NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

# Chain of Custody

LABORATORY NUMBER:

Attention: Accounts Payable
Results & Invoice to: Laco Associates
Address: 21 W. 4th St. Eureka CA 95501

Phone: (707) 443-5054
Copies of Report to: LACO; Christine Manhart

Sampler (Sign & Print): SJD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 5282.01
Project Name: HPI/PFP C.C. Shell
Purchase Order Number: task 3020

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS | CONTAINER | PRESERVATIVE | SAMPLE CONDITION/SPECIAL INSTRUCTIONS |
|---|---|---|---|---|---|---|---|---|
| | 5282-QCTB-W | 2-16-05 | Pm | GW | 8260 list1 | 9 | b | |
| | | | | | 1 | | | |

Cold intact

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| J L Short | 2/16/05 1625 | [illegible] | 2/16/05 1625 |

SAMPLE DISPOSAL
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

NORTH COAST LABORATORIES LTD.
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# Chain of Custody

LABORATORY NUMBER: 0502352

Attention: Accounts Payable
Results & Invoice to: Laco Associates
Address: 21 W. 4th St. Eureka CA 95501
Phone: (707) 443-5054
Copies of Report to: LACO; Christine Manhart
Sampler (Sign & Print): SJD

TAT: [ ] 24 Hr [ ] 48 Hr [ ] 5 Day [ ] 5–7 Day
[✓] STD (2–3 Wk) [ ] Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms [ ]
Preliminary: FAX [✓] Verbal [ ] By:
Final Report: FAX [ ] Verbal [ ] By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 5282.01
Project Name: HPI/PFP C.C. Shell
Purchase Order Number: task 3020

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS | CONTAINER | PRESERVATIVE |
|---|---|---|---|---|---|---|---|
| | ~~5282-QCTB-W~~ | ~~2-16-05~~ | ~~pm~~ | GW | 8260 list1 | 9 | b |

ICT Not received Notified voice mail

**SAMPLE CONDITION/SPECIAL INSTRUCTIONS**

Cold, intact

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| J L Short | 2/16/05 1625 | [signature] | 2/16/05 1625 |

**SAMPLE DISPOSAL**
[✓] NCL Disposal of Non-Contaminated
[ ] Return [ ] Pickup

**CHAIN OF CUSTODY SEALS Y/N/NA**
**SHIPPED VIA:** UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

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# Chain of Custody

LABORATORY NUMBER:

Attention: Accounts Payable
Results & Invoice to: Laco Associates
Address: 21 W. 4th St. Eureka CA 95501
Phone: (707) 443-5054
Copies of Report to: LACO ; CHRISTINE MANHART
Sampler (Sign & Print): SJD

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☑ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☑ Verbal ☐ By:
Final Report: FAX ☐ Verbal ☐ By:

**CONTAINER CODES:** 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

**PRESERVATIVE CODES:** a—$HNO_3$; b—HCl; c—$H_2SO_4$; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

## PROJECT INFORMATION

Project Number: 3503.03
Project Name: CRESCENT CITY SHELL
Purchase Order Number: task 3020

| LAB ID | SAMPLE ID | DATE | TIME | MATRIX* | ANALYSIS: 8260 List 1 | ANALYSIS: TPHd/mo w/SGC | ANALYSIS: Dissolved Cr | CONTAINER | PRESERVATIVE |
|---|---|---|---|---|---|---|---|---|---|
| | 3503-MW3-W | 2-16-05 | AM | GW | 3 | 1 | | 9 | b |
| | 3503-DW-W | ↓ | ↓ | ↓ | 3 | 1 | ↓ | 7 | ↓ |
| | 3503-OW1-W | | | | 3 | 1 | | | |
| | 3503-OW2-W | | | | 3 | 1 | | | |
| | 3503-QCTB-W | ↓ | PM | ↓ | 1 | | | 2 | ↓ |

## SAMPLE CONDITION/SPECIAL INSTRUCTIONS

GEOTRACKER

Cold, intact

| RELINQUISHED BY (Sign & Print) | DATE/TIME | RECEIVED BY (Sign) | DATE/TIME |
|---|---|---|---|
| J L Short | 2/16/05 1625 | K. Thompson | 2/16/05 1625 |

SAMPLE DISPOSAL
☑ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

**ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT**

# AIR TOXICS LTD.

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:samplereceiving@airtoxics.com**

# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0502338

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Ms. Christine Manhart<br>Laco Associates<br>21 W. 4th Street<br>Eureka, CA 95501 | **BILL TO:** | Ms. Christine Manhart<br>Laco Associates<br>21 W. 4th Street<br>Eureka, CA 95501 |
| **PHONE:** | 707-443-5054 | **P.O. #** | |
| **FAX:** | 707-443-0553 | **PROJECT #** | 5282.01 HPI/PFP C. CITY SHELL |
| **DATE RECEIVED:** | 02/17/2005 | **CONTACT:** | Kelly Buettner |
| **DATE COMPLETED:** | 03/02/2005 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. |
|---|---|---|---|
| 01A | 5282-VP1 | Mod. Method TO-14A | Tedlar Bag |
| 02A | 5282-VP2 | Mod. Method TO-14A | Tedlar Bag |
| 03A | 5282-VP3 | Mod. Method TO-14A | Tedlar Bag |
| 04A | 5282-VP4 | Mod. Method TO-14A | Tedlar Bag |
| 05A | 5282-VP5 | Mod. Method TO-14A | Tedlar Bag |
| 06A | 5282-VP6 | Mod. Method TO-14A | Tedlar Bag |
| 07A | Lab Blank | Mod. Method TO-14A | NA |
| 08A | CCV | Mod. Method TO-14A | NA |
| 09A | LCS | Mod. Method TO-14A | NA |

CERTIFIED BY: Linda J. Freeman

Laboratory Director

DATE: 03/03/05

Certfication 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: 07/01/04, Expiration date: 06/30/05
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**Mod. Method TO-14A**
**Laco Associates**
**Workorder# 0502338**

Six 1 Liter Tedlar Bag samples were received on February 17, 2005. The laboratory performed the analysis via Modified Method TO-14A using GC/MS in the full scan mode. The method involves direct injection of up to a 40 mL sample aliquot into a vapor management system. Following dehumidification the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits of each compound.

| *Requirement* | *TO-14A/TO-15* | *ATL Modifications* |
|---|---|---|
| Concentration of IS Spike | 10 ppbv (TO-15) | 500 ppbv |
| BFB Acceptance Criteria | CLP protocol (TO-15) | SW-846 protocol |
| Sampling Drying System | Nafion Dryer (TO-14A) | Multisorbent concentrator |
| Blank acceptance criteria | < 0.2 ppbv (TO-14A) | < RL. |
| IS Recovery | TO-15: Within 40 % of mean over ICAL for blanks, and w/in 40 % of daily CCV for samples | Within 40 % of CCV recovery for blank and samples. |
| Sample volume | Up to 400 mL (TO-14A) | Up to 40 mLs |
| Initial Calibration | +- 30 % RSD (TO-14A) | </= 30 % RSD with 2 compounds allowed out to < 40 %. |
| Primary Ions for Quantification | Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91 | Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106 |
| Daily CCV | +- 30 % D | </= 30 % D with 2 allowed out up to 40%; flag associated sample results. |
| 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 |
| BFB Tune Absolute Abundance Criteria | Within 10% of that from the previous day. (TO-14A) | CCV Internal Standard area counts are compared to the ICAL; corrective action for > 40 %D. |
| Dilutions for Initial Calibration | Dynamic dilutions or static using canisters. | Syringe dilutions, bag dilutions. |

## Receiving Notes

There were no receiving discrepancies.

## Analytical Notes

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven 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 no 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.

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: 5282-VP1**

**ID#: 0502338-01A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021820 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 11:02 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 104 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: 5282-VP2**

**ID#: 0502338-02A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021821 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 11:27 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | 10 | 18 | 38 |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 106 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: 5282-VP3**

**ID#: 0502338-03A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021822 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 11:52 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 107 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: 5282-VP4**

**ID#: 0502338-04A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021819 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 10:11 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | 8.5 | 19 | 32 |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 110 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: 5282-VP5**

**ID#: 0502338-05A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021823 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 12:19 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 114 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: 5282-VP6**

**ID#: 0502338-06A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021824 | Date of Collection: | 2/16/05 |
| Dil. Factor: | 1.00 | Date of Analysis: | 2/18/05 12:43 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | 5.5 | 19 | 21 |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: 1 Liter Tedlar Bag**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 110 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: Lab Blank**

**ID#: 0502338-07A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021806 | Date of Collection: NA | |
| Dil. Factor: | 1.00 | Date of Analysis: 2/18/05 03:17 AM | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (uG/m3) | Amount (uG/m3) |
|---|---|---|---|---|
| Benzene | 5.0 | Not Detected | 16 | Not Detected |
| Toluene | 5.0 | Not Detected | 19 | Not Detected |
| Ethyl Benzene | 5.0 | Not Detected | 22 | Not Detected |
| m,p-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| o-Xylene | 5.0 | Not Detected | 22 | Not Detected |
| Methyl tert-butyl ether | 5.0 | Not Detected | 18 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 102 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: CCV**

**ID#: 0502338-08A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021804 | Date of Collection: NA | |
| Dil. Factor: | 1.00 | Date of Analysis: 2/18/05 02:20 AM | |

| Compound | %Recovery |
|---|---|
| Benzene | 98 |
| Toluene | 94 |
| Ethyl Benzene | 94 |
| m,p-Xylene | 102 |
| o-Xylene | 91 |
| Methyl tert-butyl ether | 95 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 104 | 70-130 |

# AIR TOXICS LTD.

**SAMPLE NAME: LCS**

**ID#: 0502338-09A**

**MODIFIED EPA METHOD TO-14A DIRECT INJECT GC/MS**

| | | | |
|---|---|---|---|
| File Name: | e021805 | Date of Collection: NA | |
| Dil. Factor: | 1.00 | Date of Analysis: 2/18/05 02:48 AM | |

| Compound | %Recovery |
|---|---|
| Benzene | 104 |
| Toluene | 99 |
| Ethyl Benzene | 100 |
| m,p-Xylene | 111 |
| o-Xylene | 89 |
| Methyl tert-butyl ether | 91 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| Toluene-d8 | 101 | 70-130 |

# @ 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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020



Contact Person: CHRISTINE MANHART
Company: LACO ASSOCIATES
Address: 21 W. 4TH ST. City: EUREKA State: CA Zip: 95501
Phone: (707) 443-5054 FAX: (707) 443-0553
Collected By: Signature: [signature]

**Project info:**
P.O. #:
Project #: 5282.01
Project Name: HPI/PFP C. CITY SHELL

**Turn Around Time:**
☑ Normal
☐ Rush _____ Specify

| Lab I.D. | Field Sample I.D. | Date & Time | Analyses Requested | Canister Pressure / Vacuum Initial | Final | Receipt |
|---|---|---|---|---|---|---|
| | 5282-VP1 | 2-16-05 PM | BTEX / MTBE BY TO14 | | | |
| | 5282-VP2 | ↓ | ↓ | | | |
| | 5282-VP3 | ↓ | ↓ | | | |
| | 5282-VP4 | ↓ | ↓ | | | |
| | 5282-VP5 | ↓ | ↓ | | | |
| | 5282-VP6 | ↓ | ↓ | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Relinquished By: (Signature) | Date/Time | Received By: (Signature) | Date/Time |
|---|---|---|---|
| [signature] | 2-16-05 | | |
| Relinquished By: (Signature) | Date/Time | Received By: (Signature) | Date/Time |
| Relinquished By: (Signature) | Date/Time | Received By: (Signature) | Date/Time |

Notes:

| Lab Use Only | Shipper Name | Air Bill # | Opened By | Temp. (°C) | Condition | Custody Seals Intact? | Work Order # |
|---|---|---|---|---|---|---|---|
| | | | | | | Yes No None | |

Form 1293 rev. 09

# Attachment 4

LACO ASSOCIATES
CONSULTING ENGINEERS
21 We[illegible]th Street, Eureka, CA 95501
TEL 70[illegible]443.5054
FAX 707.443.0553

Project Name: HPI PFP CC Sitell
Project No.: 5282.01
Task: 413
Date: 3/15/2005
PM: CSM

Tech: BWN
Mobe/Demobe time: .5/.5
Travel time: 2/1.75
Time on site: 1330
Time off site: 1515
Mileage: 180

## SYSTEM READINGS

| UNIT: C-SPARGER | | | | UNIT: | | | |
|---|---|---|---|---|---|---|---|
| Master Panel Runtime (Hrs): | 9727.32 | | | Master Panel Runtime (Hrs): | | | |
| $O_2$ Concentrator Runtime (Hrs): | 12985 | | | $O_2$ Concentrator Runtime (Hrs): | | | |
| System Clock Time: | 1440 @ 1442 | | | System Clock Time: | | | |
| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) | STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
| 1 | ~~35~~ 33 | | | 1 | | | |
| 2 | ~~18~~ 37 | | | 2 | | | |
| 3 | ~~15~~ 39 | | | 3 | | | |
| 4 | 37 | | | 4 | | | |
| 5 | 29 | | | 5 | | | |
| 6 | 24 | | | 6 | | | |
| 7 | 27 | | | 7 | | | |
| 8 | 24 | | | 8 | | | |
| 9 | 34 | | | 9 | | | |
| 10 | 25 | | | 10 | | | |
| 11 | | | | 11 | | | |
| 12 | | | | 12 | | | |

## ANCILLARY INFORMATION

| | | | |
|---|---|---|---|
| Power Meter (Kwh): | 23125 | Max. Temperature (°F): | 87.6°F |
| Max. Humidity (%RH): | 65% | Ventilation Fan(s): | (ON) / OFF |
| Surge Suppression: | (ON) / OFF | Controller Battery Voltage (volts): | N/A |

## TROUBLESHOOTING

| | | | |
|---|---|---|---|
| Ozone Detector Fault: | N/A YES / NO | 16A Breaker Fault: | YES / (NO) |
| Panel GFI Fault: | YES / (NO) | Main Circuit Breaker Fault: | YES / (NO) |
| Controller Fault: | YES / (NO) | Fasteners/Fittings: | ✓ |
| Solenoid Malfunction: | 1 2 3 4 5 6 7 8 9 10 11 12 | Correct Controller Program: | (YES) / NO |
| Tubing: | ✓ | Wires: | ✓ |

## MAINTENANCE

| | | | |
|---|---|---|---|
| $O_2$ Concentrator Filter | (YES) / NO | Reset Temperature/Humidity | (YES) / NO |
| Compressor Filter | CHANGE (YES) / NO | Check Peroxide Level | N/A YES / NO |

| TATION | RUN TIME A | B | C | HOURS/DAY | SPARGE POINT | WELL BOX OZONE CONC. (ppm) |
|---|---|---|---|---|---|---|
| 1 | 14 | 12 | 12 | 228 | 1s | |
| 2 | 14 | 12 | 12 | 228 | 1d | |
| 3 | 14 | 12 | 12 | 228 | 4s | |
| 4 | 14 | 12 | 12 | 228 | 4d | |
| 5 | 14 | 12 | 12 | 228 | 5d | |
| 6 | — | 2 | 2 | 24 | 3s, 2s | |
| 7 | — | 2 | 2 | 24 | 2d, 3d | |
| 8 | — | 2 | 2 | 24 | 6s, 7s | |
| 9 | — | 2 | 2 | 24 | 6d, 7d | |
| 10 | — | 2 | 2 | 24 | 8, 9 | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| TOTAL: | 420 | 420 | 420 | 1260 | | |

| START TIMES | A | B | C |
|---|---|---|---|
| 1 | 1200 | 800 | 1600 |
| 2 | 120 | 920 | 1720 |
| 3 | 240 | 1040 | 1840 |
| 4 | 400 | 1200 | 2000 |
| 5 | 520 | 1320 | 2120 |
| 6 | 640 | 1440 | 2240 |

**REPAIRS**

REBUILT 1207 COMPRESSOR
- SS CYL
- PISTON
- HEAD SEAL
- HEAD RING SEAL
- 4 TOP FLAPPER
- 1 UNDER FLAPPER

ADDED SNUBBER & NEW PRESSURE GAUGE

**MODIFICATIONS**

CLEANED DUST/DIRT OUT OF SHED

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: CRESCENT CITY SHELL
Project No.: 5282.01
Task: 413
Date: 2-16-05
PM: CSM

Tech: SJD
Mobe/Demobe time: -/-
Travel time: -
Time on site: 1:00
Time off site: 1:45
Mileage: -

## SYSTEM READINGS

| UNIT: C-SPARGER #1 | | | | UNIT: | | | |
|---|---|---|---|---|---|---|---|
| Master Panel Runtime (Hrs): 9208.99 | | | | Master Panel Runtime (Hrs): | | | |
| $O_2$ Concentrator Runtime (Hrs): 1192.7 | | | | $O_2$ Concentrator Runtime (Hrs): | | | |
| System Clock Time: 1303 CORRECT | | | | System Clock Time: | | | |
| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) | STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
| 1 | 25 | 1S | | 1 | | | |
| 2 | 26 | 1D | | 2 | | | |
| 3 | 25 | 4S | | 3 | | | |
| 4 | 24 | 4D | | 4 | | | |
| 5 | 23 | 5D | | 5 | | | |
| 6 | 24 | 2S/3S | | 6 | | | |
| 7 | 25 | 2D/3D | | 7 | | | |
| 8 | 22 | 6S/7S | | 8 | | | |
| 9 | 27 | 6D/7D | | 9 | | | |
| 10 | 24 | 8,9 | | 10 | | | |
| 11 | | | | 11 | | | |
| 12 | | | | 12 | | | |

## ANCILLARY INFORMATION

| | | | |
|---|---|---|---|
| Power Meter (Kwh): | 22536 | Max. Temperature (°F): | 86.5 °F |
| Max. Humidity (%RH): | 65% | Ventilation Fan(s): | (ON) OFF |
| Surge Suppression: | (ON) OFF | Controller Battery Voltage (volts): | N/A |

## TROUBLESHOOTING

| | | | |
|---|---|---|---|
| Ozone Detector Fault: N/A | YES / NO | 16A Breaker Fault: | YES / (NO) |
| Panel GFI Fault: | YES / (NO) | Main Circuit Breaker Fault: | YES / (NO) |
| Controller Fault: | YES / (NO) | Fasteners/Fittings: ✓ | REPLACED TUBING FITTINGS ON STATION 7 |
| Solenoid Malfunction: | 1 2 3 4 5 6 7 8 9 10 11 12 | Correct Controller Program: | (YES) / NO |
| Tubing: ✓ | | Wires: ✓ | |

## MAINTENANCE

| | | | |
|---|---|---|---|
| $O_2$ Concentrator Filter | (YES) / NO | Reset Temperature/Humidity | (YES) / NO |
| Compressor Filter | (YES) / NO | Check Peroxide Level N/A | YES / NO |

**LACO ASSOCIATES**
CONSULTING ENGINEERS

21 W. Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: CRESCENT CITY SHELL
Project No.: 5282.01
Task: 413
Date: 1/24/05
PM: CSM

Tech: BMN
Mobe/Demobe time: .25 / .25
Travel time: 1.75 / 1.75
Time on site: 1500
Time off site: 1600
Mileage: 165

## SYSTEM READINGS

**UNIT:** C-SPARGER #1

Master Panel Runtime (Hrs): 8785.22
$O_2$ Concentrator Runtime (Hrs): 1179.7
System Clock Time: 1505 Correct

| STATION | MANIFOLD PRESSURE (psi) | | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|---|
| 1 | 21 | 25 | 1S | |
| 2 | 25 | 28 | 1D | |
| 3 | 21 | 26 | 4S | |
| 4 | 22 | 26 | 4D | |
| 5 | 23 | 27 | 5D | |
| 6 | 19 | 23 | 2S/3S | |
| 7 | 23 | 25 | 2D/3D | |
| 8 | 15 | 20 | 6S/7S | |
| 9 | 22 | 27 | 6D/7D | |
| 10 | 18 | 26 | 8, 9 | |
| 11 | | | | |
| 12 | | | | |

**UNIT:**

Master Panel Runtime (Hrs):
$O_2$ Concentrator Runtime (Hrs):
System Clock Time:

| STATION | MANIFOLD PRESSURE (psi) | | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |

## ANCILLARY INFORMATION

ver Meter (Kwh): 22012
Humidity (%RH): 64%
e Suppression: (ON) / OFF

Max. Temperature (°F): 84.0°F
Ventilation Fan(s): (ON) / OFF
Controller Battery Voltage (volts): N/A

## TROUBLESHOOTING

Detector Fault: N/A
GFI Fault: YES / NO
er Fault: YES / (NO)
Malfunction: YES / (NO)
1 2 3 4 5 6 7 8 9 10 11 12
/

16A Breaker Fault: YES / (NO)
Main Circuit Breaker Fault: YES / (NO)
Fasteners/Fittings: ✓
Correct Controller Program: (YES) / NO
Wires: ✓

## MAINTENANCE

trator Filter
r Filter
(YES) / NO
(YES) / NO

Reset Temperature/Humidity: (YES) / NO
Check Peroxide Level: N/A YES / NO

LACO ASSOCIATES
CONSULTING ENGINEERS
21 We[illegible]th Street, Eureka, CA 95501
TEL 707.[illegible]3.5054
FAX 707.443.0553

| | | | |
|---|---|---|---|
| Project Name: | CRESCENT CITY SHELL | Tech: | SJD |
| Project No.: | 5282.01 | Mobe/Demobe time: | .50/.25 |
| Task: | 413 | Travel time: | 1.75 |
| Date: | 1-12-05 | Time on site: | 1:20 |
| PM: | CSM | Time off site: | 2:35 |
| | | Mileage: | 86 |

## SYSTEM READINGS

| UNIT: C - SPARGER #1 | | UNIT: | |
|---|---|---|---|
| Master Panel Runtime (Hrs): | 8553.95 | Master Panel Runtime (Hrs): | |
| $O_2$ Concentrator Runtime (Hrs): | 1150.8 | $O_2$ Concentrator Runtime (Hrs): | |
| System Clock Time: | 1432 SB 1432 CURRENT | System Clock Time: | |

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) | STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|---|---|---|---|
| 1 | 26 | 1S | — | 1 | | | |
| 2 | 29 | 1D | — | 2 | | | |
| 3 | 29 | 4S | — | 3 | | | |
| 4 | 27 | 4D | — | 4 | | | |
| 5 | 28 | 5D | — | 5 | | | |
| 6 | 24 | 2S/3S | — | 6 | | | |
| 7 | 26 | 2D/3D | — | 7 | | | |
| 8 | 20 | 6S/7S | — | 8 | | | |
| 9 | 28 | 6D/7D | — | 9 | | | |
| 10 | 25 | 8,9 | — | 10 | | | |
| 11 | — | — | — | 11 | | | |
| 12 | — | — | — | 12 | | | |

## ANCILLARY INFORMATION

| | | | |
|---|---|---|---|
| Power Meter (Kwh): | 21721 | Max. Temperature (°F): | 83.1 F |
| Max. Humidity (%RH): | 78% | Ventilation Fan(s): | (ON) / OFF |
| Surge Suppression: | (ON) / OFF | Controller Battery Voltage (volts): | N/A |

## TROUBLESHOOTING

| | | | |
|---|---|---|---|
| Ozone Detector Fault: | YES / (NO) | 16A Breaker Fault: | YES / (NO) |
| Panel GFI Fault: | YES / (NO) | Main Circuit Breaker Fault: | YES / (NO) |
| Controller Fault: | YES / (NO) | Fasteners/Fittings: | ✓ |
| Solenoid Malfunction: | 1 2 3 4 5 6 7 8 9 10 11 12 | Correct Controller Program: | (YES) / NO |
| Tubing: | ✓ | Wires: | ✓ |

## MAINTENANCE

| | | | |
|---|---|---|---|
| $O_2$ Concentrator Filter | (YES) / NO | Reset Temperature/Humidity | (YES) / NO |
| Compressor Filter | (YES) / NO | Check Peroxide Level N/A | YES / NO |

| ATION | R[illegible]N TIME | | | | SP[illegible]GE POINT | WELL BOX OZONE CONC. (ppm) |
|---|---|---|---|---|---|---|
| | A | B | C | HOURS/DAY | | |
| 1 | 14 | 12 | 12 | 228 | 1s | |
| 2 | 14 | 12 | 12 | 228 | 1d | |
| 3 | 14 | 12 | 12 | 228 | 4s | |
| 4 | 14 | 12 | 12 | 228 | 4d | |
| 5 | 14 | 12 | 12 | 228 | 5d | |
| 6 | — | 2 | 2 | 24 | 3s, 2s | |
| 7 | — | 2 | 2 | 24 | 2d, 3d | |
| 8 | — | 2 | 2 | 24 | 6s, 7s | |
| 9 | — | 2 | 2 | 24 | 6d, 7d | |
| 10 | — | 2 | 2 | 24 | 8, 9 | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| TOTAL: | 420 | 420 | 420 | 1260 | | |

| TART MES | A | B | C | REPAIRS |
|---|---|---|---|---|
| 1 | 1200 | 800 | 1600 | — |
| 2 | ~~120~~ | ~~920~~ | ~~1720~~ | |
| 3 | 240 | 1040 | 1840 | |
| 4 | 400 | 1200 | 2000 | |
| 5 | 520 | 1320 | 2120 | |
| 6 | 640 | 1440 | 2240 | |

MODIFICATIONS

—

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: CRESCENT CITY SHELL
Project No.: 5282.01
Task: 413
Date: 12/13/2004
PM: CSM

Tech: BWN
Mobe/Demobe time: .25/.25
Travel time: 1.75/1.75
Time on site: 1325
Time off site: 1405
Mileage: 185

## SYSTEM READINGS

UNIT: C-SPARGER #1

Master Panel Runtime (Hrs): 8010.82
$O_2$ Concentrator Runtime (Hrs): 10788
System Clock Time: 1357 SB 1357 CORRECT

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | 31 | 1S | — |
| 2 | 37 | 1D | — |
| 3 | 39 | 4S | — |
| 4 | 37 | 4D | — |
| 5 | 29 | 5D | — |
| 6 | 24 | 2S, 3S | — |
| 7 | 27 | 2D, 3D | — |
| 8 | 23 | 6S, 7S | — |
| 9 | 31 | 6D, 7D | — |
| 10 | 28 | 8, 9 | — |
| 11 | | | |
| 12 | | | |

UNIT:

Master Panel Runtime (Hrs):
$O_2$ Concentrator Runtime (Hrs):
System Clock Time:

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

## ANCILLARY INFORMATION

Power Meter (Kwh): 20921
Max. Humidity (%RH): HI
Surge Suppression: (ON) / OFF

Max. Temperature (°F): 76.8F
Ventilation Fan(s): (ON) / OFF
Controller Battery Voltage (volts): N/A

## TROUBLESHOOTING

Ozone Detector Fault: YES / (NO)
Panel GFI Fault: YES / (NO)
Controller Fault: YES / (NO)
Solenoid Malfunction: 1 2 3 4 5 6 7 8 9 10 11 12
Tubing: ✓

16A Breaker Fault: YES / (NO)
Main Circuit Breaker Fault: YES / (NO)
Fasteners/Fittings: ✓
Correct Controller Program: (YES) / NO
Wires: ✓

## MAINTENANCE

$O_2$ Concentrator Filter (YES) / NO
Compressor Filter (YES) / NO

Reset Temperature/Humidity (YES) / NO
Check Peroxide Level N/A YES / NO

LACO ASSOCIATES
CONSULTING ENGINEERS
21 W[illegible]rth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

Project Name: CRESCENT CITY SHELL
oject No.: 5282.01
Task: 413
Date: 11/15/2004
PM: CSM

Tech: BNN
Mobe/Demobe time: .5/.5
Travel time: 2/2
Time on site: 1305
Time off site: 1450
Mileage: 170

## SYSTEM READINGS

**UNIT:** C - SPARGER #1

aster Panel Runtime (Hrs): 7753.80

Concentrator Runtime (Hrs): 10141

stem Clock Time: 1410 SB 1310

| ATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | 37 | 1s | |
| 2 | 44 | 1d | |
| 3 | 47 | 4s | |
| 4 | 44 | 4d | |
| 5 | 36 | 5d | |
| 6 | 32 | 2s, 3s | |
| 7 | 34 | 2d, 3d | |
| 8 | 31 | 6s, 7s | |
| 9 | 38 | 6d, 7d | |
| 10 | 35 | 8, 9 | |
| 1 | | | |
| 2 | | | |

**UNIT:**

Master Panel Runtime (Hrs):

$O_2$ Concentrator Runtime (Hrs):

System Clock Time:

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

## ANCILLARY INFORMATION

er Meter (Kwh): 20433

Humidity (%RH): Hi

e Suppression: ON / OFF

Max. Temperature (°F): 74.1°F

Ventilation Fan(s): ON / OFF

Controller Battery Voltage (volts): N/A

## TROUBLESHOOTING

e Detector Fault: N/A YES / NO

GFI Fault: YES / NO

oller Fault: YES / NO

oid Malfunction: OK 1 2 3 4 5 6 7 8 9 10 11 12

: ✓

16A Breaker Fault: YES / NO

Main Circuit Breaker Fault: YES / NO

Fasteners/Fittings: ✓

Correct Controller Program: NEW SEE BACK YES / NO

Wires: ✓

## MAINTENANCE

ncentrator Filter YES / NO

essor Filter YES / NO

Reset Temperature/Humidity YES / NO

Check Peroxide Level N/A YES / NO

LACO ASSOCIATES
CONSULTING ENGINEERS
21 West Fourth Street, Eureka, CA 95501
TEL 707.443.5054
FAX 707.443.0553

9

Project Name: CRESCENT CITY SHELL
Project No.: 5282.01
Task: 413
Date: 11/15/2004
PM: CSM

Tech: BNN
Mobe/Demobe time: .5/.5
Travel time: 2/2
Time on site: 1305
Time off site: 1450
Mileage: 170

## SYSTEM READINGS

**UNIT:** C - SPARGER #1

Master Panel Runtime (Hrs): 7753.80
$O_2$ Concentrator Runtime (Hrs): 10141
System Clock Time: 1410 SB 1310

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | 37 | 1s | |
| 2 | 44 | 1d | |
| 3 | 47 | 4s | |
| 4 | 44 | 4d | |
| 5 | 36 | 5d | |
| 6 | 32 | 2s, 3s | |
| 7 | 34 | 2d, 3d | |
| 8 | 31 | 6s, 7s | |
| 9 | 38 | 6d, 7d | |
| 10 | 35 | 8, 9 | |
| 11 | | | |
| 12 | | | |

**UNIT:**

Master Panel Runtime (Hrs):
$O_2$ Concentrator Runtime (Hrs):
System Clock Time:

| STATION | MANIFOLD PRESSURE (psi) | SPARGE POINT | WELL HEAD PRESSURE (psi) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

## ANCILLARY INFORMATION

Power Meter (Kwh): 20433
Max. Humidity (%RH): Hi
Surge Suppression: (ON) / OFF

Max. Temperature (°F): 74.1°F
Ventilation Fan(s): (ON) / OFF
Controller Battery Voltage (volts): N/A

## TROUBLESHOOTING

Ozone Detector Fault: N/A YES / NO
Panel GFI Fault: YES / (NO)
Controller Fault: YES / (NO)
Solenoid Malfunction: OK 1 2 3 4 5 6 7 8 9 10 11 12
Tubing: ✓

16A Breaker Fault: YES / (NO)
Main Circuit Breaker Fault: YES / (NO)
Fasteners/Fittings: ✓
Correct Controller Program: NEW SEE BACK (YES) / NO
Wires: ✓

## MAINTENANCE

$O_2$ Concentrator Filter (YES) / NO
Compressor Filter (YES) / NO

Reset Temperature/Humidity (YES) / NO
Check Peroxide Level N/A YES / NO

| TATION | RUN TIME A | RUN TIME B | RUN TIME C | MINUTES/ HOURS/DAY | SPARGE POINT | WELL BOX OZONE CONC. (ppm) |
|---|---|---|---|---|---|---|
| 1 | 14 | 12 | 12 | 228 | 1s | |
| 2 | 14 | 12 | 12 | 228 | 1d | |
| 3 | 14 | 12 | 12 | 228 | 4s | |
| 4 | 14 | 12 | 12 | 228 | 4d | |
| 5 | 14 | 12 | 12 | 228 | 5d | |
| 6 | — | 2 | 2 | 24 | 3s, 2s | |
| 7 | — | 2 | 2 | 24 | 2d, 3s | |
| 8 | — | 2 | 2 | 24 | 6s, 7s | |
| 9 | — | 2 | 2 | 24 | 6d, 7d | |
| 10 | — | 2 | 2 | 24 | 8, 9 | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| TOTAL: | 420 | 420 | 420 | 1260 | | |

| START TIMES | A | B | C |
|---|---|---|---|
| 1 | 1200AM | 800 | 1600 |
| 2 | 120 | 920 | 1720 |
| 3 | 240 | 1040 | 1840 |
| 4 | 400 | 1200pm | 2000 |
| 5 | 520 | 1320 | 2120 |
| 6 | 640 | 1440 | 2240 |

**REPAIRS**

Used T's & 90° Kynars to Allow Run changes. Removed more parts than added. None Billed.

**MODIFICATIONS**

Lines 7s, 7d, & 9 - Identified.