



RW - 083

November 5, 2002

Alameda County  
NOV 6 7 2002  
Environmental Health

REPORT  
of  
SOIL VAPOR SURVEY  
ASE JOB NO. 3857  
at  
California College of Arts and Crafts  
810 Clay Street  
Oakland, California

Submitted by:  
AQUA SCIENCE ENGINEERS, INC.  
208 West El Pintado  
Danville, CA 94526  
(925) 820-9391

### 3.2 Drilling and Soil Sample Collection

On November 1, 2002, Vironex, Inc. of San Leandro, California drilled borings SV-1 and SV-2 to 3-foot bgs in the basement of the site building using drilling rods driven with a 40-pound manual slide hammer. The bottom of the rod contained an expendable point. Once at depth, the drive rod was retracted separating the expendable point and the rods and creating the desired void for sample collection. A Geoprobe Point Run Tubing (PRT) system adapter and new, unused polyethylene tubing was then advanced through the inner drive rod and secured to the expendable point holder at the base of the rods. The tubing was then purged using the Geoprobe vacuum/volume system. The sample was collected using a Tedlar bag with a vacuum box. The samples were labeled with the site location, sample designation, date and time the sample were collected, and the initials of the person collecting the sample. The samples were then delivered under chain of custody to Severn Trent Laboratory (STL San Francisco) of Pleasanton, California (CA DHS ELAP #2496) for analysis. The sampling was directed by ASE geologists Robert E. Kitay and Erik Paddleford.

### 3.3 Decontamination and Borehole Backfilling

Drilling equipment was cleaned with a trisodium phosphate (TSP) solution between borings to prevent potential cross-contamination. All tubing was discarded after each sampling event, and tubing was not reused. Following collection of the samples, each boring was backfilled with neat cement to the surface.

## **4.0 ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES**

Each soil vapor sample was analyzed by STL San Francisco for TPH-G by modified EPA Method 5030/8015 and BTEX and MTBE by EPA Method 8021B. The analytical results are tabulated in Table One, and the certified analytical report and chain of custody forms are included in Appendix A.

## **1.0 INTRODUCTION**

This report presents the methods and findings of Aqua Science Engineers, Inc. (ASE)'s soil vapor survey under the basement area of 810 Clay Street in Oakland, California. This work was conducted to meet the requirements of the Alameda County Health Care Services Agency (ACHCSA) as requested in their letter dated June 3, 2002. During a telephone conversation with Ms. Eva Chu of the ACHCSA on July 30, 2002, Ms. Chu stated that there was no longer a need to define the vertical extent of contamination since other borings and monitoring well MW-1 are located nearby. This property was formerly owned and used by The Salvation Army, but has been sold to California College of Arts and Crafts (CCAC), who is in the process of reselling the property.

## **2.0 SCOPE OF WORK (SOW)**

ASE's SOW for this soil vapor survey was as follows:

- 1) Obtain a drilling permit from the Alameda County Public Works Agency (ACPWA).
- 2) Push two vapor extraction points to 3-feet below ground surface (bgs) in the basement area and collect soil vapor samples.
- 3) Analyze one soil vapor sample collected from each point at a CAL-DHS certified analytical laboratory for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE).
- 4) Backfill each boring with neat cement.
- 5) Prepare a report presenting the results of the vapor sampling.

Details of the assessment are presented below.

## **3.0 DRILL SOIL BORINGS AND COLLECT SAMPLES**

### **3.1 Permit Preparation**

Prior to drilling, ASE applied for a drilling permit from the Alameda County Public Works Agency. However, the ACPWA contacted ASE and stated that the permit was not necessary for these shallow borings since no soil samples were to be collected.

**TABLE ONE**  
 Summary of Analysis of **SOIL VAPOR** Samples  
 All results are in **ug/L**

Boring	Depth Sampled	TPH Gasoline	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
SV-1	3'	<50	<0.50	<0.50	<0.50	<0.50	<5.0
SV-2	3'	<50	<0.50	<0.50	<0.50	<0.50	<5.0

Notes:

Non-detectable concentrations noted by the less than symbol (<) followed by the detection limit

No hydrocarbons were detected in either of the soil vapor samples.

**5.0 CONCLUSIONS AND RECOMMENDATIONS**

No hydrocarbons were detected in either of the soil vapor samples. Based on these results, **ASE recommends that this case be closed, and that the monitoring wells at the site be destroyed.**

**6.0 REPORT LIMITATIONS**

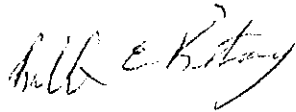
The results presented in this report represent conditions at the time of the sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory.

This report does not fully characterize the site for contamination resulting from unknown sources or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

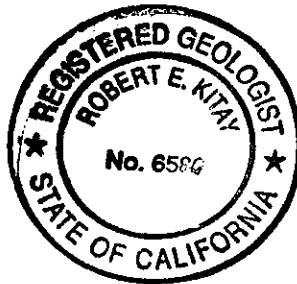
Aqua Science Engineers appreciates the opportunity provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Robert E. Kitay, R.G., R.E.A.  
Senior Geologist



Attachments: Figures 1 and 2  
Appendix A

cc: Mr. David Kirshman, California College of Arts and Crafts. 5212  
Broadway, Oakland, CA 94618

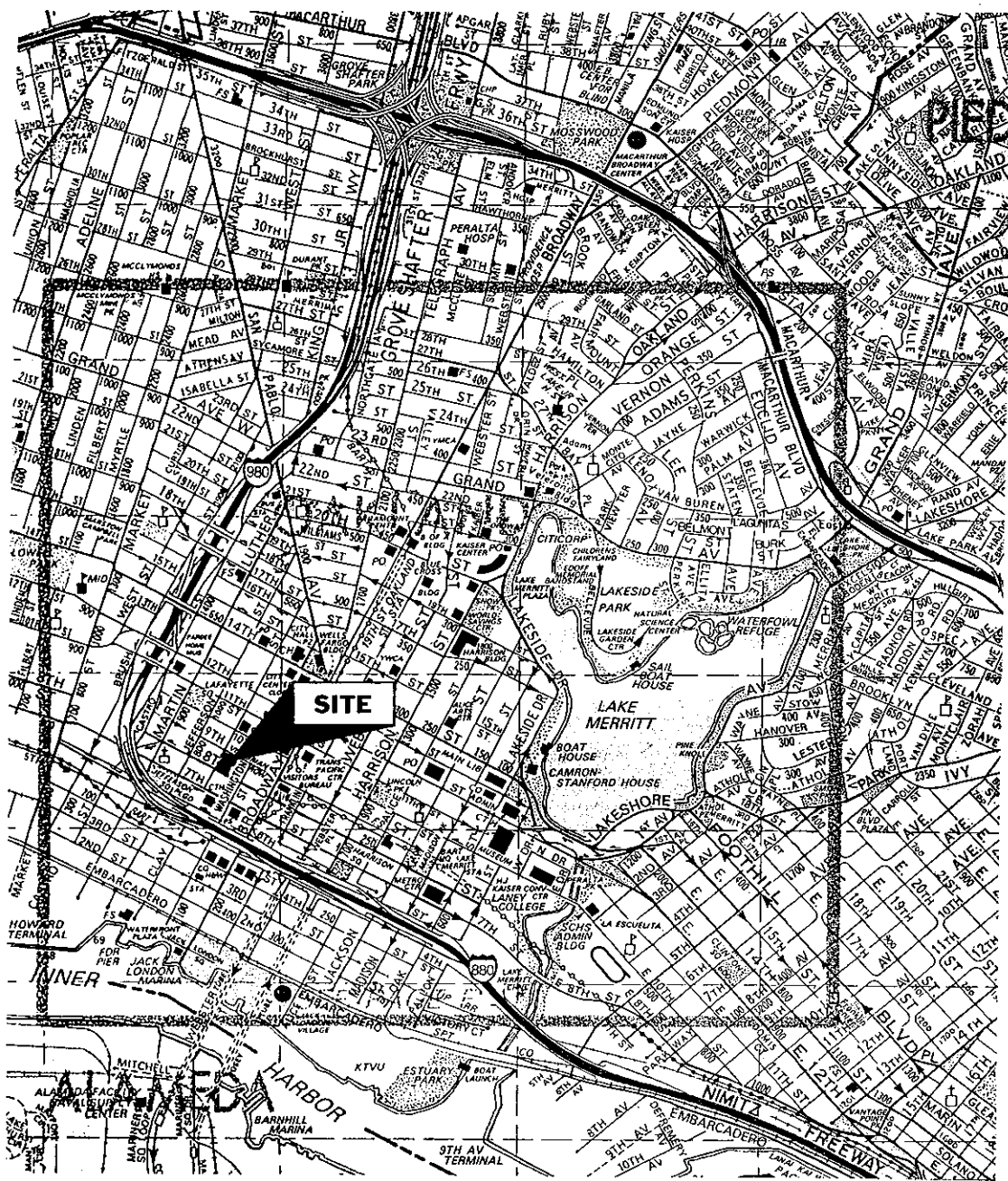
Ms. Eva Chu, Alameda County Health Care Services Agency, 1131  
Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Mr. Chuck Headlee, California Regional Water Quality Control Board,  
San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, CA  
94612

## **FIGURES**



NORTH



### SITE LOCATION MAP

THE SALVATION ARMY  
810 CLAY STREET  
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1



NORTH

SCALE  
1" = 30'

J & M Meats Building

Parking

SB-3

Parking

Clay Street

Sidewalk

Basement #3

SALVATION ARMY BUILDING

Adjacent Building

Basement #4

Former Gasoline Station Area

Basement #2

SV-2

SV-1

Basement #1

BH-A

SB-1

MW-1

BH-B

Sidewalk

SB-2

Eighth Street

Area of Attempted Borings

LEGEND



Soil Vapor Sample Location



Monitoring Well Location



Soil boring drilled 4/99



Hand augered soil boring drilled in basement area



Soil boring drilled 1/99

SOIL VAPOR  
SAMPLE LOCATIONS

THE SALVATION ARMY  
810 CLAY STREET  
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

FIGURE 2



## **APPENDIX A**

Analytical Report and Chain of Custody Form

Submission#: 2002-11-0018

November 04, 2002

SEVERN

TRENT

LABORATORY

**Aqua Science Engineers, Inc.**

208 West El Pintado Road

Danville, CA 94526

Attn.: Robert Kitay

Project#: CALIFORNIA COLLEGE OF ARTS & CRAFTS

Project: 810 Clay Street

STL San Francisco  
1220 Quarry Ln  
Pleasanton CA 94566

Tel.: (925) 484-1919  
Fax: (925) 484-1096  
www.stl-inc.com  
www.chromalab.com

CA DHS ELAP#:2496

Dear Mr. Kitay,

Attached is our report for your samples received on 11/01/2002 13:15

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/16/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [vvancil@chromalab.com](mailto:vvancil@chromalab.com)

Sincerely,



Vincent Vancil  
Project Manager

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.

Attn.: Robert Kitay

208 West El Pintado Road

Danville, CA 94526

Phone: (925) 820-9391 Fax: (925) 837-4853

Project: CALIFORNIA COLLEGE OF ARTS & CRAFTS Received: 11/01/2002 13:15  
810 Clay Street

SEVERN

TRENT

LABORATORY

STL San Francisco  
1220 Quarry Lane  
Pleasanton, CA 94566

Tel: (925) 484-1919  
Fax: (925) 484-1096  
www.stl-inc.com  
www.chromalab.com

CA DHS ELAP# 2496

### Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SV-1	11/01/2002 10:00	Air	1
SV-2	11/01/2002 10:25	Air	2

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

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Tel: (925) 484-1919  
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www.stl-inc.com  
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	SV-1	Lab ID:	2002-11-0018 - 1
Sampled:	11/01/2002 10:00	Extracted:	11/4/2002 11:09
Matrix:	Air	QC Batch#:	2002/11/04-01:05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	11/04/2002 11:09	
Benzene	ND	0.50	ug/L	1.00	11/04/2002 11:09	
Toluene	ND	0.50	ug/L	1.00	11/04/2002 11:09	
Ethyl benzene	ND	0.50	ug/L	1.00	11/04/2002 11:09	
Xylene(s)	ND	0.50	ug/L	1.00	11/04/2002 11:09	
MTBE	ND	5.0	ug/L	1.00	11/04/2002 11:09	
<b>Surrogates(s)</b>						
Trifluorotoluene	100.2	58-124	%	1.00	11/04/2002 11:09	
4-Bromofluorobenzene-FID	82.4	50-150	%	1.00	11/04/2002 11:09	

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

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Project: CALIFORNIA COLLEGE OF ARTS & CRAFTS Received: 11/01/2002 13:15

810 Clay Street

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Fax: (925) 484-1096  
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 5030 Test(s): 8015M  
5030 8021B  
Sample ID: SV-2 Lab ID: 2002-11-0018 - 2  
Sampled: 11/01/2002 10:25 Extracted: 11/4/2002 11:41  
Matrix: Air QC Batch#: 2002/11/04-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	11/04/2002 11:41	
Benzene	ND	0.50	ug/L	1.00	11/04/2002 11:41	
Toluene	ND	0.50	ug/L	1.00	11/04/2002 11:41	
Ethyl benzene	ND	0.50	ug/L	1.00	11/04/2002 11:41	
Xylene(s)	ND	0.50	ug/L	1.00	11/04/2002 11:41	
MTBE	ND	5.0	ug/L	1.00	11/04/2002 11:41	
<b>Surrogates(s)</b>						
Trifluorotoluene	79.6	58-124	%	1.00	11/04/2002 11:41	
4-Bromofluorobenzene-FID	67.7	50-150	%	1.00	11/04/2002 11:41	

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.

Attn.: Robert Kitay

208 West El Pintado Road

Danville, CA 94526

Phone: (925) 820-9391 Fax: (925) 837-4853

Project: CALIFORNIA COLLEGE OF ARTS & CRAFTS Received: 11/01/2002 13:15  
810 Clay Street

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Pleasanton, CA 94566

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Fax: (925) 484-1096  
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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030

Method Blank

MB: 2002/11/04-01.05-003

Water

Test(s): 8015M

QC Batch # 2002/11/04-01.05

Date Extracted: 11/04/2002 08:21

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	11/04/2002 08:21	
Benzene	ND	0.5	ug/L	11/04/2002 08:21	
Toluene	ND	0.5	ug/L	11/04/2002 08:21	
Ethyl benzene	ND	0.5	ug/L	11/04/2002 08:21	
Xylene(s)	ND	0.5	ug/L	11/04/2002 08:21	
MTBE	ND	5.0	ug/L	11/04/2002 08:21	
<b>Surrogates(s)</b>					
Trifluorotoluene	107.7	58-124	%	11/04/2002 08:21	
4-Bromofluorobenzene-FID	90.0	50-150	%	11/04/2002 08:21	

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030

Test(s): 8021B

Laboratory Control Spike

Water

QC Batch # 2002/11/04-01.05

LCS 2002/11/04-01.05-004

Extracted: 11/04/2002

Analyzed: 11/04/2002 08:53

LCSD 2002/11/04-01.05-005

Extracted: 11/04/2002

Analyzed: 11/04/2002 09:25

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	93.2	93.0	100.0	93.2	93.0	0.2	77-123	20		
Toluene	94.1	94.0	100.0	94.1	94.0	0.1	78-122	20		
Ethyl benzene	95.1	96.4	100.0	95.1	96.4	1.4	70-130	20		
Xylene(s)	285	289	300	95.0	96.3	1.4	75-125	20		
<i>Surrogates(s)</i>										
Trifluorotoluene	490	502	500	98.0	100.4		58-124			

Submission #: 2002-11-0018

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.

Attn.: Robert Kitay

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Danville, CA 94526

Phone: (925) 820-9391 Fax: (925) 837-4853

Project: CALIFORNIA COLLEGE OF ARTS & CRAFTS Received: 11/01/2002 13:15  
810 Clay Street

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Fax: (925) 484-1096  
www.stl-inc.com  
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2002/11/04-01.05

LCS 2002/11/04-01.05-006

Extracted: 11/04/2002

Analyzed: 11/04/2002 09:58

LCSD 2002/11/04-01.05-007

Extracted: 11/04/2002

Analyzed: 11/04/2002 10:30

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Gasoline	496	543	500	99.2	108.6	9.0	75-125	20		
Surrogates(s) 4-Bromofluorobenzene-FID	440	484	500	88.0	96.8		50-150			



**Report To**

Attn: R Kitay / E Paddleford  
Company: ASE  
Address: Danville CA  
Phone: 925-820-9391 Email: \_\_\_\_\_  
Bill To: \_\_\_\_\_ Sampled By: \_\_\_\_\_  
Attn: \_\_\_\_\_ Phone: \_\_\_\_\_

**Analysis Request**

Sample ID	Date	Time	Mat rix	Pres erv.	TPH EPA - <input type="checkbox"/> 8015/8021 <input type="checkbox"/> 8260B <input checked="" type="checkbox"/> Gas w/ <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE	Purgeable Aromatics BTEX EPA - <input type="checkbox"/> 8021 <input type="checkbox"/> 8260B	TEPH EPA 8015M <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____	Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021	Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624	Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625	Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total	Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608	PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____	<input type="checkbox"/> W.E.T (STLC) <input type="checkbox"/> TCLP	Hexavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS	Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>	Number of Containers	
<u>SV-1</u>	<u>11/1/02</u>	<u>1000</u>	<u>Air</u>	<u>-</u>	<input checked="" type="checkbox"/>																	<u>1</u>
<u>SV-2</u>	<u>11/1/02</u>	<u>1025</u>	<u>Air</u>	<u>-</u>	<input checked="" type="checkbox"/>																	<u>1</u>

**Project Info.**

**Sample Receipt**

Project Name: 810 clay street  
Project#: California College of Art and Crafts  
PO#: \_\_\_\_\_  
Credit Card#: \_\_\_\_\_  
# of Containers: \_\_\_\_\_  
Head Space: \_\_\_\_\_  
Temp: \_\_\_\_\_  
Conforms to record: \_\_\_\_\_  
Other: \_\_\_\_\_

T A T  
Std 5 Day  
72h 48h 24h

Report:  Routine  Level 3  Level 4  EDD  State Tank Fund EDF  
Special Instructions / Comments: \_\_\_\_\_  
 Global ID \_\_\_\_\_

1) Relinquished by:  
E Paddleford 1315  
Signature Time  
Erik Paddleford 11/1/02  
Printed Name Date  
ASE  
Company

1) Received by:  
Signature Time  
Printed Name Date  
Company

2) Relinquished by:  
Signature Time  
Printed Name Date  
Company

2) Received by:  
Signature Time  
Printed Name Date  
Company

3) Relinquished by:  
Signature Time  
Printed Name Date  
Company

3) Received by:  
Nouna K. 1315  
Signature Time  
Nouna K. 11/1/02  
Printed Name Date  
STL-SF  
Company