0.0000</b>		<b>45</b>		<b>INFIN</b>
VC	1.00	<b>0.0006</b>	<b>0.0000</b>		<b>467</b>	<b>INFIN</b>	4.50	<b>0.0004</b>	<b>0.0000</b>		<b>700</b>		<b>INFIN</b>
T	1.00	<b>0.0017</b>	<b>0.0010</b>		<b>107,647</b>	<b>183,000</b>	4.50	<b>0.0014</b>	<b>0.0008</b>		<b>130,714</b>		<b>228,750</b>
EB	1.00	<b>0.0043</b>	<b>0.0017</b>		<b>1,062,791</b>	<b>2,688,235</b>	4.50	<b>0.0034</b>	<b>0.0014</b>		<b>399,0</b>	<b>160,0</b>	<b>4570</b>
X	1.00	<b>0.0179</b>	<b>0.0088</b>		<b>17,877</b>	<b>36,364</b>	4.50	<b>0.0142</b>	<b>0.0070</b>		<b>1644,0</b>	<b>813,0</b>	<b>320</b>

FR UCLC = FIELD RESULTS UPPER CONFIDENCE LIMIT SOIL VAPOR CONCENTRATION (ug/m<sup>3</sup>)

SC UCLC = SUMMA CANISTER RESULTS UPPER CONFIDENCE LIMIT SOIL VAPOR CONCENTRATION (ug/m<sup>3</sup>)

AIR EXCH = AIR EXCHANGE RATE (1/hr)

CUL = MCTA METHOD B CLEANUP ACTION LIMIT (ug/m<sup>3</sup>)

**Table 3.1**  
**Comparison of Soil Vapor Results from On-Site and Air Toxics, Ltd. Laboratories**

Compound	Sample Number						Background
	VP-2	SC-1	VP-3	SC-2	VP-4	SC-3	
Benzene	5	<b>9.2</b>	5	4.1	5	7.0	5
Toluene	6	<b>84.0</b>	6	<b>21.0</b>	<b>180</b>	<b>92.0</b>	6
Ethylbenzene	7	<b>5.9</b>	7	5.6	<b>530</b>	<b>210.0</b>	7
Total xylenes	7	<b>25.5</b>	7	<b>15.6</b>	<b>1059</b>	<b>1070.0</b>	7
cis1,2DCE	6	4.8	6	5.1	<b>76</b>	<b>5.0</b>	6
Trans1,2DE	6	4.80	6	5.1	<b>442</b>	<b>5.0</b>	6
TCE	8	6.5	8	6.9	8	16.0	<b>60</b>
PCE	10	<b>130.0</b>	10	8.7	<b>614</b>	<b>3200.0</b>	<b>145</b>
VC	52	3.1	52	3.3	52	3.2	52

## Notes:

All units are in  $\mu\text{g}/\text{m}^3$ 

Bold numbers = results greater than MDL

Refer to Figure 3.1 for sample locations

SC = Summa canister

VP-2 and SC-1 were taken at the same location

VP-3 and SC-2 were taken at the same location

VP-4 and SC-3 were taken at the same location

VP-7 and SC-4 were taken at the same location

VP-11 and SC-5 were taken at the same location

**Table 3.2**  
**Model Input Parameters**

Parameter	Building	Office
Floor Area (sf)	36,400	3,200
Height (ft)	26	26
Pressure Differential (Pascals)	4	4
Air Exchange Rate (1/hr)	1	4.5
SCS Soil Type	S	S
Floor Crack Width (cm)	0.1	0.1

**Table 4.1**  
**Chronology of Construction Activity**

Date	Work Performed	Material Removed from Site	Other Information
May 11, 2004	Concrete slab in northwest and west portion of site was broken and removed by Democon.	None	Sample NW 1-Ft. was collected from soil below slab in the northwest area. All soil associated with slab rubble provided background PID readings.
May 12, 2004	Concrete slab in southwest and south portion of site was broken and removed by Democon. Slab removal continued in the northwest, approximately 35 percent of the existing slab had been removed.	122 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	Sample S 1-Ft. was collected from soil below slab in the south area. All soil associated with slab rubble provided background PID readings.
May 13, 2004	Concrete slab in southeast portion of site was broken and removed by Democon.	300 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	All soil associated with slab rubble provided background PID readings.
May 14, 2004	Concrete slab in center and noth portion of site was broke and removed by Democon. Slab removal continued in west portion of the site. Breaking of large footings in northwest portion was conducted by Democon.	16 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	Sample NW-SLAB 2 was collected from soil adhered to slab removed from the northwest area. All soil associated with slab rubble provided background PID readings.
May 17, 2004	Slab removal continued in the northwest and the southeast. Approximately 70 percent of the existing slab had been removed.	172 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	Sample SE-SLAB-1 was collected from soil adhered to slab removed from southeast area. All soil associated with slab rubble provided background PID readings.
May 18, 2004	Slab removal continued in the southeast, east and the center portions of the site. Large footings were broken up throughout site. Approximately 85 percent of the existing slab had been removed.	174 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	Sample C SLAB-1 was collected from soil adhered to slab removed from central area. All soil associated with slab rubble provided background PID readings.
May 19, 2004	Concrete slab in center and northeast portion of site was broken and removed by Democon. Slab removal continued in the central area. Soil excavation for the stormwater vault in the northwest began. A stockpile of suspect soil, called N-Stockpile, was created.	Approximately 220 cy of soil from vault excavation exported to Rio's Sunnyvale Construction in Tukwila, WA. Approximately 40 cy of soil from vault excavation exported to Procon, Inc. in Renton, WA.	Sample NE SLAB was collected from soil adhered to slab removed from northeast area. All soil exported provided background PID readings.
May 20, 2004	Excavation for the stormwater vault continued. Work included removal of soils beneath the former slab surface area. A small amount of soil was excavated outside the northern wall in the west to find the side sewer connection. Bedding for vault was laid down. Slab removal continued in the east.	70 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	Crushed rock was brought on site for vault bedding. All soil associated with slab rubble provided background PID readings.
May 21, 2004	Excavation began for footings along southern and northern walls. Slab removal continued in the north and northeast areas. Breaking of large footings throughout site continued. N-Stockpile was moved to northeast area of site and suspect soil from 2 footings along south wall was added.	88 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	All soil associated with slab rubble provided background PID readings. Approximately 10 cy of 'suspect soil' was encountered during the excavation of two footings along the south wall of Plant 2. This 'suspect soil' was added to the 'suspect soil' stockpile created on May 17, 2004
May 24, 2004	Slab removal continued in the southwest. 100 percent of the slab had been removed as of this date. Excavation of footings along northern wall continued.	60 cy of slab rubble exported to Building Busters, Inc. in Seattle, WA	All soil associated with slab rubble provided background PID readings.

**Table 4.1**  
**Chronology of Construction Activity**

Date	Work Performed	Material Removed from Site	Other Information
June 2, 2004	Trenches for plumbing were excavated along western edge of site.	None	All PID readings of excavated soil at background levels.
June 3, 2004	Trenches for plumbing were excavated in northeast and east areas of site.	None	All PID readings of excavated soil at background levels.
June 7, 2004	Trenches for electrical were excavated in southeast area and along south wall. Excavation of internal (not along walls) footings began in southern half of site. Vault walls and floor were poured and backfill began around vault.	None	All PID readings of excavated soil at background levels.
June 8, 2004	Excavation of internal footings continued. Excavation of footings along south and north walls continued.	None	All PID readings of excavated soil at background levels.
June 9, 2004	Excavation of internal footings in the northern half of the site began. Electrical trenches were excavated from the eastern end of the vault to the southern wall. Backfill, compaction, and concrete pouring of internal footings and footings along wall continued.	None	All PID readings of excavated soil at background levels.
June 10, 2004	Excavation of internal footings in the northern half of the site continued. Electrical trenches were excavated from the eastern end of the vault to the southern wall. Backfill, compaction, and concrete pouring of internal footings continued. S-Stockpile of suspect soil was created in northwest area.	None	Approximately 7 cy of 'suspect' soil was encountered during excavation for an internal footing in the SW corner of Plant 2. The 'suspect soil' was placed in a second suspect soil stockpile.
June 11, 2004	Excavation of all footings was completed. Backfill, compaction, and pouring of concrete for footings continued. Panels for top of vault were being brought in and installed.	None	Samples N-Stockpile north, N-Stockpile southwest, N-Stockpile southeast, S-Stockpile southwest, S-Stockpile east, and S-Stockpile northwest were collected from suspect soil stockpiles.
June 16, 2004	Sampled (PID) stockpile of soil that was to be exported	None	All PID readings were at background levels.
June 18, 2004	Soil stockpiled during grading activities is expected to be disposed of off site. Rebar for new slab was being installed in the southern half of the site.	68 cy of clean soil exported to Rio's Sunnyvale Construction in Tukwila, WA	All soil exported provided background PID readings.

Notes:  
Photos of construction activities are provided in Appendix D  
cy = cubic yards

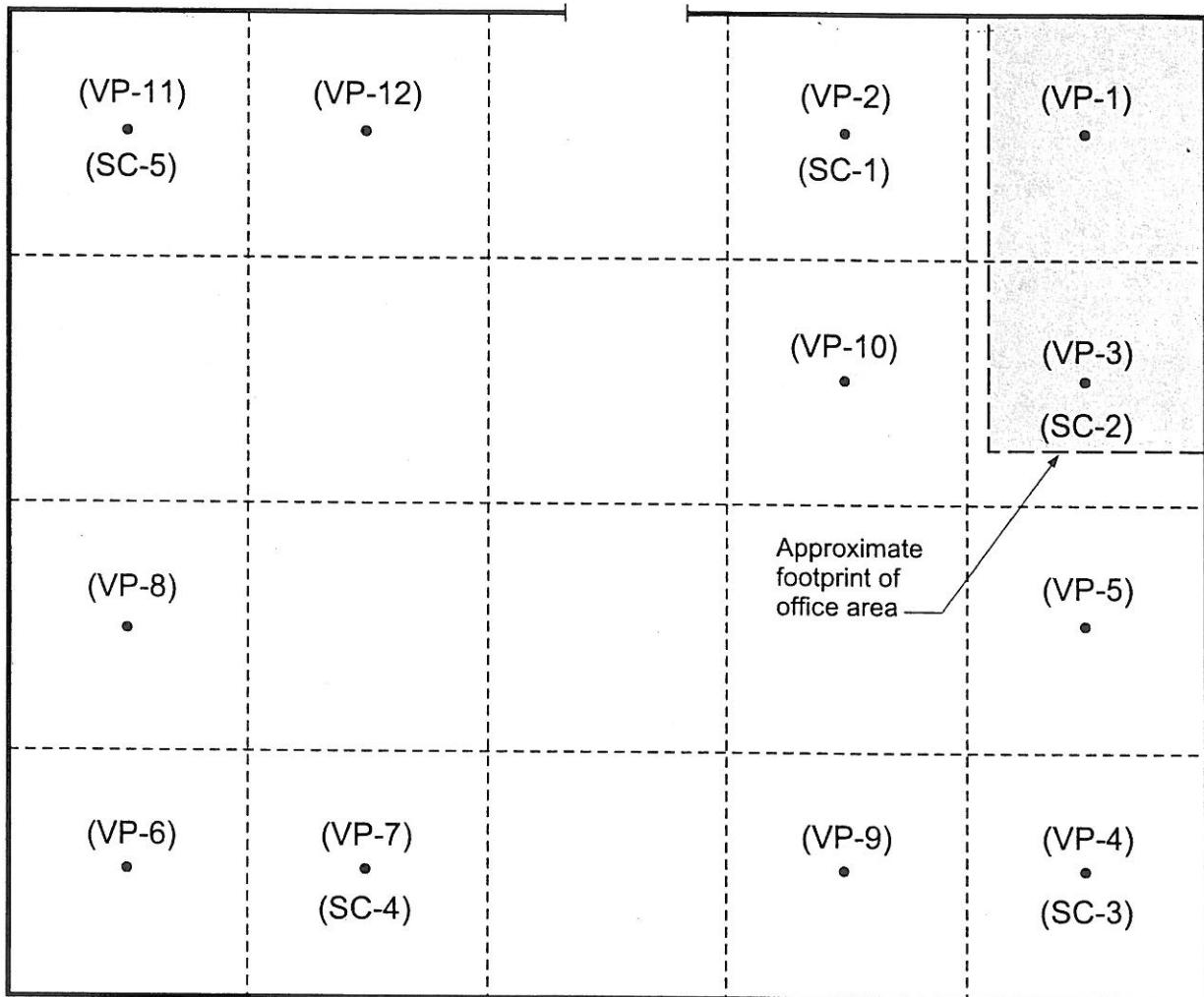
**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

**Figures**

**Final  
July 6, 2004**

S. MEAD STREET



S. FIDALGO STREET

LEGEND

- Sample Location
- (VP) On-Site Lab Soil Vapor Sample
- (SC) Off-Site Lab Summa Canister Sample

NOT TO SCALE



**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

**Appendix A  
Analytical Results for Soil Vapor Samples**

**Final  
July 6, 2004**

RECEIVED

APR 30 2004

BY:

April 28, 2004

Dan McCarthy  
Floyd Snider McCarthy Inc.  
83 King Street, Ste. 614  
Seattle, WA 98104

Dear Mr. McCarthy:

Please find enclosed the analytical data report for the Capital Industries Project in Seattle, Washington. Direct Push and Mobile Laboratory services were conducted on April 19, 2004. Air samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Method 8021B.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Floyd Snider McCarthy for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec  
President

# CHAIN-OF-CUSTODY RECORD

CLIENT: <u>Floyd Snider McCarty</u>	DATE: <u>4/19/04</u>	PAGE: <u>1</u> OF <u>1</u>			
ADDRESS: <u>83 Santa Fe St. Suite C14</u>	PROJECT NAME: <u>Capital Industries</u>				
PHONE: <u>(206) 242-2078</u>	LOCATION: <u>Seattle, WA</u>	DATE OF COLLECTION: <u>4/19/04</u>			
CLIENT PROJECT #: <u>DAN</u>	COLLECTOR: <u>TSC</u>	Total Number of Containers: <u>1</u>			
Sample Number	Depth	Time	Sample Type	Container Type	NOTES
1. Blank	0' 400	Air	20 Vials	X	
2. VP-1	0' 13	Air	20ml	X	2
3. VP-2	0' 24	Air	20ml	X	2
4. VP-3	0' 42	Air	20ml	X	2
5. VP-4	0' 60	Air	20ml	X	2
6. VP-5	1' 05	Air	20ml	X	2
7. VP-6	1' 36	Air	20ml	X	2
8. VP-7	1' 52	Air	20ml	T	2
9. VP-8	1' 43	Air	20ml	T	2
10. VP-9	1' 230	Air	20ml	X	2
11. VP-10	1' 248	Air	20ml	T	2
12. VP-11	1' 257	Air	20ml	K	2
13. VP-12	1' 510	Air	20ml	X	2
14.					
15.					
16.					
17.					
18.	RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT
<u>John</u>	<u>4/19/04</u>	<u>McLennan</u>	<u>4/19/04</u>	<u>4/19/04</u>	LABORATORY NOTES: <u>Mobile Laboratory</u>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
<u>John</u>	<u>4/19/04</u>	<u>McLennan</u>	<u>4/19/04</u>	<u>4/19/04</u>	RECEIVED GOOD COND/COLD
SAMPLE DISPOSAL INSTRUCTIONS					
EST	SAL	2.QT	Q	Q	Time _____
5					Time _____

## ESN NORTHWEST CHEMISTRY LABORATORY

CAPITAL INDUSTRIES PROJECT  
 Seattle, Washington  
 Floyd Snyder McCarthy

## Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil Vapor

Sample Description	Method Blank	Equipment Blank	VP-1	VP-2	VP-3	VP-4	VP-4 Dup.	VP-5	VP-5 Dup.
Date Sampled	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004
Date Analyzed	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004
MDL	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Vinyl chloride	20	nd	nd	nd	nd	nd	nd	nd	nd
Benzene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
Toluene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
Total Xylenes	1.5	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
<i>trans</i> -1,2-Dichloroethene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
<i>cis</i> -1,2-Dichloroethene	1.5	nd	nd	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	1.5	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.5	nd	nd	nd	nd	12	89	73	5.1
									11

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Marilyn Farmer

## ESN NORTHWEST CHEMISTRY LABORATORY

CAPITAL INDUSTRIES PROJECT  
 Seattle, Washington  
 Floyd Snyder McCarthy

## Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil Vapor

Sample Description	LCS	VP-6	VP-7	VP-8	VP-9	VP-10	VP-11	VP-12
Date Sampled	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004
Date Analyzed	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004	4/19/2004
MDL	ppbv	% recovery	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Vinyl chloride	20		nd	nd	nd	nd	nd	nd
Benzene	1.5	91	nd	nd	nd	nd	nd	nd
Toluene	1.5	101	nd	nd	nd	nd	10	nd
Ethylbenzene	1.5		33	nd	nd	nd	nd	nd
Total Xylenes	1.5		nd	nd	nd	41	nd	nd
1,1-Dichloroethene	1.5		nd	nd	nd	nd	nd	nd
<i>trans</i> -1,2-Dichloroethene	1.5		nd	nd	nd	nd	nd	nd
<i>cis</i> -1,2-Dichloroethene	1.5	104	nd	11	nd	nd	6.6	nd
Trichloroethene (TCE)	1.5	103	36	21	17	31	26	25
Tetrachloroethene (PCE)	1.5							24

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Marilyn Farmer

**Dan McCarthy**

**From:** Team E [reporting@airtoxics.com]  
**Sent:** Friday, May 07, 2004 3:55 PM  
**To:** Dan McCarthy  
**Subject:** Proj. Name: CI Capital Industries, Project ID: 6514, FinalReport: WO# 0404392R1, Air Toxics Ltd.



0404392R1COC.pdf 0404392R1\_d.pdf

f

Project Name: CI Capital Industries

Date Received: 04/21/04

Date Promised: 05/07/04

Sample Listing

Sample	Analysis
Collection Date	Pressure
SC-1	Modified TO-14A
04/19/04 01:05 PM	4.5 "Hg
SC-2	Modified TO-14A
04/19/04 01:26 AM	6.0 "Hg
SC-3	Modified TO-14A
04/19/04 01:34 PM	5.5 "Hg
SC-3 Duplicate	Modified TO-14A
04/19/04 01:34 PM	5.5 "Hg
SC-5	Modified TO-14A
04/19/04 03:43 PM	4.0 "Hg
SC-4	Modified TO-14A
04/19/04 02:36 PM	2.0 "Hg
SC-6	Modified TO-14A
04/19/04 12:40 PM	4.0 "Hg

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. The attached document, 0404392R1\_d.PDF, is provided in Portable Document Format (PDF). To view the document, use Acrobat Reader by Adobe. If you do not have Acrobat Reader, you can download a free copy from the Adobe website at <http://www.adobe.com>

Air Toxics Ltd. appreciates your business. If you have any questions regarding the electronic report, please contact Client Services by phone at (916) 985-1000 or by e-mail at [samplerceiving@airtoxics.com](mailto:samplerceiving@airtoxics.com). For more information about Air Toxics Ltd., you can visit us at <http://www.airtoxics.com>.

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AIR TOXICS LTD.

ENVIRONMENTAL ANALYTICAL INTEGRITY

CHAIN-OF-CUSTODY RECORD

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180 BLUE RAVINE ROAD, SUITE 8

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Tatics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to no damage, loss or damage to the collection, handling, or shipping of samples. DQT, Headline (800) 467-4922 Name \_\_\_\_\_ Date \_\_\_\_\_



# AIR TOXICS LTD.

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

## Air Toxics Ltd. Introduces the Electronic Report

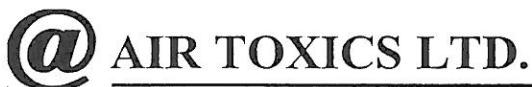
Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020  
Hours 8:00 A.M to 6:00 P.M. Pacific  
E-mail to:[samplerceiving@airtoxics.com](mailto:samplerceiving@airtoxics.com)



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**WORK ORDER #: 0404392R1**

**Work Order Summary**

<b>CLIENT:</b>	Mr. Dan McCarthy Floyd, Snider & McCarthy 83 South King Street, Suite 614 Seattle, WA 98104	<b>BILL TO:</b>	Mr. Dan McCarthy Floyd, Snider & McCarthy 83 South King Street, Suite 614 Seattle, WA 98104
<b>PHONE:</b>	206-292-2078	<b>P.O. #</b>	
<b>FAX:</b>	206-682-7867	<b>PROJECT #</b>	CI Capital Industries
<b>DATE RECEIVED:</b>	4/21/04	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	4/23/04		
<b>DATE REISSUED:</b>	5/6/04		

<b>FRACTION #</b>	<b>NAME</b>	<b>TEST</b>	<b>RECEIPT</b>
			<b>VAC./PRES.</b>
01A	SC-1	Modified TO-14A	4.5 "Hg
02A	SC-2	Modified TO-14A	6.0 "Hg
03A	SC-3	Modified TO-14A	5.5 "Hg
03AA	SC-3 Duplicate	Modified TO-14A	5.5 "Hg
04A	SC-5	Modified TO-14A	4.0 "Hg
05A	SC-4	Modified TO-14A	2.0 "Hg
06A	SC-6	Modified TO-14A	4.0 "Hg
07A	Lab Blank	Modified TO-14A	NA
08A	CCV	Modified TO-14A	NA
09A	LCS	Modified TO-14A	NA

CERTIFIED BY:

DATE: 05/07/04

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/03, Expiration date: 06/30/04

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified TO-14A**  
**Floyd, Snider & McCarthy**  
**Workorder# 0404392R1**

Six 1 Liter Summa Canister samples were received on April 21, 2004. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<b>Requirement</b>	<b>TO-14A/TO-15</b>	<b>ATL Modifications</b>
Continuing Calibration criteria	</= 30% Difference	</= 30% Difference with two allowed out to </= 40% Difference; flag and narrate outliers
Initial Calibration criteria	RSD<30% (TO-14A)	RSD</=30%, two compounds allowed up to 40%.
Moisture control	Nafion Dryer (TO-14A)	Multisorbent trap
Blank acceptance criteria	<0.20 ppbv (TO-14A)	<Reporting Limit
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters	Syringe dilutions
BFB absolute abundance criteria	Within 10% of that from previous day. (TO-14A)	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D.
Sample Load Volume	400 mL (TO-14A)	Varied to 200 mL
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Concentration of IS Spike.	10 ppbv (TO-15)	25 ppbv.
BFB Abundance	CLP Protocol (TO-15)	SW-846 Protocol
IS Recoveries.	Within 40% of mean over ICAL for blanks, and within 40% of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blanks and samples.

#### Receiving Notes

There were no receiving discrepancies.

#### Analytical Notes

There were no analytical discrepancies.

THE WORK ORDER WAS RE-ISSUED ON 5-07-2004 TO REPORT TARGET COMPOUNDS DOWN TO THE MDL PER CLIENT REQUEST.

AS PER PROJECT SPECIFIC CLIENT REQUEST THE LABORATORY HAS REPORTED ESTIMATED VALUES FOR TARGET COMPOUND HITS THAT ARE BELOW THE REPORTING LIMIT BUT GREATER THAN THE METHOD DETECTION LIMIT. CONCENTRATIONS THAT ARE BELOW THE LEVEL AT WHICH THE CANISTER WAS CERTIFIED MAY BE FALSE POSITIVES.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

# AIR TOXICS LTD.

SAMPLE NAME: SC-1

ID#: 0404392R1-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042206R1	Date of Collection:	4/19/04
Dil. Factor:	2.38	Date of Analysis:	4/22/04 11:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	18	8.2	130
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
m,p-Xylene	1.2	4.5	5.2	20
o-Xylene	1.2	1.2	5.2	5.5
Toluene	1.2	22	4.6	84
Ethyl Benzene	1.2	1.3	5.2	5.9
Benzene	1.2	2.8	3.9	9.2

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-2

ID#: 0404392R1-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042207R1	Date of Collection:	4/19/04
Dil. Factor:	2.53	Date of Analysis:	4/22/04 12:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Trichloroethene	1.3	0.88 J	6.9	4.8 J
Tetrachloroethene	1.3	0.52 J	8.7	3.6 J
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
m,p-Xylene	1.3	2.3	5.6	10
o-Xylene	1.3	0.79 J	5.6	3.5 J
Toluene	1.3	5.4	4.8	21
Ethyl Benzene	1.3	0.50 J	5.6	2.2 J
Benzene	1.3	0.93 J	4.1	3.0 J

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-3

ID#: 0404392R1-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042208R1	Date of Collection:	4/19/04
Dil. Factor:	2.47	Date of Analysis:	4/22/04 12:51 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	3.0	6.7	16
Tetrachloroethene	1.2	460	8.5	3200
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
m,p-Xylene	1.2	200	5.4	870
o-Xylene	1.2	44	5.4	200
Toluene	1.2	24	4.7	92
Ethyl Benzene	1.2	47	5.4	210
Benzene	1.2	2.2	4.0	7.0

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-3 Duplicate

ID#: 0404392R1-03AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042209R1	Date of Collection:	4/19/04
Dil. Factor:	2.47	Date of Analysis:	4/22/04 01:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	3.2	6.7	17
Tetrachloroethene	1.2	450	8.5	3100
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
m,p-Xylene	1.2	200	5.4	860
o-Xylene	1.2	44	5.4	200
Toluene	1.2	24	4.7	92
Ethyl Benzene	1.2	48	5.4	210
Benzene	1.2	2.0	4.0	6.5

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-5

ID#: 0404392R1-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042210R1	Date of Collection:	4/19/04
Dil. Factor:	2.33	Date of Analysis:	4/22/04 02:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	3.9	8.0	27
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
m,p-Xylene	1.2	3.5	5.1	16
o-Xylene	1.2	1.2	5.1	5.2
Toluene	1.2	6.7	4.5	26
Ethyl Benzene	1.2	0.90 J	5.1	4.0 J
Benzene	1.2	2.7	3.8	8.8

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-4

ID#: 0404392R1-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042211R1	Date of Collection:	4/19/04
Dil. Factor:	2.16	Date of Analysis:	4/22/04 03:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	0.40 J	5.9	2.2 J
Tetrachloroethene	1.1	29	7.4	200
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
m,p-Xylene	1.1	6.0	4.8	27
o-Xylene	1.1	1.7	4.8	7.4
Toluene	1.1	4.0	4.1	15
Ethyl Benzene	1.1	1.2	4.8	5.1
Benzene	1.1	0.69 J	3.5	2.2 J

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

SAMPLE NAME: SC-6

ID#: 0404392R1-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042212R1	Date of Collection:	4/19/04
Dil. Factor:	2.33	Date of Analysis:	4/22/04 03:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	Not Detected	8.0	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
m,p-Xylene	1.2	0.96 J	5.1	4.2 J
o-Xylene	1.2	Not Detected	5.1	Not Detected
Toluene	1.2	2.6	4.5	10
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
Benzene	1.2	0.71 J	3.8	2.3 J

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0404392R1-07A

## MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042205a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/04 10:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

SAMPLE NAME: CCV

ID#: 0404392R1-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042202	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/04 07:48 AM

Compound	%Recovery
cis-1,2-Dichloroethene	93
Trichloroethene	94
Tetrachloroethene	105
trans-1,2-Dichloroethene	87
Vinyl Chloride	101
m,p-Xylene	103
o-Xylene	101
Toluene	98
Ethyl Benzene	103
Benzene	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0404392R1-09A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	d042203	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/22/04 08:27 AM

Compound	%Recovery
cis-1,2-Dichloroethene	96
Trichloroethene	108
Tetrachloroethene	107
trans-1,2-Dichloroethene	99
Vinyl Chloride	108
m,p-Xylene	98
o-Xylene	96
Toluene	104
Ethyl Benzene	102
Benzene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

# CHAIN-OFF-CUSTODY RECORD

CLIENT: Floyd Snider McCord Company  
 ADDRESS: 95 Grand King St. Suite 111  
 PHONE: 206-242-7667 FAX: 206-242-7667

DATE: 4/19/04 PAGE 1 OF 1

PROJECT NAME: Catalytic转化器

LOCATION: Seattle, WA

COLLECTOR: T. S. DATE OF COLLECTION: 4/19/04

CLIENT PROJECT #: Project # PROJECT MANAGER: Project Manager

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES											
					VOCs 8021B	SEMI VOL 8270	TPH 8015 (Gaseous)	TPH 8015 (Dissolved)	PAH 8100	PAH 8270	PCBs 8082	EPA	VPH	Methylmercury	Hex Chrome	NOTES
1. Blanks	0'600	Air	20ml	Vials	X											2
2. VP-1	0'13	Air	20ml	Vials		X										2
3. VP-2	0'24	Air	20ml	Vials			X									2
4. VP-3	0'42	Air	20ml	Vials				X								2
5. VP-4	None	Air	20ml	Vials					X							2
6. VP-5	1'025	Air	20ml	Vials						X						2
7. VP-6	1'036	Air	20ml	Vials							X					2
8. VP-7	1'052	Air	20ml	Vials								X				2
9. VP-8	1'143	Air	20ml	Vials								X				2
10. VP-9	1'230	Air	20ml	Vials									X			2
11. VP-10	1'248	Air	20ml	Vials										X		2
12. VP-11	1'257	Air	20ml	Vials										X		2
13. VP-12	1'510	Air	20ml	Vials										X		2
14.																
15.																
16.																
17.																
18.																

RELINQUISHED BY (Signature): <i>John J.</i>	DATE/TIME: <u>4/19/04</u>	RECEIVED BY (Signature): <u>John J.</u>	DATE/TIME: <u>4/19/04</u>
RELINQUISHED BY (Signature): <i>John J.</i>	DATE/TIME:	RECEIVED BY (Signature):	DATE/TIME:
<b>SAMPLE DISPOSAL INSTRUCTIONS</b>			
<input type="checkbox"/> ESN DISPOSAL <input type="checkbox"/> \$2.00 each <input type="checkbox"/> Return <input type="checkbox"/> Pickup			
NOTES:			
SAMPLE RECEIPT		TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA		SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD		NOTES:	

# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

Page 1 of 1

Contact Person <u>DAN McCarthey</u> Company <u>FSA</u>	Project info: P.Q. # <u>SC-1</u> Project # <u>CIT</u> Project Name <u>Capital Treston</u>	Turn Around Time: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Rush <u>2 days</u> Specify <u></u>
Address <u>South King St. Suite 600</u> Phone <u>(609) 272-2016</u>	State <u>NJ</u> Zip <u>08601</u> FAX <u>206-582-7867</u>	Canister Pressure / Vacuum Initial <u>-26</u> Final <u>-26</u> Receipt <u></u>
Collected By: Signature <u></u>	Analyses Requested Date & Time	
Lab I.D.	Field Sample I.D.	
SC-1	4119041305	TU-14
SC-2	4119041306	TU-14
SC-3	4119041304	TU-14
SC-4	4119041304	TU-14
SC-5	4119041240	TU-14
SC-6	4119041240	TU-14
Relinquished By: (Signature) Date/Time <u>4/20/04 3:00</u>	Received By: (Signature) Date/Time <u>4/20/04 3:00</u>	Notes: <u>RECEIVED CTS &amp; AIR TOXICS - DEC 2004</u>
Relinquished By: (Signature) Date/Time <u></u>	Received By: (Signature) Date/Time <u></u>	<u>ACU and SITE</u>
Relinquished By: (Signature) Date/Time <u></u>	Received By: (Signature) Date/Time <u></u>	<u>RECEIVED ON 4/20/04</u>
Shipper Name <u></u>	Air Bill # <u></u>	Condition <u></u> Custody Seals Intact? <u>Yes</u> No <u>None</u> Work Order # <u></u>
Lab Use Only <u></u>		

**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

**Appendix B  
Soil and Groundwater Monitoring Plan**

**Final  
July 6, 2004**



**Capital Industries, Inc.**

**Soil and Groundwater Management Plan  
for  
Contaminated Soil and Groundwater  
Encountered  
During the Re-Construction of Plant 2**

**Prepared for**

**Capital Industries, Inc.**

**Prepared by**

Floyd Snider McCarthy, Inc.  
83 South King Street  
Suite 614  
Seattle, Washington 98104

**May 2004**

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## 1.0 Introduction

Phillip Services Corporation (PSC) has prepared a Remedial Investigation report as part of its work to clean up its facility located at 734 S. Lucile Street in Seattle, Washington. PSC released solvents to the soil and groundwater at this facility. The general flow direction of the groundwater below this facility is toward the Duwamish River. Some of this groundwater flows below the Capital Industries, Inc. (CII) Site. The groundwater contains low concentrations of solvents such as tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE), as well as benzene and related chemicals. Ecology is concerned that these solvents, benzene, and related chemicals may volatilize from the groundwater and enter the breathing zone of site workers.

The groundwater under Plant 2 is expected to be present at about 7 –10 feet below ground surface (bgs). CII is not aware of the presence of solvents, benzene or related chemicals in the soils below Plant 2. The upper 2 to 4 feet of surface soil at the Site was placed to raise the floor elevation of the facility above the elevation of the adjacent street. The fill was placed in 19XX when Plant 2 was originally constructed. Although it is unlikely, there is always the possibility of encountering unknown shallow pockets of groundwater, or soils containing solvents, benzene or related chemicals during site work.

Samples of soil gas were collected from just below the cement slab that is now present at Plant 2. The soil gas samples collected contained low concentrations of PCE, TCE, DCE, benzene and related chemicals. The concentrations of these chemicals were more than approximately 1000 times lower than OSHA levels of concern. It is possible that the vapors in the soils that are excavated are concentrated enough to cause an odor or a significant photoionization detector (PID) reading. The odor associated with the volatile vapors (if present) is expected to diminish rapidly once the soil is exposed to the atmosphere.

CII plans to rebuild Plant 2. The existing cement slab will be removed. A storage vault to contain rain run off from the roof, footings to support the walls and ceiling of the new facility and utility trenches will be installed. The installation of these features will involve the excavation of soils. Groundwater may be encountered as the rainwater storage vault is installed.

This soil and groundwater management plan is part of the response by CII to properly characterize and manage potentially contaminated soil and groundwater that may be encountered during construction.

### 1.1 ESTIMATED EXTENT OF VOLATILE IMPACTS

The recent soil vapor investigation indicates that subsurface volatile constituents may be present throughout the footprint of Plant 2. As a result the soil management procedures defined in Section 3 should be followed for all excavation work at the site.

## 2.0 Health and Safety

Personnel that work with hazardous substances such as PCE must be trained in the hazards specific to these substances and in the appropriate protective measures. CII's contractor will be entirely responsible for identifying all applicable health and safety requirements in federal, state, and local regulations. CII's contractors will be responsible for writing, implementing, and enforcing an appropriate health and safety plan that is in compliance with all federal, state, and local regulations when excavating and handling soils and groundwater that may contain solvents and other volatile compounds.

### 3.0 Soil Management Plan

Contractors retained by CII will perform all excavation, soil handling, and construction activities related to Plant 2.

Granular fill/ballast may be imported to meet site grade requirements. Otherwise, it is not expected that significant quantities of soil will be imported to the Site. Soil from the excavation of the rainwater retention vault, the footings needed to support the building, and utility trenches may be exported from the site.

It is expected that the deepest excavation will occur during the excavation of the rainwater retention vault. Otherwise, CII's contractor will generally be reworking shallow soil, where the potential for encountering volatile compounds in soil is significantly less. As such, this plan consists of soil management for two activities:

1. Trenching activities that have a higher probability of encountering detectable concentrations of volatile compounds and volatile odors as the depth of the trench approaches the water table.
2. Grading activities that are less likely to encounter volatile compounds at detectable concentrations but may encounter occasional volatile odors.

#### 3.1 SOIL MANAGEMENT DURING TRENCHING AND VAULT INSTALLATION

CII's contractor shall notify CII when trenching is to occur. It will be CII's responsibility to be on-site and observe trenching activities. CII will not be responsible for managing soils containing volatile compounds generated during trenching that was not directly supervised by CII or their consultant.

During such trenching, zones of potentially impacted soil will be identified by elevated PID readings and/or visual and olfactory indications.

Potentially impacted soil identified by CII or their consultant will be segregated and stockpiled separately from cleaner soils.

Stockpiles of potentially impacted soil will then be sampled by the CII or their consultant and analyzed for PCE, TCE, DCE, BTEX, or other constituents that CII or their consultant determines are necessary.

Stockpiled soil that contains volatile compounds at concentrations greater than the site soil reuse criteria (refer to Section 3.6) will be transported by CII to an appropriate treatment/disposal site. Soil that contains volatile constituent concentrations less than the soil reuse criteria can be used by CII's contractor for general backfill on the Site.

### **3.2 SOIL MANAGEMENT DURING GRADING**

During grading, the following soil management procedures will be followed:

- The contractor shall be responsible for identifying visibly contaminated soil or soil with a sustained volatile odor and contact CII immediately.
- The contractor shall cease work in the area of potentially impacted soil.
- Once notified by the contractor of the potentially impacted soil, CII or their consultant will oversee further grading performed by the contractor in the impacted area.
- CII or their consultant will identify potentially impacted soil by elevated PID readings and/or visual and olfactory indications.
- Potentially impacted soil will be segregated and stockpiled.
- Stockpiles of impacted soil will be sampled by CII or their consultant and analyzed to determine the concentrations of PCE, TCE, DCE and BTEX.

### **3.3 SOIL STOCKPILE MANAGEMENT**

The potentially impacted soil shall be stockpiled by CII's contractor on-site. Free-standing or contained stockpiles may be used. The free-standing stockpiles shall be placed upon and covered by either 10 mil thick polyethylene sheeting or woven waterproof tarps provided by the contractor. Sheetings and tarps will be secured from the wind. Alternately, given that the volume of soils containing volatiles is expected to be small, a 20 cubic yard metal roll off container (drop box) may be utilized to store stockpiled soil. Use of a drop box eliminates the need to reload stockpiled soil onto trucks; however, should the volume of soils containing volatiles be large (i.e., greater than 20 cubic yards), it will be more efficient to stockpile the soil on the ground at a nearby on-site location identified by CII. The soil stockpiles will be kept covered until loaded for disposal or reuse.

The contractor shall be reimbursed for the incremental cost of managing potentially contaminated soil. Incremental costs are those that are required solely as a result of management of soils that may contain volatile constituents. For example, the cost of trenching that encounters soils containing volatiles is not an incremental cost, but the cost to load out and stockpile soils containing volatiles encountered during trenching would be considered an incremental cost. Such incremental costs must be approved of by CII via signed change orders, and reimbursed in accordance with the contractual conditions between the contractor and CII.

### **3.4 IMPACTED SOIL TRANSPORTATION, TREATMENT, AND DISPOSAL**

CII will handle transportation, treatment, and disposal of impacted soil that exceeds soil reuse criteria. Such soil will be transported by CII subcontractors under appropriate manifest to a subtitle C or D landfill for treatment and/or disposal. CII will not be responsible for costs associated with the transport, treatment, and/or disposal of soils containing volatiles that is transported off-site without the prior knowledge and consent of CII. Prior to off-site transport of soils containing volatiles, CII will confirm with its consultant that soil stockpile sampling requirements have been achieved.

CII's contractor will load the trucks provided by CII. CII's contractor will be responsible for efficiently loading the trucks and cleaning up any soil spillage.

### **3.5 EXPORT OF NON-IMPACTED SOIL**

Some shallow, non-impacted soil may be exported off-site. This includes only:

- Soil that exhibited PID readings below 5 ppm

Non-impacted soil may be transported off-site to a location at the contractor's discretion without stockpiling.

### **3.6 SOIL REUSE CRITERIA**

Either CII or their consultant will sample the stockpiles of potentially impacted soil. Soil reuse criteria are based on the following MTCA Method A criteria:

- PCE: 0.05 mg/kg
- TCE: 0.03 mg/kg
- Benzene: 0.03 mg/kg
- Toluene: 7 mg/kg
- Ethylbenzene: 6 mg/kg
- Total Xylenes: 9 mg/kg

A stockpile that exceeds any of these criteria will be transported off-site (refer to Section 3.7). Stockpiled soil determined to be less than the criteria (i.e., clean) can be used as general backfill by CII's contractor. If clean soil cannot be reused on-site because of poor compactability, lack of backfill need, or other issues not related to soil contamination, it could be taken off-site to a location at the contractors discretion.

The soil stockpiles will be sampled in accordance with the sampling procedure and sample frequencies described in the "Guidance for Remediation of Petroleum Contaminated Soils" (Ecology 1995). For example, the number of stockpile samples collected will be appropriate to the volume of the stockpile. Up to three samples will be collected from stockpiles that contain up to 100 cubic yards of soil.

### **3.7 SOIL DISPOSAL CRITERIA**

If the soil contains the solvents of interest at concentrations above Method A criteria but below Method B Criteria:

- PCE: 19.6 mg/kg
- TCE: 90.9 mg/kg
- DCE: 1.67 mg/kg

- Benzene: 18.2 mg/kg
- Ethylbenzene: 8000 mg/kg
- Toluene: 16,000 mg/kg
- Total Xylene: 160,000mg/kg

The soils can be managed as non-hazardous waste and be disposed of at a regulated subtitle D landfill. This assumes that the soil does not exhibit dangerous waste characteristics (i.e., fails the Toxicity Characteristics Leaching Procedure (TCLP) test).

If the soils fail the TCLP test the soils will be disposed of at a Subtitle C landfill permitted to accept the materials as hazardous waste.

## 4.0 Groundwater Management Plan

Construction activities may involve pumping groundwater from the excavation of the rainwater collection vault. All groundwater removed from any excavation will be considered to be potentially impacted groundwater. The total quantity of groundwater (if any) that is removed is expected to be low. As a result all groundwater removed will be removed by a permitted and licensed water extraction and disposal subcontractor such as Emerald Services, Inc. (206-832-3000). The contractor will notify CII in advance of the potential need for a groundwater extraction and disposal subcontractor. The contractor will arrange for subcontractor services. This subcontractor must be approved by CII in advance. Emerald Services, Inc. is the approved subcontractor.

Extracted groundwater must not be disposed upon the ground or directed to stormwater or sanitary sewers.

## 5.0 Analytical Methods

If suspect soil is encountered during construction activities, sampling and analysis may be performed to accomplish the following:

1. Classify the volatile concentrations of potentially impacted soil stockpiles to determine if potentially impacted soil may be reused on-site or must be shipped off-site for disposal and/or treatment.
2. Collect soil data to document compliance with waste acceptance criteria of the treatment and disposal facility.

The soil treatment facility will require the following analyses of soil prior to accepting soil.

- PCE, TCE, DCE and BTEX by EPA Method 8260B

Samples will be analyzed at North Creek Analytical, a Washington State Department of Ecology certified analytical laboratory.

## 6.0 Project Contacts

### CII Project Manager

Ron. S. Taylor  
President  
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### Carney Badley Spellmann

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### Floyd Snider McCarthy

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E-mail: stehpenb@fsmseattle.com  
E-mail: cammtjc@earthlink.com

## **7.0 References**

Washington State Department of Ecology (Ecology). 1995. *Guidance for Remediation of Petroleum Contaminated Soils*. April.

**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

**Appendix C  
Construction Monitoring Documentation**

**Final  
July 6, 2004**





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14 May 2004 *Spec her F&I*

*CII*

Dan McCarthy  
Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104  
RE: CII

Enclosed are the results of analyses for samples received by the laboratory on 05/12/04 16:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Kortland Orr*

Kortland Orr

PM



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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: C11  
Project Number: [none]  
Project Manager: Dan McCarthy

**Reported:**  
05/14/04 10:03

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NW-1ft	B4E0326-01	Soil	05/11/04 16:09	05/12/04 16:55
S-1ft	B4E0326-03	Soil	05/12/04 14:04	05/12/04 16:55

North Creek Analytical - Bothell

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Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

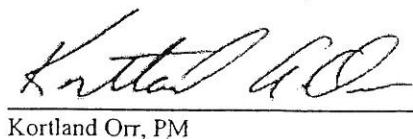
**Reported:**  
05/14/04 10:03

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NW-1ft (B4E0326-01) Soil   Sampled: 05/11/04 16:09   Received: 05/12/04 16:55</b>									
Benzene	ND	0.00150	mg/kg dry	1	4E13022	05/13/04	05/13/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	
Toluene	ND	0.00150	"	"	"	"	"	"	
Trichloroethene	ND	0.00250	"	"	"	"	"	"	
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	
Total Xylenes	ND	0.0100	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>	137 %	60-140			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	109 %	60-140			"	"	"	"	
<i>Surrogate: 4-BFB</i>	117 %	60-140			"	"	"	"	
<b>S-1ft (B4E0326-03) Soil   Sampled: 05/12/04 14:04   Received: 05/12/04 16:55</b>									
Benzene	ND	0.00150	mg/kg dry	1	4E13022	05/13/04	05/13/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	
Toluene	ND	0.00150	"	"	"	"	"	"	
Trichloroethene	ND	0.00250	"	"	"	"	"	"	
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	
Total Xylenes	ND	0.0100	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>	140 %	60-140			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	114 %	60-140			"	"	"	"	
<i>Surrogate: 4-BFB</i>	119 %	60-140			"	"	"	"	

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

**Reported:**  
05/14/04 10:03

**Physical Parameters by APHA/ASTM/EPA Methods**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**NW-1ft (B4E0326-01) Soil** Sampled: 05/11/04 16:09 Received: 05/12/04 16:55

Dry Weight 88.3 1.00 % 1 4E13032 05/13/04 05/14/04 BSOPSPL003R08

**S-1ft (B4E0326-03) Soil** Sampled: 05/12/04 14:04 Received: 05/12/04 16:55

Dry Weight 85.7 1.00 % 1 4E13032 05/13/04 05/14/04 BSOPSPL003R08

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Project: CJI  
 Project Number: [none]  
 Project Manager: Dan McCarthy

Reported:  
 05/14/04 10:03

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch 4E13022: Prepared 05/13/04 Using EPA 5035**

**Blank (4E13022-BLK1)**

Benzene	ND	0.00150	mg/kg							
1,2-Dichloroethane	ND	0.00125	"							
Ethylbenzene	ND	0.00400	"							
Tetrachloroethene	ND	0.00200	"							
Toluene	ND	0.00150	"							
Trichloroethene	ND	0.00250	"							
Vinyl chloride	ND	0.00250	"							
Total Xylenes	ND	0.0100	"							
<i>Surrogate: 1,2-DCA-d4</i>	0.101		"	0.0800		126	60-140			
<i>Surrogate: Toluene-d8</i>	0.0893		"	0.0800		112	60-140			
<i>Surrogate: 4-BFB</i>	0.0967		"	0.0800		121	60-140			

**LCS (4E13022-BS1)**

Benzene	0.0228	0.00150	mg/kg	0.0200		114	70-130			
Ethylbenzene	0.0202	0.00400	"	0.0200		101	70-130			
Tetrachloroethene	0.0213	0.00200	"	0.0200		106	70-130			
Toluene	0.0195	0.00150	"	0.0200		97.5	70-130			
Trichloroethene	0.0223	0.00250	"	0.0200		112	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	0.0922		"	0.0800		115	60-140			
<i>Surrogate: Toluene-d8</i>	0.0745		"	0.0800		93.1	60-140			
<i>Surrogate: 4-BFB</i>	0.0819		"	0.0800		102	60-140			

**LCS Dup (4E13022-BSD1)**

Benzene	0.0227	0.00150	mg/kg	0.0200		114	70-130	0.440	30	
Ethylbenzene	0.0202	0.00400	"	0.0200		101	70-130	0.00	30	
Tetrachloroethene	0.0212	0.00200	"	0.0200		106	70-130	0.471	30	
Toluene	0.0193	0.00150	"	0.0200		96.5	70-130	1.03	30	
Trichloroethene	0.0225	0.00250	"	0.0200		112	70-130	0.893	30	
<i>Surrogate: 1,2-DCA-d4</i>	0.107		"	0.0800		134	60-140			
<i>Surrogate: Toluene-d8</i>	0.0880		"	0.0800		110	60-140			
<i>Surrogate: 4-BFB</i>	0.0947		"	0.0800		118	60-140			

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83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

**Reported:**  
05/14/04 10:03

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD Limit	Notes
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Batch 4E13032: Prepared 05/13/04 Using Dry Weight

Blank (4E13032-BLK1)

Dry Weight	100	1.00	%
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Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
05/14/04 10:03

### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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<b>Bend</b>	20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588
<b>Anchorage</b>	2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119 907.563.9200 fax 907.563.9210

02 June 2004

Dan McCarthy  
Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

RE: CII

Enclosed are the results of analyses for samples received by the laboratory on 05/14/04 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kortland Orr  
PM



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:53

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NW-SLAB 2	B4E0414-02	Soil	05/13/04 12:32	05/14/04 17:15

North Creek Analytical - Bothell

Kortland Orr, PM

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Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:53

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NW-SLAB 2 (B4E0414-02) Soil Sampled: 05/13/04 12:32 Received: 05/14/04 17:15</b>									
Benzene	ND	0.00150	mg/kg dry	1	4E26023	05/25/04	05/26/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	
Toluene	ND	0.00150	"	"	"	"	"	"	
Trichloroethene	ND	0.00250	"	"	"	"	"	"	
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	
Total Xylenes	ND	0.0100	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	115 %	60-140			"	"	"	"	
Surrogate: Toluene-d8	106 %	60-140			"	"	"	"	
Surrogate: 4-BFB	98.9 %	60-140			"	"	"	"	

North Creek Analytical - Bothell

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06/02/04 18:53

### Physical Parameters by APHA/ASTM/EPA Methods

#### North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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NW-SLAB 2 (B4E0414-02) Soil Sampled: 05/13/04 12:32 Received: 05/14/04 17:15

Dry Weight 98.5 1.00 % 1 4E26054 05/26/04 05/27/04 BSOPSP003R08

North Creek Analytical - Bothell

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Project: CII  
 Project Number: Not Provided  
 Project Manager: Dan McCarthy

**Reported:**  
 06/02/04 18:53

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**Blank (4E26023-BLK1)**

Acetone	ND	0.0300	mg/kg							
Benzene	ND	0.00150	"							
Bromobenzene	ND	0.00500	"							
Bromoform	ND	0.00500	"							
Bromomethane	ND	0.0100	"							
2-Butanone	ND	0.0150	"							
n-Butylbenzene	ND	0.00500	"							
sec-Butylbenzene	ND	0.00500	"							
tert-Butylbenzene	ND	0.00500	"							
Carbon disulfide	ND	0.00300	"							
Carbon tetrachloride	ND	0.00500	"							
Chlorobenzene	ND	0.00200	"							
Chloroethane	ND	0.00500	"							
Chloroform	ND	0.00250	"							
Chloromethane	ND	0.0100	"							
2-Chlorotoluene	ND	0.00500	"							
4-Chlorotoluene	ND	0.00500	"							
Dibromochloromethane	ND	0.00500	"							
1,2-Dibromo-3-chloropropane	ND	0.0100	"							
1,2-Dibromoethane (EDB)	ND	0.00500	"							
Dibromomethane	ND	0.00500	"							
1,2-Dichlorobenzene	ND	0.00500	"							
1,3-Dichlorobenzene	ND	0.00500	"							
1,4-Dichlorobenzene	ND	0.00500	"							
Dichlorodifluoromethane	ND	0.00500	"							
1,1-Dichloroethane	ND	0.00200	"							
1,2-Dichloroethane	ND	0.00125	"							
1,1-Dichloroethene	ND	0.00300	"							
cis-1,2-Dichloroethene	ND	0.00300	"							
trans-1,2-Dichloroethene	ND	0.00250	"							
1,2-Dichloropropane	ND	0.00500	"							
1,3-Dichloropropane	ND	0.00500	"							

North Creek Analytical - Bothell

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Project: CII  
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Project Manager: Dan McCarthy

Reported:  
06/02/04 18:53

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD	RPD Limit	Notes
<b>Batch 4E26023: Prepared 05/25/04 Using EPA 5035M</b>										
<b>Blank (4E26023-BLK1)</b>										
2,2-Dichloropropane	ND	0.0100	mg/kg							
1,1-Dichloropropene	ND	0.00500	"							
cis-1,3-Dichloropropene	ND	0.00500	"							
trans-1,3-Dichloropropene	ND	0.00125	"							
Ethylbenzene	ND	0.00400	"							
Hexachlorobutadiene	ND	0.00500	"							
Methyl tert-butyl ether	ND	0.00100	"							
2-Hexanone	ND	0.0200	"							
Isopropylbenzene	ND	0.00500	"							
p-Isopropyltoluene	ND	0.00500	"							
4-Methyl-2-pentanone	ND	0.0200	"							
Methylene chloride	ND	0.00350	"							
Naphthalene	ND	0.00500	"							
n-Propylbenzene	ND	0.00500	"							
Styrene	ND	0.00100	"							
1,2,3-Trichlorobenzene	ND	0.00500	"							
1,2,4-Trichlorobenzene	ND	0.00500	"							
1,1,1,2-Tetrachloroethane	ND	0.00500	"							
1,1,2,2-Tetrachloroethane	ND	0.00500	"							
Tetrachloroethene	ND	0.00200	"							
Toluene	ND	0.00150	"							
1,1,1-Trichloroethane	ND	0.00250	"							
1,1,2-Trichloroethane	ND	0.00125	"							
Trichloroethene	ND	0.00250	"							
Trichlorofluoromethane	ND	0.00500	"							
1,2,3-Trichloropropane	ND	0.00500	"							
1,2,4-Trimethylbenzene	ND	0.00500	"							
1,3,5-Trimethylbenzene	ND	0.00500	"							
Vinyl chloride	ND	0.00250	"							
Total Xylenes	ND	0.0100	"							
<i>Surrogate: 1,2-DCA-d4</i>	0.0876		"		0.0800		110	60-140		
<i>Surrogate: Toluene-d8</i>	0.0866		"		0.0800		108	60-140		
<i>Surrogate: 4-BFB</i>	0.0856		"		0.0800		107	60-140		

North Creek Analytical - Bothell

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**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4E26023: Prepared 05/25/04 Using EPA 5035M</b>										
<b>LCS (4E26023-BS1)</b>										
Acetone	0.192	0.0300	mg/kg	0.200	96.0	70-130				
Benzene	0.0208	0.00150	"	0.0200	104	70-130				
2-Butanone	0.194	0.0150	"	0.200	97.0	70-130				
Carbon disulfide	0.0197	0.00300	"	0.0200	98.5	70-130				
Chlorobenzene	0.0191	0.00200	"	0.0200	95.5	70-130				
1,1-Dichloroethane	0.0194	0.00200	"	0.0200	97.0	70-130				
1,1-Dichloroethene	0.0214	0.00300	"	0.0200	107	70-130				
cis-1,2-Dichloroethene	0.0216	0.00300	"	0.0200	108	70-130				
Ethylbenzene	0.0200	0.00400	"	0.0200	100	70-130				
4-Methyl-2-pentanone	0.221	0.0200	"	0.200	110	70-130				
Tetrachloroethene	0.0182	0.00200	"	0.0200	91.0	70-130				
Toluene	0.0192	0.00150	"	0.0200	96.0	70-130				
1,1,1-Trichloroethane	0.0203	0.00250	"	0.0200	102	70-130				
Trichloroethene	0.0208	0.00250	"	0.0200	104	70-130				
<i>Surrogate: 1,2-DCA-d4</i>	0.0867		"	0.0800	108	60-140				
<i>Surrogate: Toluene-d8</i>	0.0841		"	0.0800	105	60-140				
<i>Surrogate: 4-BFB</i>	0.0808		"	0.0800	101	60-140				
<b>LCS Dup (4E26023-BSD1)</b>										
Acetone	0.234	0.0300	mg/kg	0.200	117	70-130	19.7	30		
Benzene	0.0220	0.00150	"	0.0200	110	70-130	5.61	30		
2-Butanone	0.225	0.0150	"	0.200	112	70-130	14.8	30		
Carbon disulfide	0.0208	0.00300	"	0.0200	104	70-130	5.43	30		
Chlorobenzene	0.0203	0.00200	"	0.0200	102	70-130	6.09	30		
1,1-Dichloroethane	0.0222	0.00200	"	0.0200	111	70-130	13.5	30		
1,1-Dichloroethene	0.0218	0.00300	"	0.0200	109	70-130	1.85	30		
cis-1,2-Dichloroethene	0.0227	0.00300	"	0.0200	114	70-130	4.97	30		
Ethylbenzene	0.0210	0.00400	"	0.0200	105	70-130	4.88	30		
4-Methyl-2-pentanone	0.254	0.0200	"	0.200	127	70-130	13.9	30		
Tetrachloroethene	0.0196	0.00200	"	0.0200	98.0	70-130	7.41	30		
Toluene	0.0204	0.00150	"	0.0200	102	70-130	6.06	30		
1,1,1-Trichloroethane	0.0213	0.00250	"	0.0200	106	70-130	4.81	30		
Trichloroethene	0.0216	0.00250	"	0.0200	108	70-130	3.77	30		
<i>Surrogate: 1,2-DCA-d4</i>	0.0867		"	0.0800	108	60-140				
<i>Surrogate: Toluene-d8</i>	0.0828		"	0.0800	104	60-140				

North Creek Analytical - Bothell

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83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:53

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	-----------	------------	-----------	-------

**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**LCS Dup (4E26023-BSD1)**

<i>Surrogate: 4-BFB</i>	0.0816	mg/kg	0.0800	102	60-140
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**Matrix Spike (4E26023-MS1)** *Source: B4E0414-02*

Acetone	0.207	0.0300	mg/kg dry	0.203	ND	102	60-140
Benzene	0.0240	0.00150	"	0.0203	ND	118	60-140
2-Butanone	0.207	0.0150	"	0.203	ND	102	60-140
Carbon disulfide	0.0223	0.00300	"	0.0203	ND	110	60-140
Chlorobenzene	0.0227	0.00200	"	0.0203	ND	112	60-140
1,1-Dichloroethane	0.0247	0.00200	"	0.0203	ND	122	60-140
1,1-Dichloroethene	0.0245	0.00300	"	0.0203	ND	121	60-140
cis-1,2-Dichloroethene	0.0243	0.00300	"	0.0203	ND	120	60-140
Ethylbenzene	0.0233	0.00400	"	0.0203	ND	115	60-140
4-Methyl-2-pentanone	0.242	0.0200	"	0.203	ND	119	60-140
Tetrachloroethene	0.0217	0.00200	"	0.0203	ND	107	60-140
Toluene	0.0219	0.00150	"	0.0203	ND	108	60-140
1,1,1-Trichloroethane	0.0230	0.00250	"	0.0203	ND	113	60-140
Trichloroethene	0.0239	0.00250	"	0.0203	ND	118	60-140

<i>Surrogate: 1,2-DCA-d4</i>	0.0907	"	0.0812	112	60-140
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<i>Surrogate: Toluene-d8</i>	0.0881	"	0.0812	108	60-140
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<i>Surrogate: 4-BFB</i>	0.0879	"	0.0812	108	60-140
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**Matrix Spike Dup (4E26023-MSD1)** *Source: B4E0414-02*

Acetone	0.222	0.0300	mg/kg dry	0.203	ND	109	60-140	6.99	30
Benzene	0.0226	0.00150	"	0.0203	ND	111	60-140	6.01	30
2-Butanone	0.216	0.0150	"	0.203	ND	106	60-140	4.26	30
Carbon disulfide	0.0219	0.00300	"	0.0203	ND	108	60-140	1.81	30
Chlorobenzene	0.0208	0.00200	"	0.0203	ND	102	60-140	8.74	30
1,1-Dichloroethane	0.0228	0.00200	"	0.0203	ND	112	60-140	8.00	30
1,1-Dichloroethene	0.0243	0.00300	"	0.0203	ND	120	60-140	0.820	30
cis-1,2-Dichloroethene	0.0229	0.00300	"	0.0203	ND	113	60-140	5.93	30
Ethylbenzene	0.0219	0.00400	"	0.0203	ND	108	60-140	6.19	30
4-Methyl-2-pentanone	0.244	0.0200	"	0.203	ND	120	60-140	0.823	30
Tetrachloroethene	0.0209	0.00200	"	0.0203	ND	103	60-140	3.76	30
Toluene	0.0210	0.00150	"	0.0203	ND	103	60-140	4.20	30
1,1,1-Trichloroethane	0.0228	0.00250	"	0.0203	ND	112	60-140	0.873	30
Trichloroethene	0.0226	0.00250	"	0.0203	ND	111	60-140	5.59	30

North Creek Analytical - Bothell

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Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:53

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Notes
---------	------------------	-------	-------	-------------	---------------	-----------	--------	---------	-------------

**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**Matrix Spike Dup (4E26023-MSD1)**

**Source: B4E0414-02**

Surrogate: 1,2-DCA-d4	0.0928	mg/kg dry	0.0812	114	60-140
Surrogate: Toluene-d8	0.0929	"	0.0812	114	60-140
Surrogate: 4-BFB	0.0915	"	0.0812	113	60-140

North Creek Analytical - Bothell

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**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:53

### Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

#### North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch 4E26054: Prepared 05/26/04 Using Dry Weight**

**Blank (4E26054-BLK1)**

Dry Weight	99.9	1.00	%
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North Creek Analytical - Bothell

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Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

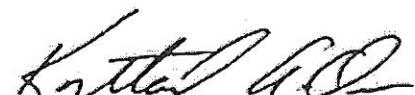
**Reported:**  
06/02/04 18:53

#### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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02 June 2004

Dan McCarthy  
Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

RE: CII

Enclosed are the results of analyses for samples received by the laboratory on 05/19/04 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Kortland Orr".

Kortland Orr  
PM



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83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:29

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C SLAB-1	B4E0523-02	Soil	05/18/04 13:59	05/19/04 16:45
SE SLAB-1	B4E0523-03	Soil	05/17/04 13:08	05/19/04 16:45
NE SLAB	B4E0523-12	Soil	05/19/04 14:46	05/19/04 16:45

North Creek Analytical - Bothell

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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:29

### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)

#### North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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#### C SLAB-1 (B4E0523-02) Soil Sampled: 05/18/04 13:59 Received: 05/19/04 16:45

Benzene	ND	0.00150	mg/kg dry	1	4E26023	05/25/04	05/26/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"

Surrogate: 1,2-DCA-d4

127 % 60-140

" " "

Surrogate: Toluene-d8

103 % 60-140

" " "

Surrogate: 4-BFB

104 % 60-140

" " "

#### SE SLAB-1 (B4E0523-03) Soil Sampled: 05/17/04 13:08 Received: 05/19/04 16:45

Benzene	ND	0.00150	mg/kg dry	1	4E26023	05/25/04	05/26/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"

Surrogate: 1,2-DCA-d4

124 % 60-140

" " "

Surrogate: Toluene-d8

117 % 60-140

" " "

Surrogate: 4-BFB

109 % 60-140

" " "

North Creek Analytical - Bothell

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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

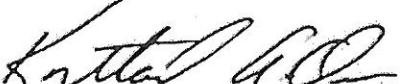
Reported:  
06/02/04 18:29

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NE SLAB (B4E0523-12) Soil Sampled: 05/19/04 14:46 Received: 05/19/04 16:45</b>									
Benzene	ND	0.00150	mg/kg dry	1	4E26023	05/25/04	05/26/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	
Toluene	ND	0.00150	"	"	"	"	"	"	
Trichloroethene	ND	0.00250	"	"	"	"	"	"	
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	
Total Xylenes	ND	0.0100	"	"	"	"	"	"	
<i>Surrogate: 1,2-DCA-d4</i>	122 %	60-140			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	111 %	60-140			"	"	"	"	
<i>Surrogate: 4-BFB</i>	104 %	60-140			"	"	"	"	

North Creek Analytical - Bothell

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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:29

**Physical Parameters by APHA/ASTM/EPA Methods**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C SLAB-1 (B4E0523-02) Soil Sampled: 05/18/04 13:59 Received: 05/19/04 16:45</b>									
Dry Weight	97.5	1.00	%	1	4E28012	05/28/04	05/29/04	BSOPSPL003R08	
<b>SE SLAB-1 (B4E0523-03) Soil Sampled: 05/17/04 13:08 Received: 05/19/04 16:45</b>									
Dry Weight	97.1	1.00	%	1	4E28012	05/28/04	05/29/04	BSOPSPL003R08	
<b>NE SLAB (B4E0523-12) Soil Sampled: 05/19/04 14:46 Received: 05/19/04 16:45</b>									
Dry Weight	97.5	1.00	%	1	4E28012	05/28/04	05/29/04	BSOPSPL003R08	

North Creek Analytical - Bothell

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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:29

### Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit	Notes
---------	------------------	-------	-------	-------------	---------------	-----------	--------	---------	-------	-------

Batch 4E26023: Prepared 05/25/04 Using EPA 5035M

#### Blank (4E26023-BLK1)

Acetone	ND	0.0300	mg/kg							
Benzene	ND	0.00150	"							
Bromobenzene	ND	0.00500	"							
Bromochloromethane	ND	0.00500	"							
Bromodichloromethane	ND	0.00500	"							
Bromoform	ND	0.00500	"							
Bromomethane	ND	0.0100	"							
2-Butanone	ND	0.0150	"							
n-Butylbenzene	ND	0.00500	"							
sec-Butylbenzene	ND	0.00500	"							
tert-Butylbenzene	ND	0.00500	"							
Carbon disulfide	ND	0.00300	"							
Carbon tetrachloride	ND	0.00500	"							
Chlorobenzene	ND	0.00200	"							
Chloroethane	ND	0.00500	"							
Chloroform	ND	0.00250	"							
Chloromethane	ND	0.0100	"							
2-Chlorotoluene	ND	0.00500	"							
4-Chlorotoluene	ND	0.00500	"							
Dibromochloromethane	ND	0.00500	"							
1,2-Dibromo-3-chloropropane	ND	0.0100	"							
1,2-Dibromoethane (EDB)	ND	0.00500	"							
Dibromomethane	ND	0.00500	"							
1,2-Dichlorobenzene	ND	0.00500	"							
1,3-Dichlorobenzene	ND	0.00500	"							
1,4-Dichlorobenzene	ND	0.00500	"							
Dichlorodifluoromethane	ND	0.00500	"							
1,1-Dichloroethane	ND	0.00200	"							
1,2-Dichloroethane	ND	0.00125	"							
1,1-Dichloroethene	ND	0.00300	"							
cis-1,2-Dichloroethene	ND	0.00300	"							
trans-1,2-Dichloroethene	ND	0.00250	"							
1,2-Dichloropropane	ND	0.00500	"							
1,3-Dichloropropane	ND	0.00500	"							

North Creek Analytical - Bothell

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 Seattle, WA 98104

Project: CII  
 Project Number: Not Provided  
 Project Manager: Dan McCarthy

Reported:  
 06/02/04 18:29

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------------------	---------------	-------

**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**Blank (4E26023-BLK1)**

2,2-Dichloropropane	ND	0.0100	mg/kg					
1,1-Dichloropropene	ND	0.00500	"					
cis-1,3-Dichloropropene	ND	0.00500	"					
trans-1,3-Dichloropropene	ND	0.00125	"					
Ethylbenzene	ND	0.00400	"					
Hexachlorobutadiene	ND	0.00500	"					
Methyl tert-butyl ether	ND	0.00100	"					
2-Hexanone	ND	0.0200	"					
Isopropylbenzene	ND	0.00500	"					
p-Isopropyltoluene	ND	0.00500	"					
4-Methyl-2-pentanone	ND	0.0200	"					
Methylene chloride	ND	0.00350	"					
Naphthalene	ND	0.00500	"					
n-Propylbenzene	ND	0.00500	"					
Styrene	ND	0.00100	"					
1,2,3-Trichlorobenzene	ND	0.00500	"					
1,2,4-Trichlorobenzene	ND	0.00500	"					
1,1,1,2-Tetrachloroethane	ND	0.00500	"					
1,1,2,2-Tetrachloroethane	ND	0.00500	"					
Tetrachloroethene	ND	0.00200	"					
Toluene	ND	0.00150	"					
1,1,1-Trichloroethane	ND	0.00250	"					
1,1,2-Trichloroethane	ND	0.00125	"					
Trichloroethene	ND	0.00250	"					
Trichlorofluoromethane	ND	0.00500	"					
1,2,3-Trichloropropane	ND	0.00500	"					
1,2,4-Trimethylbenzene	ND	0.00500	"					
1,3,5-Trimethylbenzene	ND	0.00500	"					
Vinyl chloride	ND	0.00250	"					
Total Xylenes	ND	0.0100	"					
<i>Surrogate: 1,2-DCA-d4</i>	0.0876	"	0.0800		110	60-140		
<i>Surrogate: Toluene-d8</i>	0.0866	"	0.0800		108	60-140		
<i>Surrogate: 4-BFB</i>	0.0856	"	0.0800		107	60-140		

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:29

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD	RPD Limit	Notes
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**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**LCS (4E26023-BS1)**

Acetone	0.192	0.0300	mg/kg	0.200	96.0	70-130
Benzene	0.0208	0.00150	"	0.0200	104	70-130
2-Butanone	0.194	0.0150	"	0.200	97.0	70-130
Carbon disulfide	0.0197	0.00300	"	0.0200	98.5	70-130
Chlorobenzene	0.0191	0.00200	"	0.0200	95.5	70-130
1,1-Dichloroethane	0.0194	0.00200	"	0.0200	97.0	70-130
1,1-Dichloroethene	0.0214	0.00300	"	0.0200	107	70-130
cis-1,2-Dichloroethene	0.0216	0.00300	"	0.0200	108	70-130
Ethylbenzene	0.0200	0.00400	"	0.0200	100	70-130
4-Methyl-2-pentanone	0.221	0.0200	"	0.200	110	70-130
Tetrachloroethene	0.0182	0.00200	"	0.0200	91.0	70-130
Toluene	0.0192	0.00150	"	0.0200	96.0	70-130
1,1,1-Trichloroethane	0.0203	0.00250	"	0.0200	102	70-130
Trichloroethene	0.0208	0.00250	"	0.0200	104	70-130
<i>Surrogate: 1,2-DCA-d4</i>	0.0867		"	0.0800	108	60-140
<i>Surrogate: Toluene-d8</i>	0.0841		"	0.0800	105	60-140
<i>Surrogate: 4-BFB</i>	0.0808		"	0.0800	101	60-140

**LCS Dup (4E26023-BSD1)**

Acetone	0.234	0.0300	mg/kg	0.200	117	70-130	19.7	30
Benzene	0.0220	0.00150	"	0.0200	110	70-130	5.61	30
2-Butanone	0.225	0.0150	"	0.200	112	70-130	14.8	30
Carbon disulfide	0.0208	0.00300	"	0.0200	104	70-130	5.43	30
Chlorobenzene	0.0203	0.00200	"	0.0200	102	70-130	6.09	30
1,1-Dichloroethane	0.0222	0.00200	"	0.0200	111	70-130	13.5	30
1,1-Dichloroethene	0.0218	0.00300	"	0.0200	109	70-130	1.85	30
cis-1,2-Dichloroethene	0.0227	0.00300	"	0.0200	114	70-130	4.97	30
Ethylbenzene	0.0210	0.00400	"	0.0200	105	70-130	4.88	30
4-Methyl-2-pentanone	0.254	0.0200	"	0.200	127	70-130	13.9	30
Tetrachloroethene	0.0196	0.00200	"	0.0200	98.0	70-130	7.41	30
Toluene	0.0204	0.00150	"	0.0200	102	70-130	6.06	30
1,1,1-Trichloroethane	0.0213	0.00250	"	0.0200	106	70-130	4.81	30
Trichloroethene	0.0216	0.00250	"	0.0200	108	70-130	3.77	30
<i>Surrogate: 1,2-DCA-d4</i>	0.0867		"	0.0800	108	60-140		
<i>Surrogate: Toluene-d8</i>	0.0828		"	0.0800	104	60-140		

North Creek Analytical - Bothell

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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:29

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**LCS Dup (4E26023-BSD1)**

<i>Surrogate: 4-BFB</i>	0.0816	mg/kg	0.0800	102	60-140
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**Matrix Spike (4E26023-MS1)**

**Source: B4E0414-02**

Acetone	0.207	0.0300	mg/kg dry	0.203	ND	102	60-140
Benzene	0.0240	0.00150	"	0.0203	ND	118	60-140
2-Butanone	0.207	0.0150	"	0.203	ND	102	60-140
Carbon disulfide	0.0223	0.00300	"	0.0203	ND	110	60-140
Chlorobenzene	0.0227	0.00200	"	0.0203	ND	112	60-140
1,1-Dichloroethane	0.0247	0.00200	"	0.0203	ND	122	60-140
1,1-Dichloroethene	0.0245	0.00300	"	0.0203	ND	121	60-140
cis-1,2-Dichloroethene	0.0243	0.00300	"	0.0203	ND	120	60-140
Ethylbenzene	0.0233	0.00400	"	0.0203	ND	115	60-140
4-Methyl-2-pentanone	0.242	0.0200	"	0.203	ND	119	60-140
Tetrachloroethene	0.0217	0.00200	"	0.0203	ND	107	60-140
Toluene	0.0219	0.00150	"	0.0203	ND	108	60-140
1,1,1-Trichloroethane	0.0230	0.00250	"	0.0203	ND	113	60-140
Trichloroethene	0.0239	0.00250	"	0.0203	ND	118	60-140

*Surrogate: 1,2-DCA-d4*

0.0907	"	0.0812	112	60-140
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*Surrogate: Toluene-d8*

0.0881	"	0.0812	108	60-140
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*Surrogate: 4-BFB*

0.0879	"	0.0812	108	60-140
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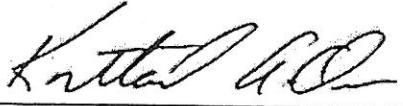
**Matrix Spike Dup (4E26023-MSD1)**

**Source: B4E0414-02**

Acetone	0.222	0.0300	mg/kg dry	0.203	ND	109	60-140	6.99	30
Benzene	0.0226	0.00150	"	0.0203	ND	111	60-140	6.01	30
2-Butanone	0.216	0.0150	"	0.203	ND	106	60-140	4.26	30
Carbon disulfide	0.0219	0.00300	"	0.0203	ND	108	60-140	1.81	30
Chlorobenzene	0.0208	0.00200	"	0.0203	ND	102	60-140	8.74	30
1,1-Dichloroethane	0.0228	0.00200	"	0.0203	ND	112	60-140	8.00	30
1,1-Dichloroethene	0.0243	0.00300	"	0.0203	ND	120	60-140	0.820	30
cis-1,2-Dichloroethene	0.0229	0.00300	"	0.0203	ND	113	60-140	5.93	30
Ethylbenzene	0.0219	0.00400	"	0.0203	ND	108	60-140	6.19	30
4-Methyl-2-pentanone	0.244	0.0200	"	0.203	ND	120	60-140	0.823	30
Tetrachloroethene	0.0209	0.00200	"	0.0203	ND	103	60-140	3.76	30
Toluene	0.0210	0.00150	"	0.0203	ND	103	60-140	4.20	30
1,1,1-Trichloroethane	0.0228	0.00250	"	0.0203	ND	112	60-140	0.873	30
Trichloroethene	0.0226	0.00250	"	0.0203	ND	111	60-140	5.59	30

North Creek Analytical - Bothell

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Kortland Orr, PM



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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

Reported:  
06/02/04 18:29

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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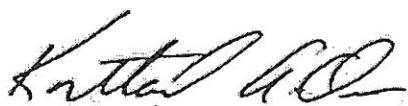
**Batch 4E26023: Prepared 05/25/04 Using EPA 5035M**

**Matrix Spike Dup (4E26023-MSD1)** **Source: B4E0414-02**

Surrogate: 1,2-DCA-d4	0.0928	mg/kg dry	0.0812		114	60-140
Surrogate: Toluene-d8	0.0929	"	0.0812		114	60-140
Surrogate: 4-BFB	0.0915	"	0.0812		113	60-140

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:29

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD Limit	Notes
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**Batch 4E28012: Prepared 05/28/04 Using Dry Weight**

**Blank (4E28012-BLK1)**

Dry Weight	99.8	1.00	%
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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
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Project: CII  
Project Number: Not Provided  
Project Manager: Dan McCarthy

**Reported:**  
06/02/04 18:29

### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

Kortland Orr, PM

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14 June 2004

Dan McCarthy  
Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

RE: CII

Enclosed are the results of analyses for samples received by the laboratory on 06/11/04 13:34. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kortland Orr  
PM



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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N Stockpile N	B4F0323-01	Soil	06/11/04 10:02	06/11/04 13:34
N Stockpile SW	B4F0323-02	Soil	06/11/04 10:05	06/11/04 13:34
N Stockpile SE	B4F0323-03	Soil	06/11/04 10:08	06/11/04 13:34
S Stockpile SW	B4F0323-04	Soil	06/11/04 10:22	06/11/04 13:34
S Stockpile E	B4F0323-05	Soil	06/11/04 10:24	06/11/04 13:34
S Stockpile NW	B4F0323-06	Soil	06/11/04 10:27	06/11/04 13:34

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
 83 South King Street, Suite 614  
 Seattle, WA 98104

Project: CII  
 Project Number: [none]  
 Project Manager: Dan McCarthy

Reported:  
 06/14/04 09:14

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**

**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>N Stockpile N (B4F0323-01) Soil    Sampled: 06/11/04 10:02    Received: 06/11/04 13:34</b>									
Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
<i>Surrogate: 1,2-DCA-d4</i>	135 %	60-140			"	"	"	"	"
<i>Surrogate: Toluene-d8</i>	117 %	60-140			"	"	"	"	"
<i>Surrogate: 4-BFB</i>	113 %	60-140			"	"	"	"	"
<b>N Stockpile SW (B4F0323-02) Soil    Sampled: 06/11/04 10:05    Received: 06/11/04 13:34</b>									
Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
<i>Surrogate: 1,2-DCA-d4</i>	134 %	60-140			"	"	"	"	"
<i>Surrogate: Toluene-d8</i>	115 %	60-140			"	"	"	"	"
<i>Surrogate: 4-BFB</i>	112 %	60-140			"	"	"	"	"

North Creek Analytical - Bothell

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North Creek Analytical, Inc.  
 Environmental Laboratory Network



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Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>N Stockpile SE (B4F0323-03) Soil Sampled: 06/11/04 10:08 Received: 06/11/04 13:34</b>									
Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
Surrogate: 1,2-DCA-d4	127 %	60-140			"	"	"	"	"
Surrogate: Toluene-d8	111 %	60-140			"	"	"	"	"
Surrogate: 4-BFB	106 %	60-140			"	"	"	"	"
<b>S Stockpile SW (B4F0323-04) Soil Sampled: 06/11/04 10:22 Received: 06/11/04 13:34</b>									
Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
Surrogate: 1,2-DCA-d4	130 %	60-140			"	"	"	"	"
Surrogate: Toluene-d8	109 %	60-140			"	"	"	"	"
Surrogate: 4-BFB	104 %	60-140			"	"	"	"	"

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
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 Seattle, WA 98104

Project: CII  
 Project Number: [none]  
 Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**S Stockpile E (B4F0323-05) Soil Sampled: 06/11/04 10:24 Received: 06/11/04 13:34**

Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
Surrogate: 1,2-DCA-d4	135 %	60-140			"	"	"	"	"
Surrogate: Toluene-d8	120 %	60-140			"	"	"	"	"
Surrogate: 4-BFB	116 %	60-140			"	"	"	"	"

**S Stockpile NW (B4F0323-06) Soil Sampled: 06/11/04 10:27 Received: 06/11/04 13:34**

Benzene	ND	0.00150	mg/kg dry	1	4F11037	06/11/04	06/11/04	EPA 8260B	
1,2-Dichloroethane	ND	0.00125	"	"	"	"	"	"	"
Ethylbenzene	ND	0.00400	"	"	"	"	"	"	"
Tetrachloroethene	ND	0.00200	"	"	"	"	"	"	"
Toluene	ND	0.00150	"	"	"	"	"	"	"
Trichloroethene	ND	0.00250	"	"	"	"	"	"	"
Vinyl chloride	ND	0.00250	"	"	"	"	"	"	"
Total Xylenes	ND	0.0100	"	"	"	"	"	"	"
Surrogate: 1,2-DCA-d4	132 %	60-140			"	"	"	"	"
Surrogate: Toluene-d8	117 %	60-140			"	"	"	"	"
Surrogate: 4-BFB	115 %	60-140			"	"	"	"	"

North Creek Analytical - Bothell

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907.563.0200 fax 907.563.0210

Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Physical Parameters by APHA/ASTM/EPA Methods**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
<b>N Stockpile N (B4F0323-01) Soil Sampled: 06/11/04 10:02 Received: 06/11/04 13:34</b>									
Dry Weight	92.1	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	
<b>N Stockpile SW (B4F0323-02) Soil Sampled: 06/11/04 10:05 Received: 06/11/04 13:34</b>									
Dry Weight	93.3	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	
<b>N Stockpile SE (B4F0323-03) Soil Sampled: 06/11/04 10:08 Received: 06/11/04 13:34</b>									
Dry Weight	93.1	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	
<b>S Stockpile SW (B4F0323-04) Soil Sampled: 06/11/04 10:22 Received: 06/11/04 13:34</b>									
Dry Weight	91.3	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	
<b>S Stockpile E (B4F0323-05) Soil Sampled: 06/11/04 10:24 Received: 06/11/04 13:34</b>									
Dry Weight	88.6	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	
<b>S Stockpile NW (B4F0323-06) Soil Sampled: 06/11/04 10:27 Received: 06/11/04 13:34</b>									
Dry Weight	92.7	1.00	%	1	4F11056	06/11/04	06/14/04	BSOPSPL003R08	

North Creek Analytical - Bothell

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Environmental Laboratory Network

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Floyd Snider McCarthy, Inc.  
 83 South King Street, Suite 614  
 Seattle, WA 98104

Project: CII  
 Project Number: [none]  
 Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

## Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4F11037: Prepared 06/11/04 Using EPA 5035M**

**Blank (4F11037-BLK1)**

Acetone	ND	0.0300	mg/kg							
Benzene	ND	0.00150	"							
Bromobenzene	ND	0.00500	"							
Bromochloromethane	ND	0.00500	"							
Bromodichloromethane	ND	0.00500	"							
Bromoform	ND	0.00500	"							
Bromomethane	ND	0.0100	"							
2-Butanone	ND	0.0150	"							
n-Butylbenzene	ND	0.00500	"							
sec-Butylbenzene	ND	0.00500	"							
tert-Butylbenzene	ND	0.00500	"							
Carbon disulfide	ND	0.00300	"							
Carbon tetrachloride	ND	0.00500	"							
Chlorobenzene	ND	0.00200	"							
Chloroethane	ND	0.00500	"							
Chloroform	ND	0.00250	"							
Chloromethane	ND	0.0100	"							
2-Chlorotoluene	ND	0.00500	"							
4-Chlorotoluene	ND	0.00500	"							
Dibromochloromethane	ND	0.00500	"							
1,2-Dibromo-3-chloropropane	ND	0.0100	"							
1,2-Dibromoethane (EDB)	ND	0.00500	"							
Dibromomethane	ND	0.00500	"							
1,2-Dichlorobenzene	ND	0.00500	"							
1,3-Dichlorobenzene	ND	0.00500	"							
1,4-Dichlorobenzene	ND	0.00500	"							
Dichlorodifluoromethane	ND	0.00500	"							
1,1-Dichloroethane	ND	0.00200	"							
1,2-Dichloroethane	ND	0.00125	"							
1,1-Dichloroethene	ND	0.00300	"							
cis-1,2-Dichloroethene	ND	0.00300	"							
trans-1,2-Dichloroethene	ND	0.00250	"							
1,2-Dichloropropane	ND	0.00500	"							

North Creek Analytical - Bothell

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North Creek Analytical, Inc.  
Environmental Laboratory Network



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 907.563.9200 fax 907.563.9210

Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Notes
<b>Batch 4F11037: Prepared 06/11/04 Using EPA 5035M</b>									
<b>Blank (4F11037-BLK1)</b>									
1,3-Dichloropropane	ND	0.00500	mg/kg						
2,2-Dichloropropane	ND	0.0100	"						
1,1-Dichloropropene	ND	0.00500	"						
cis-1,3-Dichloropropene	ND	0.00500	"						
trans-1,3-Dichloropropene	ND	0.00125	"						
Ethylbenzene	ND	0.00400	"						
Hexachlorobutadiene	ND	0.00500	"						
Methyl tert-butyl ether	ND	0.00100	"						
2-Hexanone	ND	0.0200	"						
Isopropylbenzene	ND	0.00500	"						
p-Isopropyltoluene	ND	0.00500	"						
4-Methyl-2-pentanone	ND	0.0200	"						
Methylene chloride	ND	0.00350	"						
Naphthalene	ND	0.00500	"						
n-Propylbenzene	ND	0.00500	"						
Styrene	ND	0.00100	"						
1,2,3-Trichlorobenzene	ND	0.00500	"						
1,2,4-Trichlorobenzene	ND	0.00500	"						
1,1,1,2-Tetrachloroethane	ND	0.00500	"						
1,1,2,2-Tetrachloroethane	ND	0.00500	"						
Tetrachloroethene	ND	0.00200	"						
Toluene	ND	0.00150	"						
1,1,1-Trichloroethane	ND	0.00250	"						
1,1,2-Trichloroethane	ND	0.00125	"						
Trichloroethene	ND	0.00250	"						
Trichlorofluoromethane	ND	0.00500	"						
1,2,3-Trichloropropane	ND	0.00500	"						
1,2,4-Trimethylbenzene	ND	0.00500	"						
1,3,5-Trimethylbenzene	ND	0.00500	"						
Vinyl chloride	ND	0.00250	"						
Total Xylenes	ND	0.0100	"						
<i>Surrogate: 1,2-DCA-d4</i>	0.0887		"	0.0800		111	60-140		
<i>Surrogate: Toluene-d8</i>	0.0992		"	0.0800		124	60-140		
<i>Surrogate: 4-BFB</i>	0.0934		"	0.0800		117	60-140		

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

## Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4F11037: Prepared 06/11/04 Using EPA 5035M

### LCS (4F11037-BS1)

Acetone	0.228	0.0300	mg/kg	0.200	114	70-130
Benzene	0.0231	0.00150	"	0.0200	116	70-130
2-Butanone	0.231	0.0150	"	0.200	116	70-130
Carbon disulfide	0.0246	0.00300	"	0.0200	123	70-130
Chlorobenzene	0.0208	0.00200	"	0.0200	104	70-130
1,1-Dichloroethane	0.0257	0.00200	"	0.0200	128	70-130
1,1-Dichloroethene	0.0255	0.00300	"	0.0200	128	70-130
cis-1,2-Dichloroethene	0.0245	0.00300	"	0.0200	122	70-130
Ethylbenzene	0.0219	0.00400	"	0.0200	110	70-130
4-Methyl-2-pentanone	0.227	0.0200	"	0.200	114	70-130
Tetrachloroethene	0.0207	0.00200	"	0.0200	104	70-130
Toluene	0.0211	0.00150	"	0.0200	106	70-130
1,1,1-Trichloroethane	0.0251	0.00250	"	0.0200	126	70-130
Trichloroethene	0.0225	0.00250	"	0.0200	112	70-130
<i>Surrogate: 1,2-DCA-d4</i>	0.0948		"	0.0800	118	60-140
<i>Surrogate: Toluene-d8</i>	0.0860		"	0.0800	108	60-140
<i>Surrogate: 4-BFB</i>	0.0871		"	0.0800	109	60-140

### LCS Dup (4F11037-BSD1)

Acetone	0.214	0.0300	mg/kg	0.200	107	70-130	6.33	30
Benzene	0.0230	0.00150	"	0.0200	115	70-130	0.434	30
2-Butanone	0.219	0.0150	"	0.200	110	70-130	5.33	30
Carbon disulfide	0.0240	0.00300	"	0.0200	120	70-130	2.47	30
Chlorobenzene	0.0210	0.00200	"	0.0200	105	70-130	0.957	30
1,1-Dichloroethane	0.0252	0.00200	"	0.0200	126	70-130	1.96	30
1,1-Dichloroethene	0.0244	0.00300	"	0.0200	122	70-130	4.41	30
cis-1,2-Dichloroethene	0.0246	0.00300	"	0.0200	123	70-130	0.407	30
Ethylbenzene	0.0224	0.00400	"	0.0200	112	70-130	2.26	30
4-Methyl-2-pentanone	0.220	0.0200	"	0.200	110	70-130	3.13	30
Tetrachloroethene	0.0207	0.00200	"	0.0200	104	70-130	0.00	30
Toluene	0.0215	0.00150	"	0.0200	108	70-130	1.88	30
1,1,1-Trichloroethane	0.0247	0.00250	"	0.0200	124	70-130	1.61	30
Trichloroethene	0.0225	0.00250	"	0.0200	112	70-130	0.00	30
<i>Surrogate: 1,2-DCA-d4</i>	0.0857		"	0.0800	107	60-140		

North Creek Analytical - Bothell

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Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CI  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4F11037: Prepared 06/11/04 Using EPA 5035M</b>										
<b>LCS Dup (4F11037-BSD1)</b>										
Surrogate: Toluene-d8	0.0776		mg/kg		0.0800		97.0	60-140		
Surrogate: 4-BFB	0.0806		"		0.0800		101	60-140		

North Creek Analytical - Bothell

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907.563.9200 fax 907.563.9210

Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	Notes
---------	--------	-----------------	-------	-------------	---------------	-----------	-------------	---------	-------

**Batch 4F11056: Prepared 06/11/04 Using Dry Weight**

**Blank (4F11056-BLK1)**

Dry Weight	99.8	1.00	%
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North Creek Analytical - Bothell

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North Creek Analytical, Inc.  
Environmental Laboratory Network



Floyd Snider McCarthy, Inc.  
83 South King Street, Suite 614  
Seattle, WA 98104

Project: CII  
Project Number: [none]  
Project Manager: Dan McCarthy

Reported:  
06/14/04 09:14

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541.383.9310 fax 541.382.7588  
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1110  
907.563.9200 fax 907.563.9210

### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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**nca**  
North Creek Analytical, Inc.  
Environmental Laboratory Network  
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## CHAIN OF CUSTODY REPORT

## Work Order #:

CLIENT: FSM		INVOICE TO: <i>Science</i>		TURNAROUND REQUEST in Business Days*																
REPORT TO: Don McCarthy #614				Organic & Inorganic Analyses																
ADDRESS: 83 S. Kings St.				<input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1																
Science Hill WA 98104				STD. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1					Petroleum Hydrocarbon Analyses											
PHONE: 206-242.2678				STD. <input type="checkbox"/> OTHER					Please Specify _____											
PROJECT NAME: C-12				REQUESTED ANALYSES																
PROJECT NUMBER: C-12																				
SAMPLED BY: SB																				
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. NW - SLAB 1	6-13-04 / 1228	A	R	C	H	I	V	E									S	1		
2. NW - SLAB 2	6-13-04 / 1232	A	R	C	H	I	V	E									S	1		
3. NW - SLAB 3	6-13-04 / 1236	A	R	C	H	I	V	E									S	1		
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				
RELINQUISHED BY: PRINT NAME: Stephen Berntson	FIRM: FSA	DATE: 5/14/04	TIME: 15:15	RECEIVED BY: PRINT NAME: J. Lovins	FIRM: NCA	DATE: 5/14/04	TIME: 15:15													
RELINQUISHED BY: PRINT NAME:	FIRM:	DATE:	TIME:	RECEIVED BY: PRINT NAME:	FIRM:	DATE:	TIME:													
<i>Sample 2 was confiscated</i>	<i>5/14/04</i>	<i>7/1/04</i>		<i>7/1/04</i>																



North Creek Analytical, Inc.  
Environmental Laboratory Network  
www.nclabs.com

## CHAIN OF CUSTODY REPORT

### Work Order #:

CLIENT: FSN		INVOICE TO: <i>Scm</i>		TURNAROUND REQUEST in Business Days*											
REPORT TO: Dan McGehee				Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input type="checkbox"/> STD. <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1											
ADDRESS: 83 S. 1 <sup>st</sup> St Ste 14 Seattle, WA 292-2078		PHONE: FAX: 652-7567		PO NUMBER: CTT		Please Specify <b>OTHER</b> <small>*Turnaround Requests less than standard may incur Rush Charges.</small>									
PROJECT NAME: CTT				REQUESTED ANALYSES											
PROJECT NUMBER: CTT															
SAMPLED BY: SB															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME											MATRIX	# OF (W, S, O)	COMMENTS	NCA W/ ID
1. E SLAB - 1	5-18-04 / 1204	A	R	C	I,I	I	V	E				S	1		
2. C SLAB - 1	5-18-04 / 1359											S	1		
3. E SLAB - 1	5-17-04 / 1308											S	1		
4. VAULT 1 - N	5-19-04 / 0805											S	1		
5. VAULT 2 - S	5-19-04 / 0840											S	1		
6. VAULT 3 -	5-19-04 / 1010											S	1		
7. VAULT 4 - N	5-19-04 / 1047											S	1		
8. VAULT 5 - N	5-19-04 / 1109											S	1		
9. VAULT 6 - MID	5-19-04 / 1153											S	1		
10. VAULT 7 - S	5-19-04 / 1215											S	1		
11. VAULT 8 - E	5-19-04 / 1310											S	1		
12. NE SLAB	5-19-04 / 1416											S	1		
13.															
14. Samples 2, 3, and 12 were analyzed															
15. on 5/19/04	that day														
RELINQUISHED BY: Stephen Brantson				DATE: 5-19-04		RECEIVED BY:		PRINT NAME:		FIRM:		DATE: 5-19-04		TIME: 1554	
PRINT NAME:				TIME: 1550		RECEIVED BY:		PRINT NAME:		FIRM:		TIME:		TIME:	
RELINQUISHED BY:															
ADDITIONAL REMARKS:															



Please send results  
to me carthy 59162 cancers  
next

## CHAIN OF CUSTODY REPORT

CLIENT: FSM

REPORT TO: Dan McCarthy c/o FSN  
ADDRESS: 83 S. Kroc St.  
Seattle WA 98104  
PHONE: 206-2078 FAX:

PROJECT NAME: C-IT-C-F  
PROJECT NUMBER:

INVOICE TO:

Same

P.O. NUMBER:

PRESERVATIVE

REQUESTED ANALYSES

SAMPLED BY: Stephen Bentzen

CLIENT SAMPLE  
IDENTIFICATION

SAMPLING  
DATE/TIME

1 N. Shingle, N 6.11.04 / 1002

2 N. Shingle, SW / 1005

3 N. Shingle, SE / 1008

4 S. Shingle, SW / 1022

5 S. Shingle, E / 1024

6 S. Shingle, NW / 1027

7

8

9

10

RELEASED BY: *Stephen Bentzen* DATE: 6-11-04  
PRINT NAME: Stephen Bentzen FIRM: FSN TIME: 1205

RELEASED BY: *John Blankenship* DATE: 6/11/04  
PRINT NAME: John Blankenship FIRM: NCA TIME: 1250

ADDITIONAL REMARKS:

Please report only BTEX, PCP, OCE, TCE and VC  
COC REV 103

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508  
11115 E Montgomery Suite B, Spokane, WA 99206-4776  
9405 SW Nimbus Ave, Beaverton, OR 97008-7132  
20332 Empire Ave Suite F-1, Bend, OR 97701-5711  
3209 Denali St, Anchorage, AK 99503-4030

425-420-9200 FAX 420-9210  
509-924-9200 FAX 924-9290  
503-906-9200 FAX 906-9210  
541-383-9310 FAX 382-7588  
907-334-9200 FAX 334-9210

Work Order #: 34FO323

TURNAROUND REQUEST									
in Business Days *									
Organic & Inorganic Analyses									
<input checked="" type="checkbox"/> 10	<input type="checkbox"/> 7	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> 45		
STD. Petroleum Hydrocarbon Analyses									
<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> <1				
STD.									
OTHER Specify: <i>Turnaround Requests less than standard may incur Rush Charges.</i>									



# Field Report

Date 5/11/04  
Page 1 of 4

Project CII

Job No. \_\_\_\_\_

Weather Conditions Partly cloudy, 50's, site has various large puddles Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1317 Arrive on-site

Demcon is here and has already started breaking up the concrete in NW corner about 30-feet south of the north wall and 30-feet east of the west wall.

Large chunks are coming up with minimal soil attached to slab chunks.

I will do background readings before I investigate slabs

PID

South wall consistently at 0.1 ppm on PID

Performed Shoreline test and got 103.6 ppm quickly - PID working fine.

From east wall to center BG readings are all 0.1

No material will be removed today

Background Readings are 0.1 all throughout site

I will start sniffing the excavation site, and the pavement coming out

1347 Took PID readings from ~~pavement~~ that has been excavated, no readings above background (0.1)

Poked around in soil that is exposed and out of ~15 readings found only one reading of 0.7 ppm. This reading quickly dropped 0.3 and 0.1 after holding PID over area.

The soil is very loose and dry, light, consistent with even grain size and minimal rocks. Probably fill from previous grading jobs. At certain points I was able to pull rebar down up to 2-feet

- Currently the slab is being broken up and piled on eastern side of where Demcon is working.

Unsatisfactory Conditions & Recommended Correction

Bring Digital camera tomorrow

# Field Report

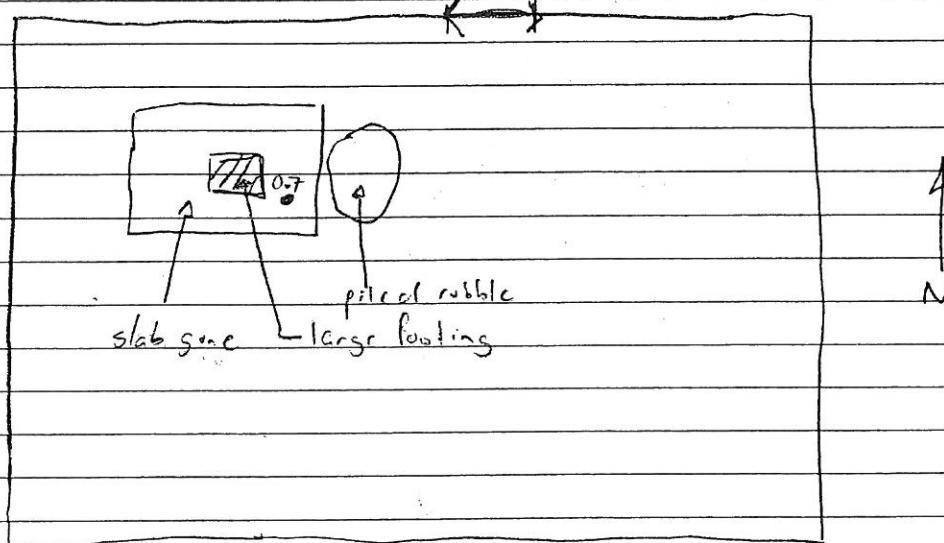
Date 5/15/04  
Page 2 of 4

Project CII Job No. \_\_\_\_\_

Weather Conditions \_\_\_\_\_ Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1356



NTS

There are various small exposed areas and I will get PID readings from those now.

All readings ~~must be~~ are equal to background throughout site.

1414 Took readings of removed slab. All readings were at background (0.1). Also poked around newly uncovered soil and only got background readings.

Operator, Ken, is now attempting to move large footing in ex. area. Approx. 3-foot thick!

1425 Excavator is starting to work his way south, left large footings in place. S111 did not detect.

## Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

Darryl - Insurance on-site

- Date on-site. Run, run, hit

# Field Report

Date 5/11/04  
Page 3 of 4

Project CII, env. monitoring construction Job No. \_\_\_\_\_

Weather Conditions Partly cloudy, 50's. Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1438 Asphalt removal is heading south on the western side of the site. I tested the removed asphalt with the PID and got only background readings. (0.1) At the same time I also poked a few holes in the exposed dirt to create vapor pathways and measured only background readings.

There is consistently less than 1-inch of soil attached to slab and commonly none.

On-site - Dale - Ferguson, site supervisor

- " " head

, Mr. Ferguson's owner

Ann Taylor, CII

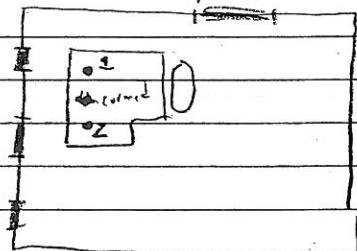
such, lawed guy Dan Ontix - attorney

Darryl, insurance adjuster

1500 Dan McCarthy stops by examining site, and it looks good

At the end of the day I will take 3 soil samples to be archived.

1506



I took readings of removed slab and soil uncovered soil. Recorded only background readings.

— Current limits

1521 Excavator is encountering some 2-ft thick pieces with re-bar  
Increased time necessary to break up slab into loadable  
pieces.

1550 Measured new exposed dirt and removed pavement. Still no  
readings higher than background

I will take 2 samples

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

Schedule sample pick-up tomorrow!

# Field Report

Date 5/11/04  
Page 4 of 4

Project CII Job No. \_\_\_\_\_

Weather Conditions Clear and 60's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1612 Took 2 samples - DAY 1 - NW ad DAY 2 - W

Both had PID readings of 0.1

Monitored rest of uncovered area, still no hits above background.

1621 Took last readings of day and all ca 0.1 Now

I am leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 5/12/04  
Page 1 of 3

Project CII Job No. \_\_\_\_\_

Weather Conditions Cool (50's) and overcast Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0700 Arrive on-site, Ken has already begun pavement removal in SW corner.

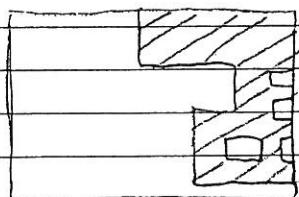
Took pictures of the progress ~~↓~~

0730 Finished taking first readings of day of newly removed slab and uncovered soil. All readings were equal to background.

Rivers Edge (Jayne) is now on-site.

0800 Re-calibrated PID using 100 ppm isobutylene gas supplied by Envirotech

0825 Removal of slab has reached the center of the southern wall. I recorded PID readings and all were at background 0.1



⇒ - A Slab removed.

N  
↓

I added a 1-ft to the name of the samples I took yesterday to indicate the depth at which they were taken. Now they are DAY 1 - NW 1-ft and DAY 1 - S 1-ft.

0830 Demolition afterling some large pieces of slab reinforced with rebar. Slow progress.

Rivers Edge is re-laying entrance ramp in northern site. Bringing in quarry spells. Material from existing ramp is being placed in NW corner of removed slab area.

0901 Got PID readings in newest area... still no hits above background. Soil is still reported fine, primarily sand. consistent grain size, light brown in color, no odor. Inspected soil in North end - no sheen. Minimal soil sticking to slab.

## Unsatisfactory Conditions & Recommended Correction

# Field Report

Date 5/12/04  
Page 1 of 3

Project CII Job No. \_\_\_\_\_

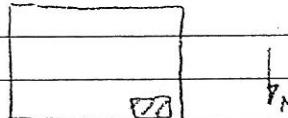
Weather Conditions Partly Cloudy, 50's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0912 Took photos of removed slab, shows lack of soil attached to pieces.

0955 Demacon has begun work on NW corner closer to N wall. This entire area is reinforced and is difficult to remove. The bearing and vibrations are mis-aligning the laser and it was requested by ? to sargent and remove a strip of slab LCII personnel

slab ~~beneath~~ on west side of site to reduce vibration impact.



Area of concern.

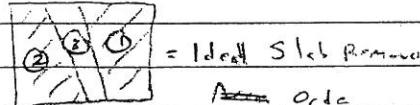
1012 Crew is preparing area for trucks to come in and to decide how to deal with side slab.

I am leaving site for 2 hours will return after lunch

1030 Leave site for lunch

1140 Arrive back on-site. Demacon has loaded up one side dump truck with slab debris and it is leaving.

1211 Work is stopped currently due to removal of debris leaves. (truck size)  
I inspected all removed slab with PDA and only got background readings. Approximately 35% of area slab has been removed.  
Awaiting one more truck to load debris out.



Called NCA and arranged for pickup between 3 and 3:30

1245 Truck and trailer showed up but couldn't fit into site. It left

Ken is now starting to remove additional slab in southern end

Spoke to Greg. He said excavation of vault area should begin Monday and will take 1 1/2 days. The side slab will be removed

Unsatisfactory Conditions & Recommended Correction Comments

On site. Greg and Dale. Ferguson

# Field Report

Date 5/12/04  
Page 3 of 3

Project CII

Job No. \_\_\_\_\_

Weather Conditions Sunny, high 50's

Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

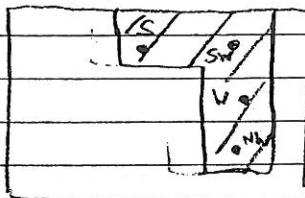
~~1311~~ 2 trucks came and picked up slab chunks. Ken is continuing to remove south center slab. No detections above background have been recorded in newly uncovered area or in removed slab pieces.

Performed PID sample on dirt from newly uncovered area that I placed in a plastic bag and still did not get any readings above 0.1 (background)

1342 2 more trucks arrive to remove chunks of slab. Took readings of newly uncovered area and removed slab and found no PID readings above background.

1414 Took 2 more samples from newly uncovered areas (today) at 1-ft depths. All had PID readings ~~of~~ of 0.1 : S 1-ft and SW 1-ft

Also renamed yesterdays samples to NW - 1ft and W 1-ft.



1st letter or 2 letters corresponds

N to location, Number

refers to depth of sample.

□ - Area where slab has been

removed. (does not include

sewer  
footing)

I believe 4 more trucks have just come in and been loaded up.

Amount of soil on slabs has been negligent; mostly just a tree on each piece.

1507 Took PID readings on newly exposed areas. No PID readings above background

1519 Cave Dale field notes from yesterday. It was Todd (Ferguson Prez) who had requested them. Gene Collier (?) is the owner.

2 more trucks are here. About  $\frac{1}{2}$  of the debris is gone.

1534 Took PID readings of newly uncovered area, all at background.

1607 NCA came and picked up samples. Recorded the last PID readings of new exposed soil + pavement

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

1615 Now leaving site.

# Field Report

Date 5/13/04  
 Page 1 of 4

Project CII

Job No. \_\_\_\_\_

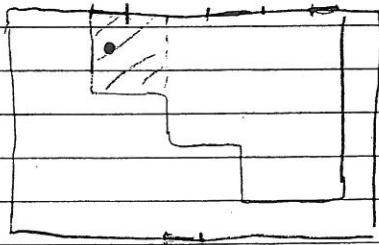
Weather Conditions Sunny and 64°

Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1145 Arrive on-site.

Removal of asphalt has been continuing



N Approx area of excavat...

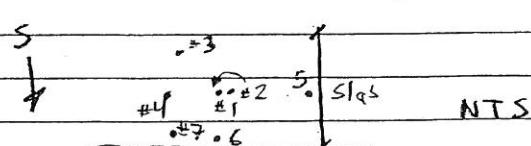
I started parking around in hatched area in front of SE door and got PID readings occasionally above Background PID of up to 6.3, they would quickly disappear and return to normal.

In an area where I got PID readings above BG I did a plastic bag test and slowly rose to 170 ppm (#1) I then called Dan.

1230 I am attempting to recreate test. I collected soil from (#2) ~1 ft. west of my initial suspect sample and am doing plastic bag test. Highest results of 16.5 ppm.

- Asphalt from this area is separate from other asphalt. Ken has been notified to NOT send this asphalt off-site for now until further investigation is complete

Took bag #3 from ~15' N and ~15'-ft W of #1. Did plastic bag test and did not get readings above background



Note: All samples are from  
0.5-ft bgs.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 5/31/04  
Page 2 of 4

Project C II Job No. \_\_\_\_\_

Weather Conditions \_\_\_\_\_ Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

- 1255 I took a plastic bag sample #4 from ~20-ft west of #1  
PID reading in plastic bag and in soil area was 0.1 equal  
to background.
1306. Spoke to Dale.  
Took 2 more plastic bag samples #5, ~10-ft east of #1 at  
edge of existing slab. and #6, ~10-ft south of #1  
#5 Plastic bag PID readings 0.1, same as soil reading.  
When plastic bag was squeezed it rose to 3.2, but then  
quickly dropped to 0.1 ppm  
#6 Plastic bag reading = 0.1 ppm, even if I press bag.  
PID reading is 0.1 ppm  
After about 5 minutes the reading is rising steadily to  
58 ppm.  
#5 Retesting getting PID results of up to 59 ppm  
#4 Retest still 0.1 ppm
- 1328 Sample #7 in plastic bag is from ~13-feet <sup>west</sup> and ~10-ft  
south of #1  
Kept PID in bag for 5+ minutes and still only reading of 0.1.  
ppm.
- 1335 I will call Dan.  
1411 Took sample from pieces of slab from area of suspected  
soil contamination (SF-SLAB)  
I went to store to get more ice + plastic bags and call NCA  
to arrange for pickup today  
I also deconned all sampling equipment  
Construction is done for today.  
The PID results in bag are not immediate even after sitting out in  
sun. They can still take over 5 minutes to register.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Field Report

Date 5/13/04  
 Page 3 of 4

Project CII Job No. \_\_\_\_\_

Weather Conditions \_\_\_\_\_ Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1422 I am going to go around site and do plastic bag tests to verify results yesterday.

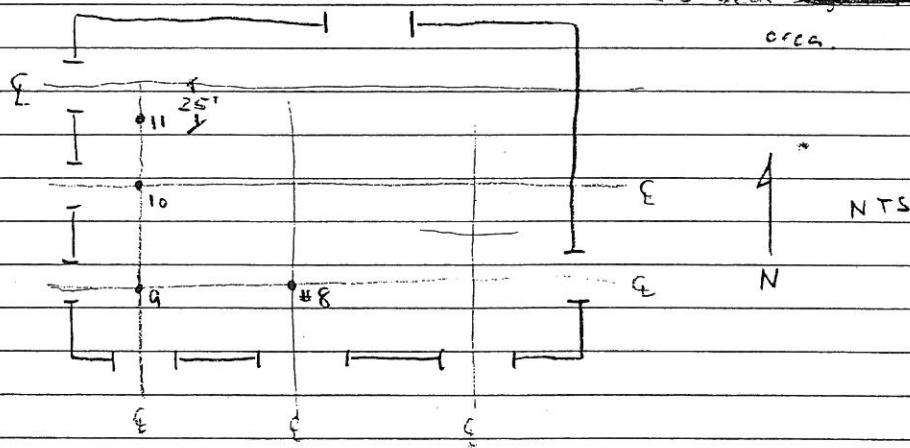
I will use the center of the southern doors as my E-W line.

#8 - S quadrant. +5 minutes in bag and still only reading of 0.1 ppm

#9 SW - center of using center of doors as guide. After 5+ minutes in bag still a PID reading of 0.1 ppm

1429 #10 - W After 5+ minutes in bag PID reading is still 0.1 ppm

#11 - NW After 5+ minutes in bag PID readings are still 0.1 ppm.  
 #11 is not in center since there was a large footing in center and soil has been significantly moved in that area.



#12 - I collected a plastic bag full of dirt from the slab removed from area of suspected soil. After 5+ minutes with a PID in bag still 0.1 ppm.

#13 - bag of soil collected from #11 north of #1

24 ppm 50.1 ppm was the maximum value reached.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

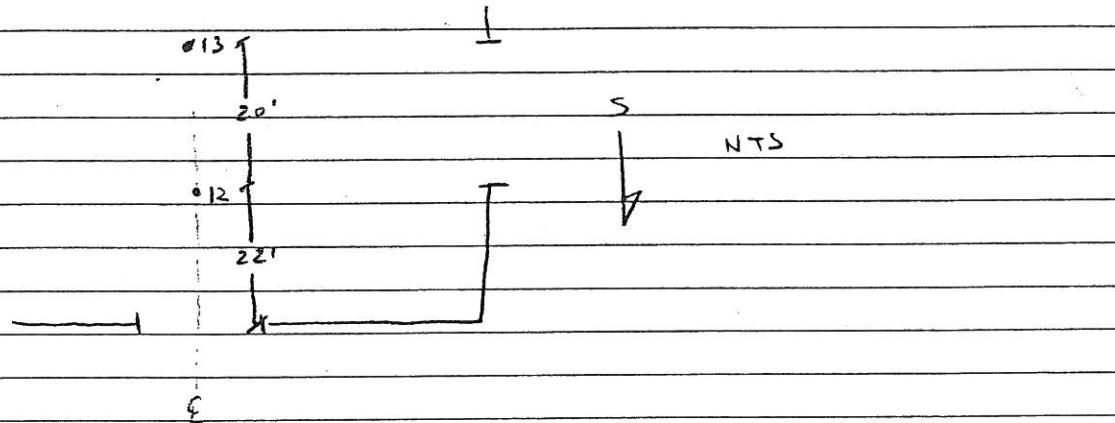
# Field Report

Date 10-13-84  
Page 4 of 4

Project CII Job No. \_\_\_\_\_

Weather Conditions Sunny and 64° Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)



1511 I will now collect 2 more samples from of soil that is adhered to slab. These samples are composite samples since there is so little dirt attached to these slabs.

SE-SLAB 2 and SE-SLAB 3

NCA will be here shortly to pick up.

1548 NCA picked up samples, all soil was returned to site and after I speak to Dale I will leave.  
Also, all equipment was disconnected.

1605 Chatted with Dale and Ron. Awaiting Don and Dan for conference call

1650 Ended conf. call with Don and Dan. Returning to office.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Field Report

Date 5-14-04  
Page 1 of 3

Project CIT Job No. \_\_\_\_\_

Weather Conditions Sunny and 56° Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0730 Arrive on-site.

Braces on western wall have been removed and Demacon is sawcutting the concrete in the NW area.

Ken (Demancon) is putting a breaker onto a 22' backhoe they brought in.

No trucks will be loading material today since there will be a lot of work today breaking up large slabs in areas (old footings, reinforced areas, concrete ramps, etc.) and removing slab along north and western walls.

0805 With a PID I took over 10 readings from a stackpile of removed asphalt in the northern area of the site, all PID readings are 0.1. The pile was approximately 30-41' in diameter and 4-feet tall.

I also took PID readings (~4) on the large block (it came out of the NW corner) and all were 0.1. This block is ~25-ft long x 10-ft wide x 3-ft high.

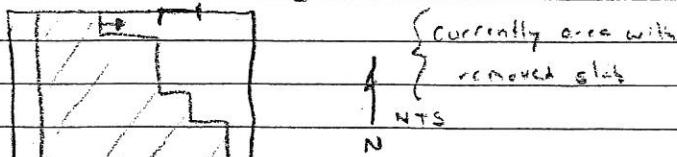
0815 They are starting to break up large blocks in NW area.

0820 With a PID I sampled a 20-41 x 4-11 x 3-ft high pile of removed slab from the NW area, all PID readings were 0.1.

0832 Dib plastic bag test on soil adheared to slab - from stackpile in northern area and got 0.1.

0851 Demacon started a line in the NW and is now using a breaker to break up the cement floor.

0915 Demacon has started removing slab from the north wall starting about 20-ft east of the NW corner and moving in an eastward direction.



Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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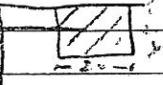
# Field Report

Date 5.14.04  
Page 2 of 3

Project CII Job No. \_\_\_\_\_

Weather Conditions Sunny and 50's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0930 Took multiple (5+) PID readings from slab stockpile removed from NW corner  All PID readings were equal to background.

Another guy from Democom has arrived and is breaking up the cement.

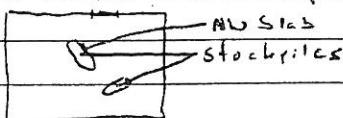
0950 Talked to Dan, Eric and Don will be here at 10:45

1015 Took ~4 PID readings from concrete slab that is being removed from northern wall. PID readings consist of finding soil on slab, scraping it off, holding the PID in the area just scraped to test for volatiles. All recent PID readings have been 0.1

1024 Took PID reading from stockpiled slab that was covered last night with t-squares. Readings on PID were equal to background.

1043 Took 3 PID readings from small pile of removed slab while Ken is attempting to pull up larger chunks. All PID readings are 0.1 ppm.

All the small piles ~~other~~ that I have sampled (the newly removed slab along the north wall) are being piled on the existing slab stockpile in the northern center part of site.



1200 Don and Dan came by the site. I met with Don, Ron, Dan, and Dan's asst. to discuss strategy.

Ken is removing ultralarge slabs from the NW area

1245 Took PID readings, approximately 10, on stockpile in north center, called NW slab since it currently contains only slab from NW. ~~All~~ All PID readings are background 0.1

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5/14/04  
Page 3 of 3

Project CII Job No. \_\_\_\_\_

Weather Conditions Sunny + 60's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

- 1236 Ken is starting to remove slab on western wall.  
Existing stockpiles have all been sampled with a PID and have  
background readings of 0.1
- 1315 Return from ~ 1/2 hour lunch
- 1335 Tested with PID about 6 readings in small 10' diameter, 3 - ft  
tall slab stockpile from western wall south of northern most door  
all PID readings were background
- 1338 Demcon has loaded out one truck so far of the NW Slab stockpile.  
This stockpile was determined to be clean by our stockpile  
criteria.
- I am now leaving site.

P.S.

- 1316 I took 3 samples NW-SLAG 1  
NW-SLAG 2  
NW-SLAB 3  
from soil adhered to slab removed from NW area in the  
NW slab stockpile.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

# Field Report

Date 5-17-04  
Page 1 of 2

Project CII

Job No. \_\_\_\_\_

Weather Conditions Partly Cloudy, 50's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0730 Arrive on-site.

Demoncon has two operators here today, Keen and \_\_\_\_\_.

Both are currently working on removing slab in Northwest corner.

0800 Checked in with Keen to find out day's plan. Slab going so far and they are going to concentrate on NW corner. One truck has already been loaded from the stockpile that I approved on Friday and more trucks are coming.

With a PID I sampled all chunks of concrete that have recently been removed from eastern side. I took about 10 readings for <15 cy of concrete. All readings were 0.1 ppm.

I also sampled large chunks that were pulled from the corner soil that came from there ~~and~~ read 0.1.

0814 2 more trucks of clean stockpile are being loaded for off-site disposal.

0851 2 more trucks have been loaded out with a slab from the NW slab stockpile deemed clean on Friday.

With a PID I sampled any new material that has been removed from NW corner. All readings were 0.1

Brecker is working on breaking up large slab in NW corner.

0913 I took photos of the job site.

0920 More trucks are being loaded. Any sort that has adhered to concrete and has mixed in with slab pieces is being completely rejected during stockpiling, removal, stockpiling, and loading.

Approximately 60% of slab has been removed thus far.

0934 Only loading and breaking is going on now I am leaving site and will return in 2 hours.

0950 Arrive at office

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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\_\_\_\_\_

# Field Report

Date 5-17-04  
Page 2 of 2

Project CII Job No. \_\_\_\_\_

Weather Conditions Sunny, 60's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1130 Leave office

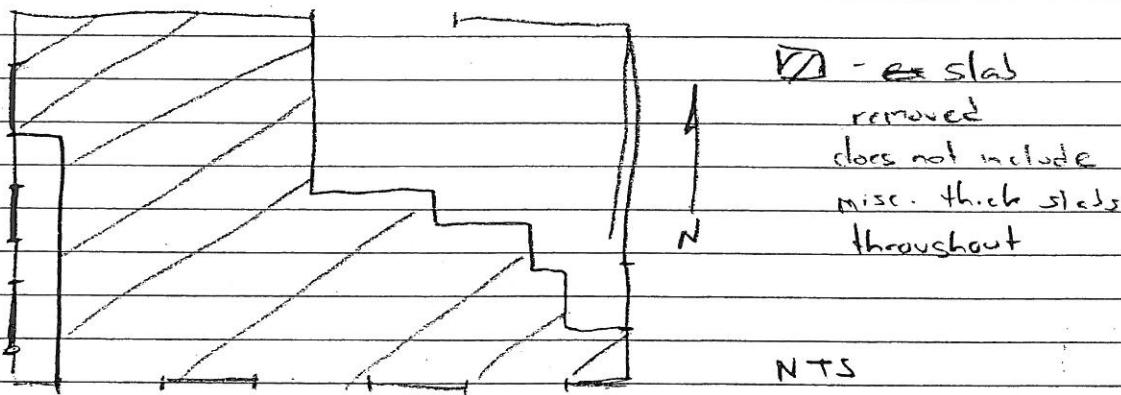
1150 Arrive on-site

Democon is beginning to remove slab in SE corner, while breaker is still breaking up large slabs in NW corner.

1212 Sampled removed slab with PID. For approximately 11 cy of slab I sampled w/ 10 times

1321 Work is continuing in the SE corner. I have extensively sampled the soil & the removed slab with the PID about 10 times per 20cy. All results have been 0.1 ppm. They are now breaking broken up chunks of the large slabs that were located in the NW corner.

1410 Democon is off and machines have stopped. Currently about 70% of site is gone



1420 Deconned equipment and now leaving site.

P.S. Sample SE-SLAB 1 was taken from soil adhered to and on top of the removed slab from the SE corner.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-18-04  
Page 1 of 3

Project CII Job No. \_\_\_\_\_

Weather Conditions Clear and 60's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0730 Arrive on-site

Demoran is currently working on removing large slabs in SW corner and breaking up large chunks in flat area.

0750 Work is continuing in the SE area. I tested all removed slabs with a PID and only got background readings. About 10 readings per 10 CY of removed slab.

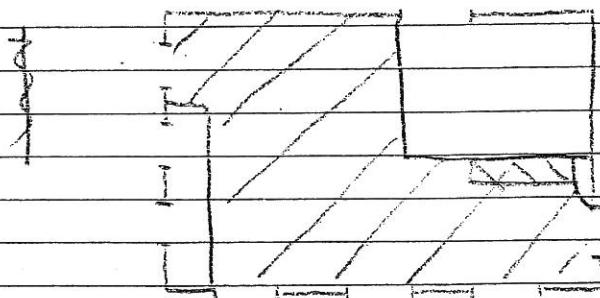
0821 Removal of slabs in SE Area continues. I tested the soil on the latest removed slab and only got background readings, 0.1 ppm. Testing frequency is about 4 times per 10CY.

There is still minimal soil adhered to slab, still very light brown, consistent grain size sand. No odor, no insect staining. ~~Although soil can look light, site is Site is dry.~~

Ken does not mix newly removed material with material to be loaded off-site until you mix new stuff with H2O.

0901 Work continues in the SE corner. PID readings, 5 ppm 10CY are still 0.1 ppm. (from soil adhered to slab).

0930



X - slab removed

I - most recent

Task 6 PID readings from most recent removal area and all were 0.1

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5.18.04.  
Page 2 of 3

Project CII Job No. \_\_\_\_\_

Weather Conditions Sunny and 60's, breezy on site Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0953 Took PID samples of new slab that has come up ~ 3' per a 3'-wide x 10' long x 1-1/2' high pile.

Called Envirotech and ordered more cat grass from Dave

1:13 They (Demcon) are removing material from the NW area.

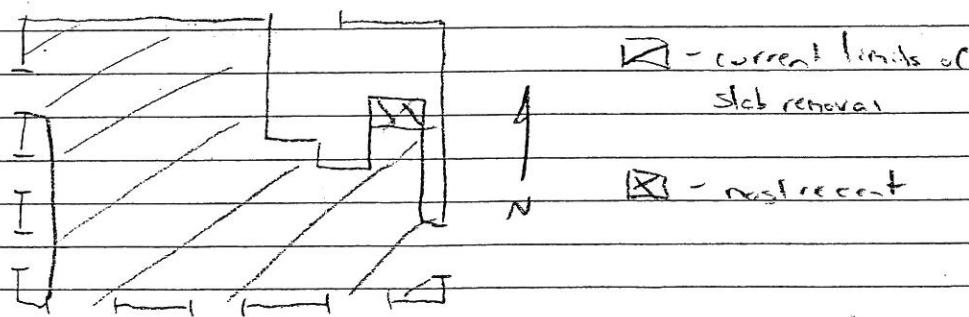
I spoke to Dale and he said excavation for the NW corner will begin tomorrow and last 2 days.

1113 Demcon has been breaking up slabs in western portion of site and removing ~~and~~ slab pieces from NW portion. I've sampled areas that they are removing with PID and results are 0.1 ppm. While removing large slab sections soil appears at 4-ft bags. Soil is richer, darker, still contains a lot of rocks.

1128 Slab Removal is continuing in SE area now they have reached the center of the eastern wall. This is now called the E area. I took approx. 5 PID readings from soil adhered to slab that was recently removed. The pile was about 15'-wide and 2 ft high. All readings were 0.1 ppm.

1204 Slab removal is continuing northward on E ~~wall~~ area. I've frequently sampled the soil on the removed slab as it has moved northward, all readings have been 0.1 ppm.

1246



Took ~5 PID readings of soil adhered to slab from most recent area. All PID readings were 0.1 ppm

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-18-04  
Page 2 of 3

Project CIE

Job No. \_\_\_\_\_

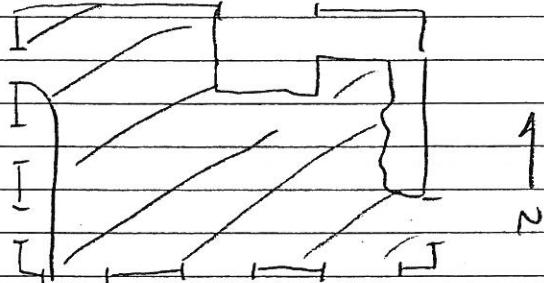
Weather Conditions Sunny breezy, 60's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1332 Demco is now working on the ~~E-SLAB~~ Eastern-Central area, removing slab. Took about 5 PID readings on the soil from the slab (~20cy) and only got background readings, 0.1 ppm.

1345 Most of the large slabs in the western portion of site have been broken up and are still in place. Breaker is being taken off second backhoe and bucket is being put on. Approx. 85% of the site is free of concrete. All slab-on-slab has been verified to be clean via PID readings of soil on slab.

1406 Deconned all equipment, work is stopped



Limited slab removed.

1415 Leaving site.

P.S. Samples E-SLAB 1 and C-SLAB 1 were taken from soil adhered to removed slab from their corresponding areas.

Unsatisfactory Conditions & Recommended Correction	NW	N	NE	A
	W	C	E	
	SW	S	SE	

# Field Report

Date 5-19-04  
Page 1 of 3

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Sunny and cool Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0730 Arrive on-site

Both Rivers Edge and Denocan are here.

Denocan is removing pulled up slab from E-C area that was approved yesterday

River Edge is grading area for excavating trench

0741 River Edge's truck is coming in to remove coil that has been pulled off during grading. I sampled the stockpile, ~10cy with a probe and a PID and it was clean. This stuff is being spoken with Jaymee and Mark (operator) to discuss strategy for soil segregating and stockpiling soil.

No stockpile is ready and Jaymee believes it is Del's responsibility. 2nd truck is here for ~~Rivers Edge~~.

0754 Tim Cunnane on-site

0806 Took PID readings from bucket, (7) it will take PID readings from every 5<sup>th</sup> bucket.

The third truck was here so I took a soil sample VAULT N 1.5 from the bucket of soil from 1.5-ft bgs.

Soil is sand-like, brown, consistent grain size, no rocks and odorless.

Denocan is loading out chunks of large slab on western side of site

0825 PID readings are primarily 0.1 but there have been a few (2-4.1) above 1.0 ppm on the PID. All are below our criterion of 5 ppm.  
H<sup>2</sup> truck is here.

0840 6<sup>th</sup> truck has gone I took a sample VAULT<sup>2</sup> S 4.0 for 4-ft bgs.

PID readings have remained at background for last 4 buckets I have tested.

0850 Soil bgs 4-ft is darker, richer, moister, appears to have more organics very fine, silty.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-15-04  
Page 2 of 3

Project CII-I-CII Job No. \_\_\_\_\_

Weather Conditions Partly cloudy, 50°s Prepared By Sa

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0925 Both Rivers Edge and Demacon continue to haul out material that has been verified via PID.

Rivers Edge has 6 trucks running to ~~Site~~ an area near Site Two. Round trip time approximately 30 min.

Excavator has reached final depth on western side of vault.  
Vault is 50' E-W x 20' N-S.

0958 Have been insuring ~ every 5' bucket with PID to make sure it is clean, readings have been 0.1

Took plastic bag test of soil coming out and it was 0.1 ppm. This soil was from the L1, 2-feet about 25-ft east of western sidewall.

1000 Took soil sample VAULT 3 from bucket coming out. Took plastic bag sample and got 0.1 ppm

1052 Took sample VAULT 4-N from bucket being loaded into 17" truck each truck is taking about 10 CY of dirt.

PID readings have continued on soil being loaded and all readings have been 0.1 ppm

I conducted a plastic bag test on soil being loaded. same bucket as sample VAULT 4-N. PID readings were 0.1 ppm.

E Clayton - Rivers Edge ~~ex-laborer~~

Talked to Chris from Demacon and he told me they would not be loading out more material today. Since he can't keep up with trucks. I will test all material he pulled up at end of day and periodically throughout. He is working on NE corner now.

1109 Took sample VAULT-5 N from bucket being loaded into 18" truck PID readings from both buckets and plastic bags continue to be 0.1.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Field Report

Date 5-19-04  
Page 3 of 3

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Cloudy and cool, 50's Prepared By SC

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1110. There is a rich, dark layer of silty-clayey soil at about 4-feet b.s.e. Torn left.

1134 Rivers Edge is stockpiling for 2-4ft of sandy material to be used as backfill ~~as~~ if it is deemed clean.

1143 The excavation is continuing eastward, they have gone approximately  $\frac{3}{4}$  of the way at top and  $\frac{1}{2}$  way at grade depth.

I have been sampling removed material at a rate of every 5<sup>ft</sup> bucket, 2-3 probes per bucket. PID readings have been 0.1.

I also did a plastic bag test on the latest material and it came up background.

1202 On eastern side of excavation, Mark encountered a 1-ft thick layer of very dense, dark clay like material. I checked it out with the PID and only got 0.1 ppm. This layer has been seen throughout ~~and~~ but this one thicker and harder. This layer might be an old garbage burn, containing sand, trash, iron, glass, etc.

1215 Took sample VAULT 7-S from bucket about 15 ft. west of eastern sidewall. Also took PID readings from bucket and conducted plastic bag test. All readings came up 0.1 ppm.

1319 Sampled ~~every~~ 5<sup>ft</sup> bucket with PID and all have been 0.1 ppm. I took sample VAULTS from eastern edge of excavation that was removed by bucket. I also sampled this soil with a plastic bag test and results were 0.1 ppm.

1430 Was taking sample of bucket from ~~the~~ SE corner of excavation, and got a reading of 9.4. This bucket was stockpiled <sup>and correct</sup> and will be resampled tomorrow.

1442 I checked all pieces of soil pulled out today with PID and only got readings of 0.1 ppm. Took sample NE-Slab.

1500 Excavation is over and I am leaving site.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

P.S. At 1153 I took a sample from a bucket of the excavated soil from the center of the excavation called VAULT 6-MID

# Field Report

Date 5/20/04  
Page 1 of 2

Project CII-CII Job No. \_\_\_\_\_

Weather Conditions Cloudy and cool, 50's Prepared By SP

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0745 Arrive on-site

Rivers Edge is bringing in a backload of pea gravel. The main excavation is done and now they need to dig ~6-inches in a 1-ft 6-inch wide trench around the perimeter of the building. This material will be used as backfill and will not be removed.

The vault is here now too. Rivers Edge will need to dig a 4x4'x2'8" deep hole to place this.

Demco is going to re-sawcut the eastern side and sawcut the western edge as well.

0813 Demco has begun to load out material removed yesterday. This material was deemed ~~soil~~ clean by me yesterday.

0849 Rivers Edge is digging the trench and Demco is loading out second truck full of slabs and re-sawcutting the eastern slab 3-ft from wall.

0904 Calibrated PID with 100 ppm iso-butylene gas.

0920 Took PID readings (about 10) from backfill stockpiled on site. It had high PID readings yesterday. Probe readings were 0.1. I also took 2 plastic bag samples from < 2-ft apart on pile. One was 0.1 ppm, but the other reached 540 ppm. This soil ~~was~~ was painted yesterday and may contain traces of paint.

0945 Wtih a PID I sampled all of the soil removed yesterday and today to be used as backfill. For approximately 120cy I sampled 15 times. All readings were 0.1 ppm.

1008 Sampled with PID st soil on slab that was pulled up from eastern side. Almost all slabs removed = minus a 3-ft wide strip on the eastern wall that they are unable to remove due to the fact that it will undermine the security of the panels. All readings were 0.1 ppm.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 5-25-04  
Page 2 of 2

Project CII-CII Job No. \_\_\_\_\_

Weather Conditions Partly Cloudy, 50's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1020 Rivers Edge is outside northern wall searching for sewer to attach vault to. I have sampled, probe with PID, soil being moist around and all readings were 0.1 ppm.

1028 Sampled soil removed at ~~cbr~~ outside northeast when they are locating sewer line, all PID readings are 0.1 ppm.

1121 Rivers Edge excavated the sum for the vault to about 10-feet below former slab top. I tested this material with a PID.

~6 probes per 20 CY and all came up 0.1 ppm. This material is moist, dirt and rhumbly. No groundwater was encountered.

The vault is in the excavation but not in place.

Demaco has completed removal of the slab on the east side. I sampled it and it was 0.1 ppm.

1126 They are starting to fill in hole with gravel.

1138 Vault is placed and bedding is being placed around it. No more slab or soil will be removed today so it can leave S.D.

1204 Arrive back at office.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 5.21.04  
Page 1 of 7

Project CII-CI

Job No. \_\_\_\_\_

Weather Conditions Cloudy & cool

Prepared By SB

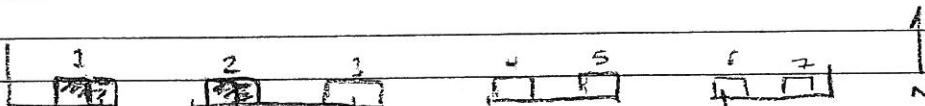
Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0745 Arrive on-site

Rivers Edge is beginning to dig out footings on south side of site. All material will remain on-site.

Demarco is continuing to saw cut the western slab.

0811 I conducted P10 probe testings on soil removed from the southeastern most footing. There was a quick hit at 1.7, but then it dropped almost immediately. I conducted ~7 P10 probes for 5 CY and only got that hit. I then did a plastic bag test at that soil and only got 0.1 ppm.



0820 Spoke to Neal

Tested soil that ran out of footings 2. ~6 P10 readings / 5 CY all readings were 0.1 ppm

Footing holes are about 10' long, 3'-foot deep and 3'-wide.

0856 Got P10 readings of up to 66.7 ppm in soil that came from #3. I tested the soil in a stockpile that Rivers Edge had created. Most readings were 0.1 ppm, but I got 3 that ranged from 16.7 to 66.4. At this same area. I spoke to Dale and he is arranging for bucket to load material onto visqueen (suspect soil stockpile)

Pile 4 was tested and I got P10 readings as high as 120 ppm. Once again most readings were 0.1 ppm, but I did get a 12.0. This material will be stockpiled as well (suspect soil stockpile)

Each of these piles is about 5 CY and I am taking ~8-10 P10 readings

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-21-04  
 Page 2 of 5

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions cloudy and cool, 50's Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0913 Tested soil from footing #5 (10 probes per 5CY) and all readings were 0.1 ppm.

Tested soil at site of slab foundation and all were 0.1 ppm.

I also tested soil on the slab that is being removed from the area just south of the north entrance and confirmed that it is clean.

0929 Sampled soil from footing #6 and all 10+ readings / 5 CY were 0.1 ppm.

Rivers Edge is using Bobcat to dig footings.

1003 Tested the remainder of the slab pulled up from the north side. All (3) PIDS readings for 15CY came up at 0.1 ppm. This is all good to go.

I tested the soil removed from footing #7 and all (11 PIDS per 5 CY) came up 0.1 ppm.

Rivers Edge is now starting to break up footings.

Donovan is finishing breaking up removed slabs and resurfacing the west side. Only slab remaining is along west wall.

Dale told me western and eastern footings will only require about 1-foot of soil removal due to a change order.

1042 Donovan is still resurfacing and is now resurfacing western footings. It will be done tomorrow. This will only load out the material from the north that has already been cleared.

Rivers Edge is breaking up footings and will not be removing more soil for awhile.

I am leaving site and will return in a few hours.

1122 Arrive at office

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-21-04  
 Page 3 of 3

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions \_\_\_\_\_ Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

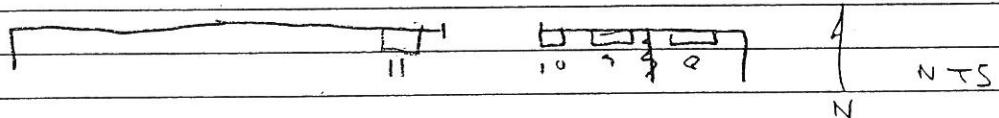
1301 Dale called and said they do not need to over-excavate or backfill

1322 Return to site

Footings and digging will commence

1323 Return to site.

Mark has begun work on northern footings and is digging the first one now



1335 With Probe PID readings I tested a soil from footings 8 and 9.

~10 8-10 PID readings per 5 CY. All PID readings were 0.1 ppm.

1353 Conv. with DM

Sampled soil from Footing #10 and all material was clean. 8 PID readings per 5 CY and all were 0.1 ppm

1413 Sampled soil from #11 Footing and all readings were 0.1 ppm

R Kenny (Ferguson) laid out visqueen in the NW corner and a front loader was on-site to stockpile soil with high PID readings.

1445 Demcon had begun removing slab on western side of site. He left at ~~1400~~ 1400 and I sampled all removed material. All material was 0.1 ppm

Mark from Rivers Edge is loading suspect soil onto stockpile site in NW corner including soil from yesterday 5-19-04.

1520 The stockpile has been made and now Rivers Edge is going to

NAPA to get more plastic to cover pile

1537 Stockpile is covered and I am leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-24-04  
Page 1 of 2

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Partly cloudy, 50° Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0740 Arrive on-site

0807 Spoke to Dale to find out days events

- Two footings on the north and south end will need to be over-excavated
- Forms for wall are being loaded today
- Sawcuts for east and west footings will be done today
- Possibly spread footings will be completed
- Remainder of slab on west side will be removed

0820 Demosa is loading out material (slab) removed earlier.

Demosa is starting to remove the remainder of the slab in the ~~SW~~ SW corner.

0840 Will a PID I tested the most recently removed slab in the SW corner. All PID readings were 0.1 ppm.

Mark (River Edge) is filling in holes with soil removed from footings that was approved on Friday.

0859 Soil Ex and wait until engineering decisions are made  
Slab removal continues

0940 Ferguson had decided (w/engineer) that no further ex is needed on the north and south footings. ~~E~~ There are 3 that need to be cleaned out and I will test any soil that comes out.

1040 Footings 3 and 5 have been cleaned out to base of existing footing and removed of debris. I tested the removed soil (~2 CY) with a PID ~8 times and all readings were 0.1 ppm.

They are now working on Faiting 10.

I also sampled the newly removed slab from the SW corner and all readings were 0.1 ppm. He is waiting for truck ~~banks~~ before he can pull up rest of slab.

1049 All slab has now been removed!! I tested the last of the slab pulled up from the SW corner. About 5 CY and all readings

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 5-24-84  
Page 2 of 2

Project CII-C5 Job No. \_\_\_\_\_

Weather Conditions Sunny and 60's Prepared By SO

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

were 0.1 ppm. Slab is running up very clearly with minimum dirt adhered to it.

Engineering decisions are being made concerning vault so work is paused

1117 Tested the soil that came out of footing #10 on north side. All sun tested (4 pto per 2 CY) at 0.1 ppm.

Talked to Da

1135 Talked to Kurt Hart of NCA and he is going to analyze 4 samples from slab material

11:45 - 12:15 Lunch

1217 Return to site. Demerson is loading out last of slab.

1240 Ferguson is unsure of what is happening next. I will leave S.E. and Dale will call me when he finds out.

1300 Return to office

Samples Submitted to be analyzed	NW	NE
	C	SE

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 6.2.04  
 Page 1 of 1

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Clear, high 50's Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

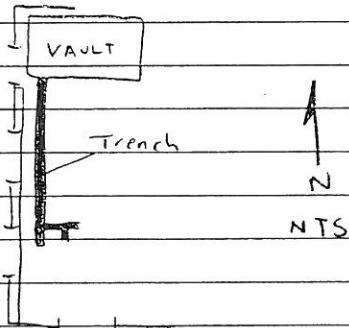
0830 Called Dale and he told me they were starting to dig trench for sanitary sewer (?) along western wall. (Rainwater pipes too)

0900 Arrive on-site. Trench is done from the vault in the NW corner to about  $\frac{1}{2}$  down the west wall. Moving in a southward direction.

0930 Calibrated PID with 100 ppm iso-butylene gas  
 Tested soil removed from trench ~1 per 2 cy. All readings were 0.1 ppm equal to background

Trench is approximately 2-11 wide by 2-3 ft deep.

1016 Trench is only going about 3/4 of the way on the west wall and a 1:4:1 b:l ratio



All removed soil has been sampled and all readings have been 0.1 ppm. I've sampled approx 1 time per 2-3 cy.

1031 Digging is done for today. All soil has been collected and is at yard.

I am leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 6.3.04  
Page 1 of 2

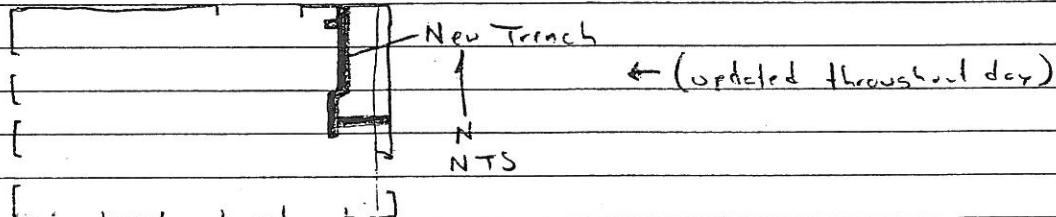
Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Sunny + high 50's Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0935 Arrive on-site

McKinstry (Plumbing) is digging a trench on the eastern side of the site for sanitary sewer + rainfall (?)



1020 All soil that has been removed so far has been tested with a PID by me. I created ~ 15-20 vapor pathways per ~ 20-25 cu. yd. and ~~all~~ tested with a PID. All PID readings were 0.1 ppm.

Trench from yesterday ~~is~~ has been laid with pipe for sanitary sewer and rainfall.

Vault bottom has been poured and Ferguson is currently making frame for walls of vault + footings on north and east.

1035 All soil removed from trench has been tested and is 0.1 ppm. Ferguson is moving material so McKinstry can dig final lateral trenches.

I uncovered suspect soil stockpile and conducted PID probe tests. About 10 tests per ~15CY of soil and all PID readings were equal to background, 0.1 ppm. I then recovered the stockpile with tarps + secured the pile.

1115 McKinstry is working on laying pipe on east side. They will finish west side later. It is leaving site and will return later.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 6-3-99  
Page 2 of 2

Project CII-CI Job No. \_\_\_\_\_

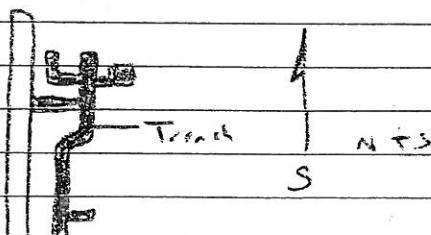
Weather Conditions Sunny 70 Prepared By SP

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1504 Return to site

McKinstry is leaving, they are done digging

[



Trench is ~ 1'2" deep towards south and 3-feet deep toward north. It is about 2 feet wide throughout.

1510 I sampled with a PID ~ 1 reading & for 2 cy. of removed dirt. All readings were 0.1 ppm.

1515 Leaving site

Unsatisfactory Conditions & Recommended Correction None

# Field Report

Date 6/7/04  
Page 1 of 3

Project C-II-C II Job No. \_\_\_\_\_

Weather Conditions Cloudy & 50°s Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0745 Arrive on job-site.

A new trench for electrical is dug in the SE corner about 2 1/2 - feet deep x 2 - feet wide.



In SE area they are creating dense clay soil at about 2 1/4 - 2 1/2 - feet

0844 Trench is continuing in a westerly direction along southern wall. I spoke to Dale and he said the whole site will be trenched for electrical. Electrical will be necessary at all footings.

I tested all soil that came out of trench in SE corner with a PID. Approx 1 PID reading per 2-3 CY. All readings are 0.1 ppm.

Sgt. to Da McFatty. I will show 2-3 times per day to check on things. No soil is going off-site.

They have poured the sides of the vault + footings on S side.

0900 I am leaving site

1218 Arrive back at site.

Electrical trench has been dug along the length of the south wall about 4-5 feet wide and 3-feet deep.

Footings are being dug as well in SW ~~SE~~ area, about 10 - feet by 10 - feet by 3 - feet

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 6-7-04

Page 2 of 2

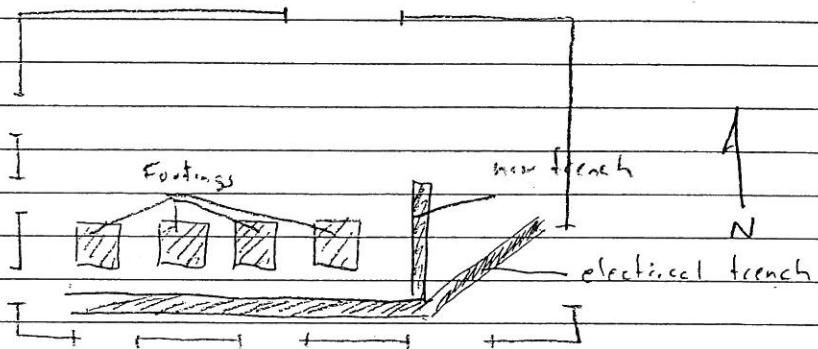
Project CII-CI

Job No. \_\_\_\_\_

Weather Conditions Cloudy, occasional rain 50° Prepared By SR

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1251 Tested the soil removed from the trench along the southern wall. I conducted PID probe tests ~2 per SCY. All readings were equal to background 0.1 ppm. A new trench is being dug south to north in the eastern center portion of the site.



1324 Tested all soil that has come out of interior footings. 4 PID probe tests per footing ~ 6 CY (per footing). All readings were 0.1 ppm.

I also tested soil from new trench running northward from southern wall. All readings were 0.1 ppm.

1330 Electricals are almost done. Footing cr. continues  
I will return. Now leaving site

1400 Return to office

1550 Leave office

1605 Arrive at site

One more footing has been dug. Additional electrical trench has been dug and south side of vault has started being backfilled.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

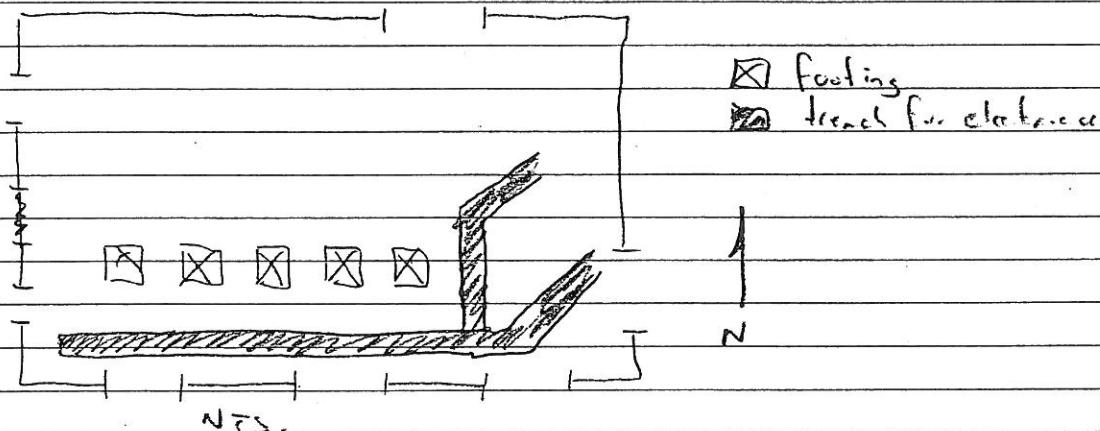
Date 6.7.04  
Page 3 of 3

Project CII - CI Job No. \_\_\_\_\_

Weather Conditions Partly cloudy +60 Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1620 Took PID probe readings of removed soil from electric trench & 5" footing. All PID readings were 0.1 ppm. Soil still odorless. Took PID reading ~ 1 per 2-3 CY.  
Also took 5" PID probe readings from soil excavated from vault area that is being used for backfill. All readings are 0.1 ppm.



1635 Spoke to Dan M  
Leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 6-8-04

Page 1 of 2

Project CII-CI

Job No.

Weather Conditions Sunny + 60's

Prepared By SB

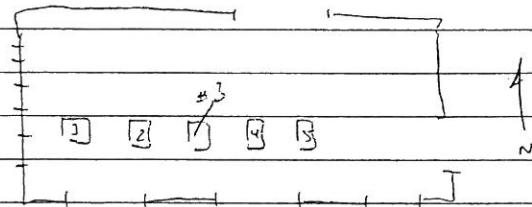
Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0830 Arrive on-site

Rivers Edge is overexcavating footings to 5-ft bgs with larger (than Bobcat) 1/2 CY bucket. This soil is being loaded into a truck and unloaded into a stockpile at the east end of the vault. This soil may or may not go off-site.

0851 An sampling with a PID every 4<sup>th</sup> bucket of soil coming from the overex. of footings. This appears to be darker clayey native soil. All PID readings have been 0.1 ppm. They also overexcavated 1. footing before I got here. At each overexcavation is about 1 truckload of dirt. With a PID I sampled this soil and all readings were 0.1 ppm.

0944 Took soil sample Footing #3 - overex from soil stockpile that came from footing #3.



Sampled soil with PID from every 4<sup>th</sup> bucket of over ex soil that is going into truck. All readings have been 0.1 ppm

1005 Soils person is on-site. talking with Dale

5<sup>th</sup> footing is overexcavated. All PID readings came out 0.1 ppm

1014 Footing ex. is done for now. Rivers Edge is going to backfill the footings #1-5 with H. sand removed yesterday. No soil will be removed from site today. All removed soil has been tested and is clean. I will leave site and return later

1040 Return to office

Unsatisfactory Conditions & Recommended Correction

# Field Report

Date 6-8-04  
Page 2 of 2

Project C I I - C I Job No. \_\_\_\_\_

Weather Conditions W Sun 70° Prepared By Sb

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

<sup>1500'</sup>  
~~1500'~~ Return to site to inspect any more excavated soil  
No additional excavation has taken place. The stockpile  
of removed dirt from vault area has been used to backfill vault  
and has been moved to eastern side of vault.  
Footings have been backfilled and compacted and forms are in  
footings 1-8. No additional footings have been dug.  
No additional electrical trench has been dug.

1500' Spoke to DM and gave him the update.  
Leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 6.9.04  
Page 1 of 2

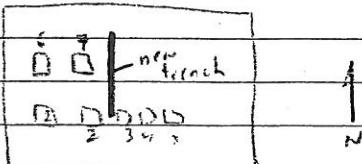
Project C III-C II Job No. \_\_\_\_\_

Weather Conditions Cloudy + 60 Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0815 Arrive at site

Footings 6+7 are being dug + backfilled. Rivers Edge



is digging down to about 5-ft bgs. The top 3-ft of soil is set aside to use as backfill and the bottom 2-ft are being ~~not~~ stucked to the east of the vault.

0845 I tested the soil to be used as backfill. All readings were 0.1 ppm. ~10 readings per 10 ft C4

I also tested the soil that is stucked (3-5 ft bgs) and all readings were 0.1 ppm

0916 Footings 6+7 are backfilled and are currently being compacted.

An electrical trench (Prime Electric) is also being dug from the east end of the vault to the west side of footing 3. Trench is approx. 2-ft wide and 2-3-ft deep. I took 10 samples of the soil that come out and all readings were 0.1 ppm.

0922 ~~test~~ Am leaving site and will return in a few hours

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

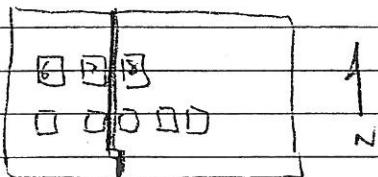
Date 6.9.04  
Page 2 of 2

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions Partly cloudy + 70° Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

~~1715~~ Return to site  
only one murr footing has been dug. #8.



I tested soil removed from this footing and all readings were 0.1 ppm

The backfilled soil on the east of the vault has been consolidated further to allow a 15-ft path on the east of the vault. This pile is now ~15-ft high and 23-ft in diameter.

I tested ~8 PID probes in this soil and all were 0.1 ppm. Also, the electrical trench has been dug all the way to the south side. I tested this removed soil and all were 0.1 ppm and all readings were 0.1 ppm.

All the footings #1-8 have been backfilled, compacted and now have been poured.

Backfilling of the electric trench in the SE area and S has begun and all the plumbing trenches are complete.

1750 Now leaving site.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

# Field Report

Date 6.16.04  
Page 1 of 2

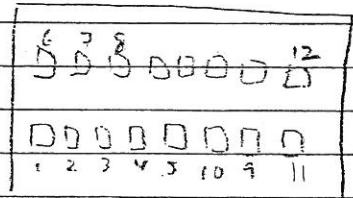
Project CTT-CT Job No. \_\_\_\_\_

Weather Conditions rainy + cool, 50's Prepared By \_\_\_\_\_

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0745 Arrive on-site

Excavation has begun on footing #9 in IL. SE corner.



I tested the top 3-ft. of sandy soil removed from this footing ad got a PID reading of 101 ppm. All other readings were 0.1 ppm. I notified Dale and he is getting more anxious to move this soil to River Edge. We have instructed not to touch this material.

0824 Excavation has continued on footing #10. I sampled soil in the bucket with a PID, every 4th bucket was tested. All readings were 0.1 ppm + background.

River Edge has excavated a 5 ft. x 8 ft. x 6 in. = tested every 3rd bucket and all readings were 0.1 ppm. They are now beginning to excavate footing #11. PID was calibrated.

1044 Shovel full of suspect soil is now covered with black plastic. The soil will be combined with the existing suspect soil structure tomorrow when they can access the new pile with a truck.

Footing #11 was dug to 5-ft. b.s. At about 4-ft. b.s. in IL footing a dark gray clay layer was discovered. I checked the soil for odor and tested with the PID. The soil was odorless and the PID was 0.1 ppm.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 5-15-94  
Page 2 of 2

Project CII-CI Job No. \_\_\_\_\_

Weather Conditions rainy, 50's Prepared By SD

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1048 I tested the soil removed from this footing with a PID. ~Every 3rd bucket was tested. All PID readings were 0.1 ppm.

Rivers Edge will now backfill and compact the footing with sand that was tested to be clean.

I am leaving site and will return after speaking with Don McCarthy

1715 Left Todd to drive here

1724 Arrive at site

only one more footing has been dug, the northwestern most footing #12.

All ~~soil~~ for other

Footings ~~holes~~ were backfilled + compacted or poured today (9.14.1)

Also done was backfilling the north side of the trench with tested clean soil.

1730 With a PID and probe I tested the soil removed from footing #12. All ~~PI~~ readings (6 per 6 CY) were 0.1 ppm. All equal to background.

1730 Leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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\_\_\_\_\_  
\_\_\_\_\_

# Field Report

Date 6-11-04  
Page 1 of 3

Project CII-CII Job No. \_\_\_\_\_

Weather Conditions Cloudy + 50's Prepared By SB

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0730 Arrive on-site

They (Nass crews) are setting large concrete panels to be the roof of the vault.

Rivers Edge is currently backfilling + compacting the footings that were poured yesterday, #9-12. They are using soil removed yesterday that was tested clean and soil from the large soil stockpile to the east of the vault. All of which had tested clean over the course of construction.

The suspect soil stockpile from yesterday has not been touched.

0756 I spoke to Gene Williams of Ferguson and he said they will not be combining suspect soil stockpiles. They want confirmation samples (?) for each one. I explained further removed soil, if suspect, would have to be stockpiled separately. I also explained that the new S. suspect soil stockpile would have to be placed in a screen and correctly covered. He understands and will pass this on to Dale.

0848 I tested the 2 suspect soil stockpiles with a PID probe readings I tested 9-10 locations per stockpile. All readings were 0.1 ppm.

I also tested the soil removed from the footing (#13) that Rivers Edge just excavated. I tested the soil both in the bucket and in stockpiles. All PID readings were 0.1 ppm. Currently they are backfilling and compacting footing #13.

□	□	□	□	□	□	□	□
6	7	8	15	14	13	12	
□	□	□	□	□	□	□	
1	2	3	4	5	10	9	11

A  
N

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 6-11-04  
Page 2 of 3

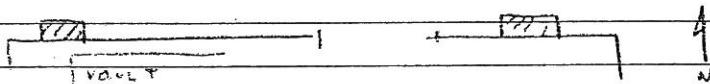
Project CITCI Job No. \_\_\_\_\_

Weather Conditions cloudy + 50's Prepared By SG

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0852 I've also spoken to Dale and let him know about our soil stockpiles and coverage requirements

0911 Spoke to DM and I will sample suspect soil stockpiles  
Excavation work was done on the outside of the north retaining wall  
locations.



Each ex. is about 3. ft deep and 2-feet wide x 8-ft long.

A 4-inch PVC pipe (sanitary sewer?) was run underneath the wall.  
In these locations I tested the soil 3 PID readings per pile  
and all readings were 0.1 ppm.

1106 Took samples from suspect coil stockpiles. Broken (visually) and piled  
into thirds and took one sample from each third

N. Stockpile is older suspect material - N. Stockpile N

" " SV

" " SIE

S. Stockpile is suspect soil from 6-10 - S. Stockpile SW

" " E

" " NW

All PID readings associated with those samples are 0.1

I took sample from 1+1/2 ft below surface of pile.

Footings 12, 14, 15 have been excavated. I sampled with a PID  
soil removed ~ 1 reading per 2x2'. I sampled both  
from bucket and stockpile. They are going to try and pour  
footings today.

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 6-11-04  
Page 3 of 3

Project CJ + CI Job No. \_\_\_\_\_

Weather Conditions Cloudy + 50's Prepared By SF

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1140 Footing #16 has been excavated I tested ~ every 5' bucket with at least 2 PID probe readings. All readings were 0-1 ppm.

1145 I am now leaving site. I will return later to check up on things.

1715 Returned to site.

New pile of suspect soil (S. stockdale) has been moved to the west of N. Stockdale and is on queen and covered with plastic.

No further excavation was completed and site ~~is~~ in the south is being graded.

1730 Leaving site

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

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# Field Report

Date 6/16/04  
Page 1 of 1

Project CII - CI

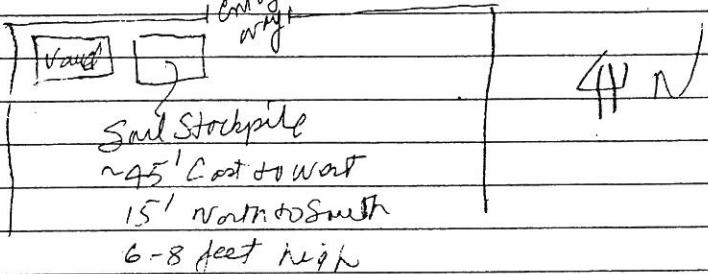
Job No. Task 2

Weather Conditions Sunny - 260°F

Prepared By DMcCarthy

Description of work done, locations, equipment used, quantity estimate (Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

Arrived on site @ 8:05A



Used the PID to measure Volatiles at 8 locations (equidistant) around the perimeter of the stockpile. Drove a rebar into pile, created a conical hole. Placed tip of PID about 6-9 inches into hole so that collar around tip contacted soil (soil). All readings were at background (0.1). Soil in this stockpile will be exported from the site.

Rebar was being installed along the south half of the Plant 2 footprint. Footings along the north wall were exposed. Forms were in place.

Soil was fine to medium sand. No staining of soil was evident

Left site at 9:25A

Unsatisfactory Conditions & Recommended Correction \_\_\_\_\_

**Capital Industries, Inc.  
Seattle, Washington**

**Soil Vapor and  
Construction Monitoring Report**

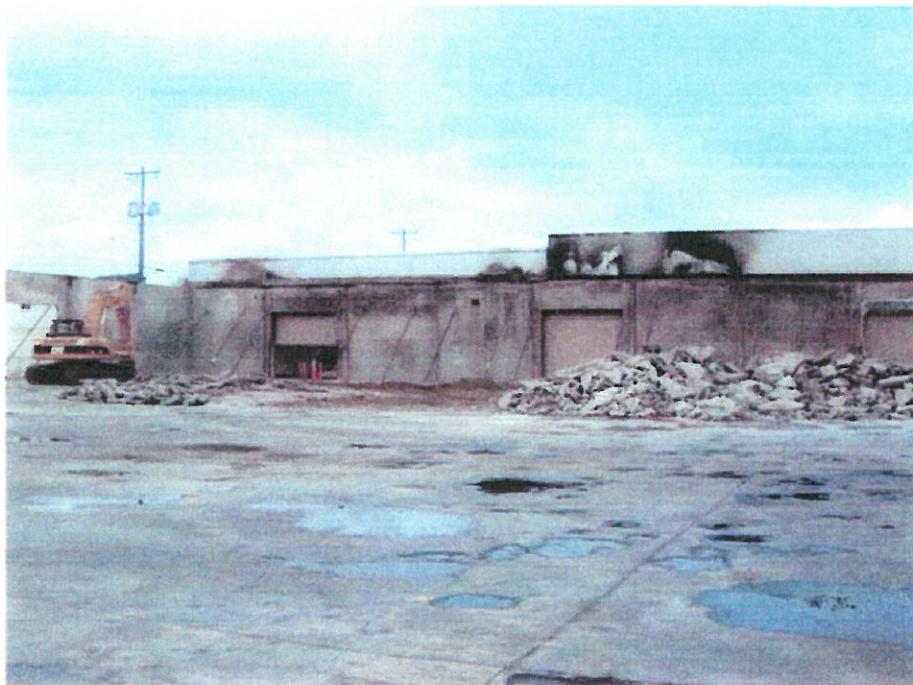
**Appendix D  
Photo Log of Construction Activities**

**Final  
July 6, 2004**





May 11, 2004: Slab removed from the W and SW areas

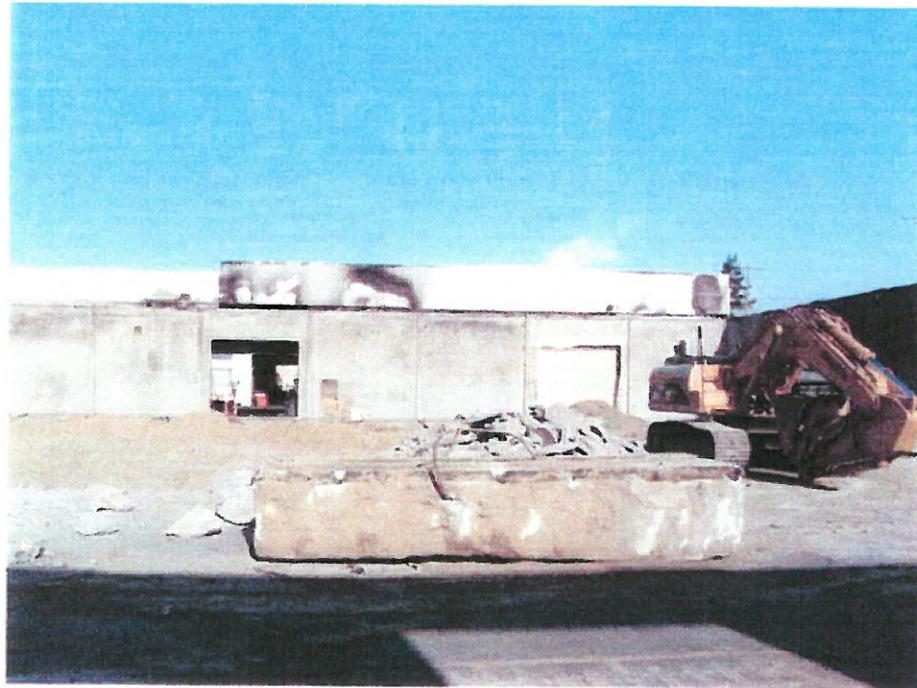


May 11, 2004: Looking W at slab removed from NW and W





May 12, 2004: Slab removed from W being loaded for off-site disposal



May 13, 2004: Looking W at large footing removed from site





May 14, 2004: Looking at NW corner from the NE corner



May 17, 2004: Looking N at removed slab and chunks of broken footing





May 18, 2004: Looking at SE corner without slab



May 19, 2004: Looking E at stormwater vault excavation





May 20, 2004: Looking N at stormwater vault excavation



May 21, 2004: Excavated footing along S wall





May 21, 2004: Looking W at stormwater vault excavation with bedding material



May 21, 2004: Looking W at covered stockpile of suspect soil, N-Stockpile





May 24, 2004: Looking E at site with 100 percent of slab removed



June 8, 2004: Internal footing excavation in SW area





June 9, 2004: Looking S at utility trench in SW area



June 11, 2004: Looking E at covered suspect soil stockpiles

