

# STC

Environmental Services Inc.  
Environmental Scientists and Engineers

4754 RESEARCH DRIVE

SAN ANTONIO, TEXAS 78240

Office (210) 696-6286 / FAX (210) 696-8761

December 16, 2009

Mr. Chris Villarreal  
Project Manager  
U.S. EPA  
Region 6  
1445 Ross Ave. (6SF-TS)  
Dallas Texas, 75202

Subject: Vent Installation  
Leon Valley Veterinary Clinic  
6701 Bandera Road  
Leon Valley, Texas

Dear Mr. Villarreal:

On October 6, 2009, the EPA issued comments on the installation of vents at the Leon Valley Veterinary Clinic. These comments were in response to the proposed work plan for installation of vents presented in an STC letter dated September 24, 2009. Thank you for your timely response.

After receiving your comments, we engaged a plumber to locate sewer lines in the Veterinary Clinic and we are now ready to authorize a contractor to install the vents at the two original proposed locations noted in the work plan. Before proceeding, we are seeking EPA's approval of the proposed work.

EPA's letter of October 6, 2009 also requested certain information concerning the PID surveys of the Vet Clinic, the condition of the slab, and other items. This letter also addresses these issues and this information is presented below.

## **PID SURVEY**

Section 1 of the EPA Comment letter presents 11 questions concerning the PID surveys of the building. A copy of EPA letter is attached for reference. Answers to each of the 11 questions are presented below.

1. There is no substantive additional information concerning the PID Surveys.
2. The model of the PID was a Mini Rae 3000.
3. The PID was calibrated. The calibrations sheets for the two surveys are attached.
4. The PID was calibrated on 6/4/09 and 7/21/09 with Isobutylene. Additional details are presented on the attached calibration sheets.
5. All accessible weep holes were sampled during the June event. The July event did not include weep holes inside the fenced area which showed no detectable levels during the June event. Sampling locations for the two surveys are shown on Figures 1 and 2.
6. No cracks in the slab were identified. The majority of the building has vinyl sheet flooring which would tend to obscure any minor cracks.
7. No cracks were surveyed with the PID.
8. The survey on June 4, 2009 occurred between the hours of approximately 8AM and noon. The survey on July 22, 2009 occurred between the hours of approximately 7AM and 9AM.
9. Outdoor air temperatures on June 4, 2009 in San Antonio ranged from 70 to 92 degrees Fahrenheit. Outdoor air temperatures on July 22, 2009 in San Antonio ranged from 79 to 102 degrees Fahrenheit.
10. Average AM humidity on June 4, 2009 was 88%. Average AM humidity on July 22, 2009 was 86%.
11. Air conditioning was running/cycling at the time of each survey.

Section 1 of the EPA Comment letter notes Sample Location P was not retested on July 22, 2009. Sample P was taken from the drain opening at the bottom of the sink. A P-Trap is evident under the sink. A P-Trap typically contains water that acts as a vapor barrier and prevents sewer gas from entering the indoor air space. The PID readings found at Sample P may therefore be attributed to some chemical or cleaning agent washed down the drain and not indicative of PCE vapors. For these reasons, no drain openings were re-tested during the July event.

Section 1 of the EPA Comment letter also requests weep hole numbers also be presented on the corresponding figures. These revisions are shown on Figures 1 and 2.

## CAMERA INSPECTION OF SEWER LINES

E.L. Smith Plumbing of San Antonio performed a camera inspection of the sewer lines at the Vet Clinic on November 20, 2009. This camera inspection revealed a sanitary sewer line exits the building at a point near the front entrance to the building on the southeast side of the structure.

The work by E.L. Smith also located the larger lines under the slab of the Vet Clinic. This work revealed the larger main line under the slab extends to the northwest portion of the building where a cleanout is located on the exterior wall on the kennel area. These main lines are shown on Figure 3. Smaller lines for several sinks and other plumbing fixtures were not identified. However, estimated locations of these secondary lines are shown on Figure 4.

## PROPOSED VENT LOCATIONS

It is proposed that two sub-slab depressurization vents will be installed at the northwest corner of the building near the kennel area (SSD-3) and near the crack in the northern building wall (SSD-4). The location of SSD-3 has been changed slightly to reflect the results of the camera survey. All other conditions and specifications noted in the September 24, 2009 work plan remain unchanged. The location of the vents is shown on Figure 4.

Section 2 of the EPA Comment letter presents several questions concerning the proposed vents. These questions are addressed in the outline below.

- If feasible, the vent near the kennel area (SSD-3) will terminate in any permeable sewer backfill material that may be present near the clean out and sewer line in this area. This same approach was taken for the vents near the Cash Advance lease space. The vents at the Cash Advance lease space (SSD-1 and SSD-2) are shown on Figure 5.
- The screened section of SSD-1 terminates in sand backfill associated with a sewer line that exits the building at this point. SSD-2 does not terminate in sand backfill but is located near sewer lines associated with a commode and sink in this area.
- A similar approach is being taken at the Vet Clinic. SSD-3 is likely to terminate in sand backfill around the sewer line. SSD-4 may not terminate in sand backfill but is located near a sink feature and a location where vapors were detected in weep holes in June 2009.

Also, in the selection the location of the vents, please note the following additional information was considered.

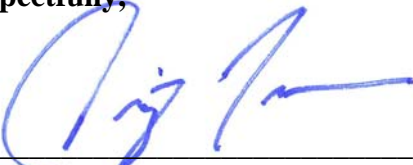
1. Both vents are located relatively close to Beacon Probe location M14 (See Figure 5). This location showed one of the highest levels of vapor during the study. Therefore, it is possible that both vents may reduce vapors in this area.
2. Beacon sample K16 also showed an elevated level of vapor. This area is located near the point where the sewer line exits the building. This location was also considered for vent installation. However, no vapors were found in weep holes near K-16, which is located near the main entrance to the facility. Installation of a vent in this area is therefore also an atheistic concern. Based on these conditions, placing a vent near the other end of the main sewer line was considered a more optimal location.

## SUMMARY

This report presents the results of a camera inspection and addressees questions presented in the EPA letter dated October 6, 2009. Based on the camera inspection, we are now prepared to install the vents. We are seeking EPA concurrence with this work prior to proceeding.

If you have any questions, please do not hesitate to contact me at (210) 696-6288.

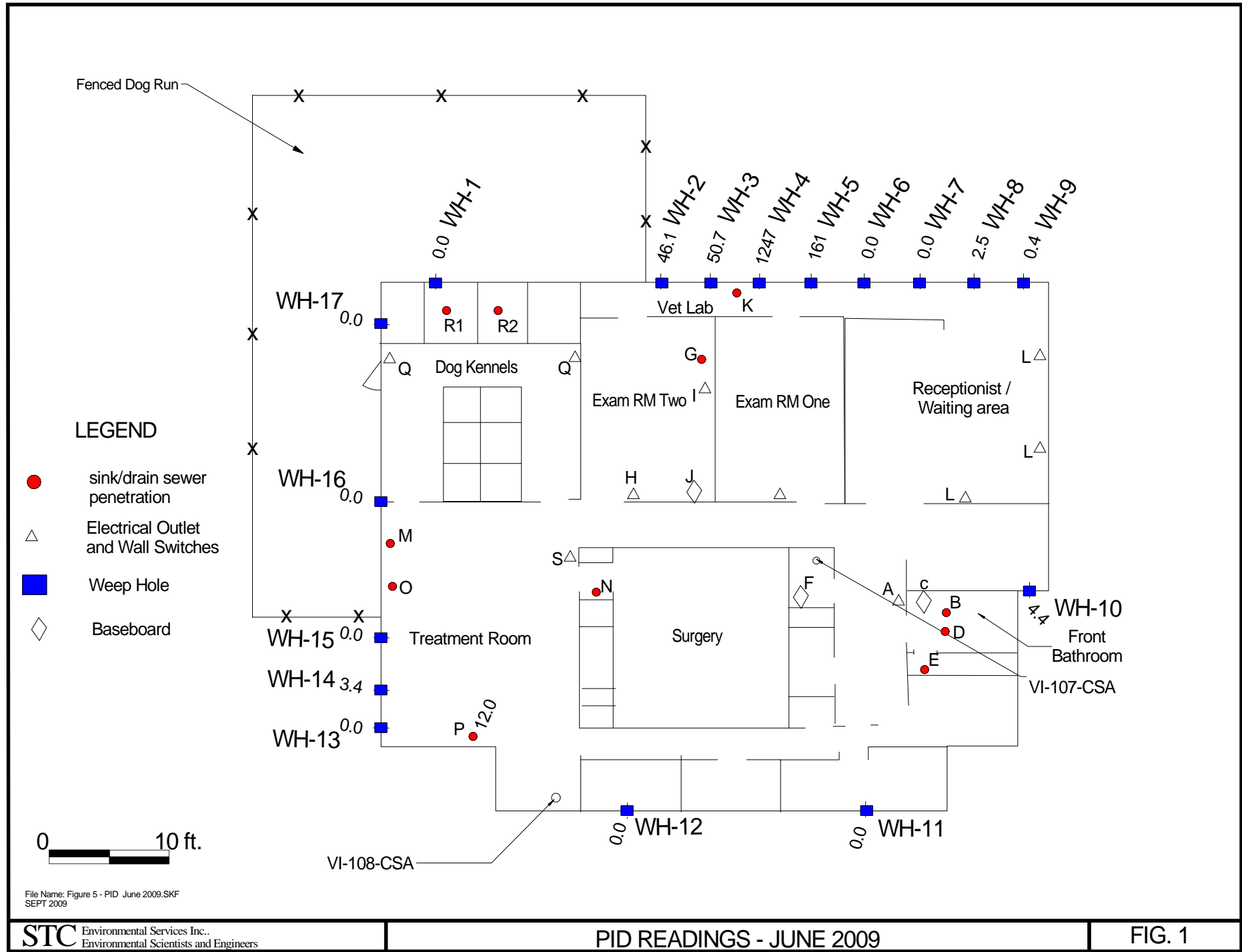
Respectfully,

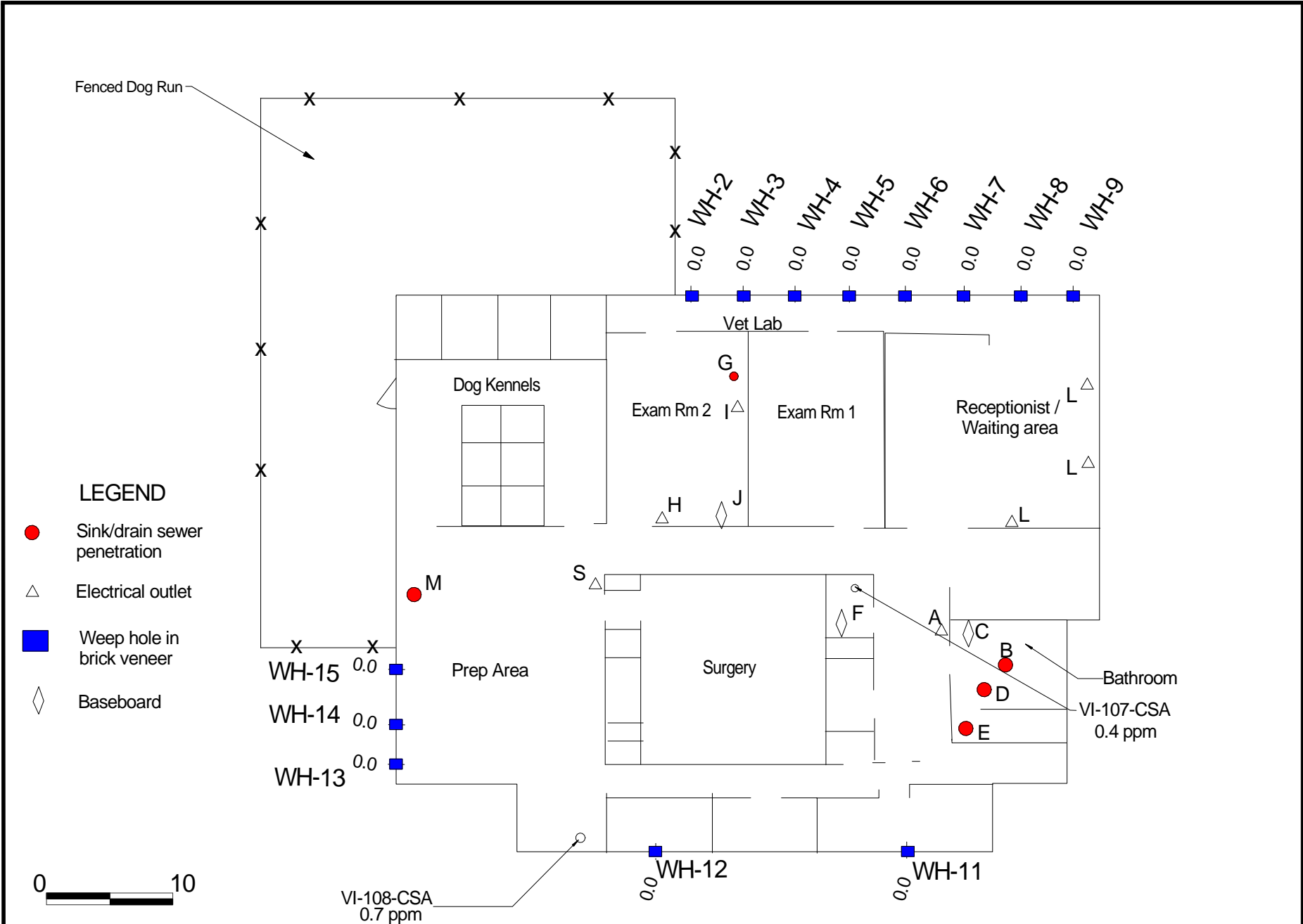


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**Craig Tribbley P.G.**  
**Vice President**  
**CAPM 00022**

**Attachments: Tables 1-2**  
**Figures 1-5**  
**PID Calibration Sheets**  
**Copy of EPA Letter dated October 6, 2009**



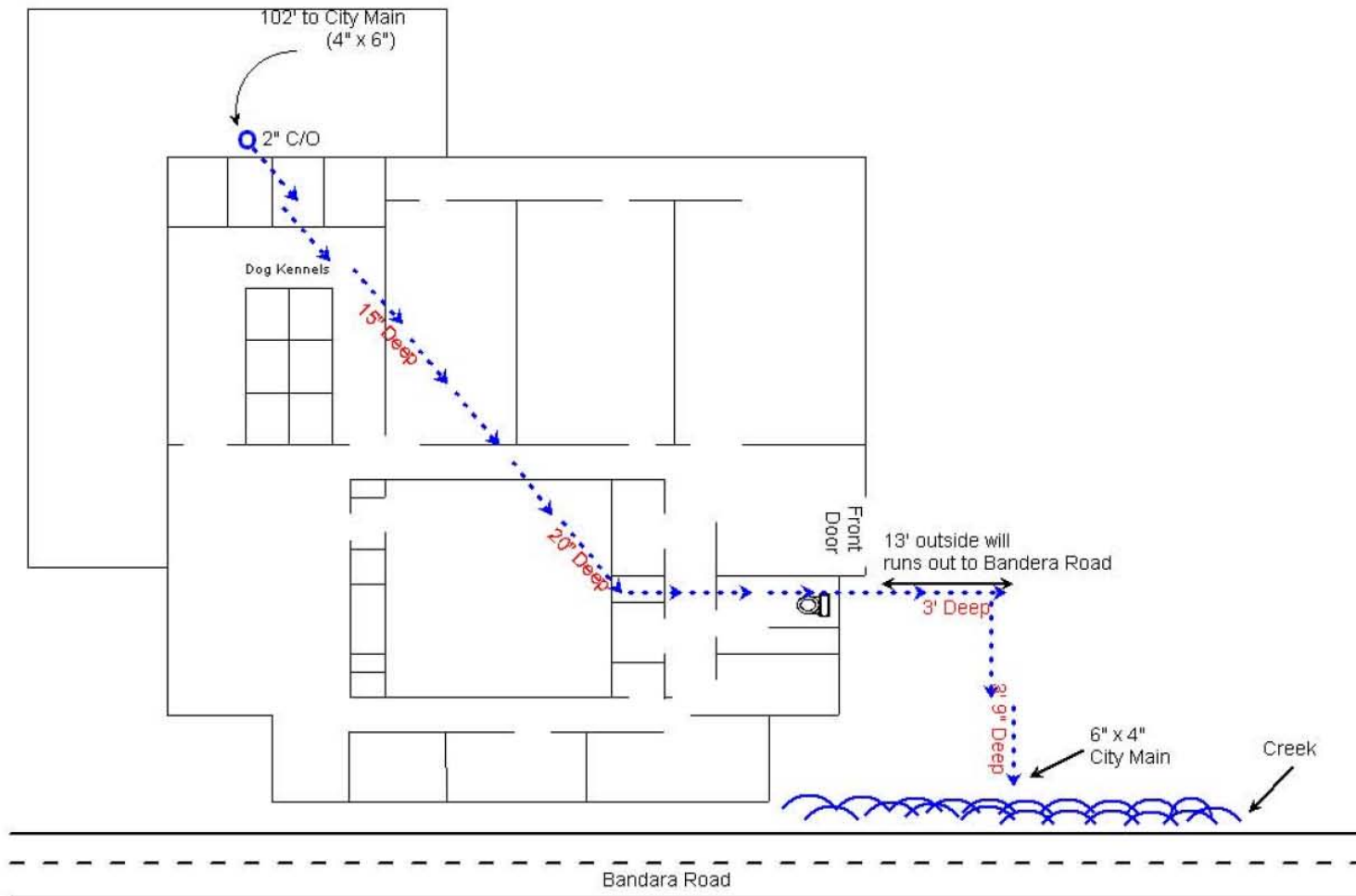


File Name: Figure 6 - PID July 2009.SKF  
SEPT 2009

Leon Valley Vet Clinic  
6701 Bandera Road  
San Antonio, TX 78238

c/o Craig Tribley  
4754 Research Dr.  
San Antonio, TX 78240

**\*\*DRAWING IS NOT TO SCALE\*\***



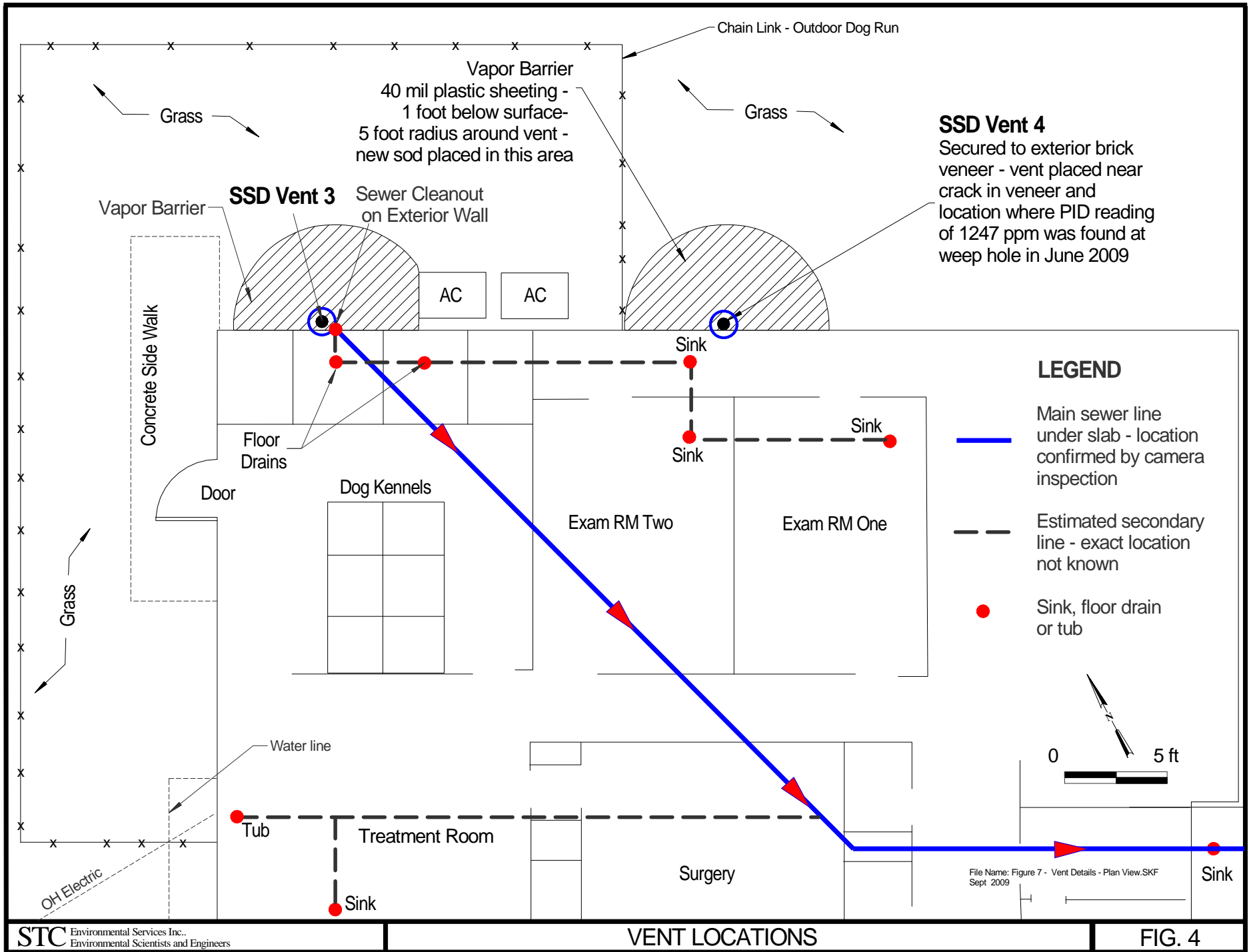
File Name: Figure 3 - Sewer Line Map.SKF  
Dec 2009

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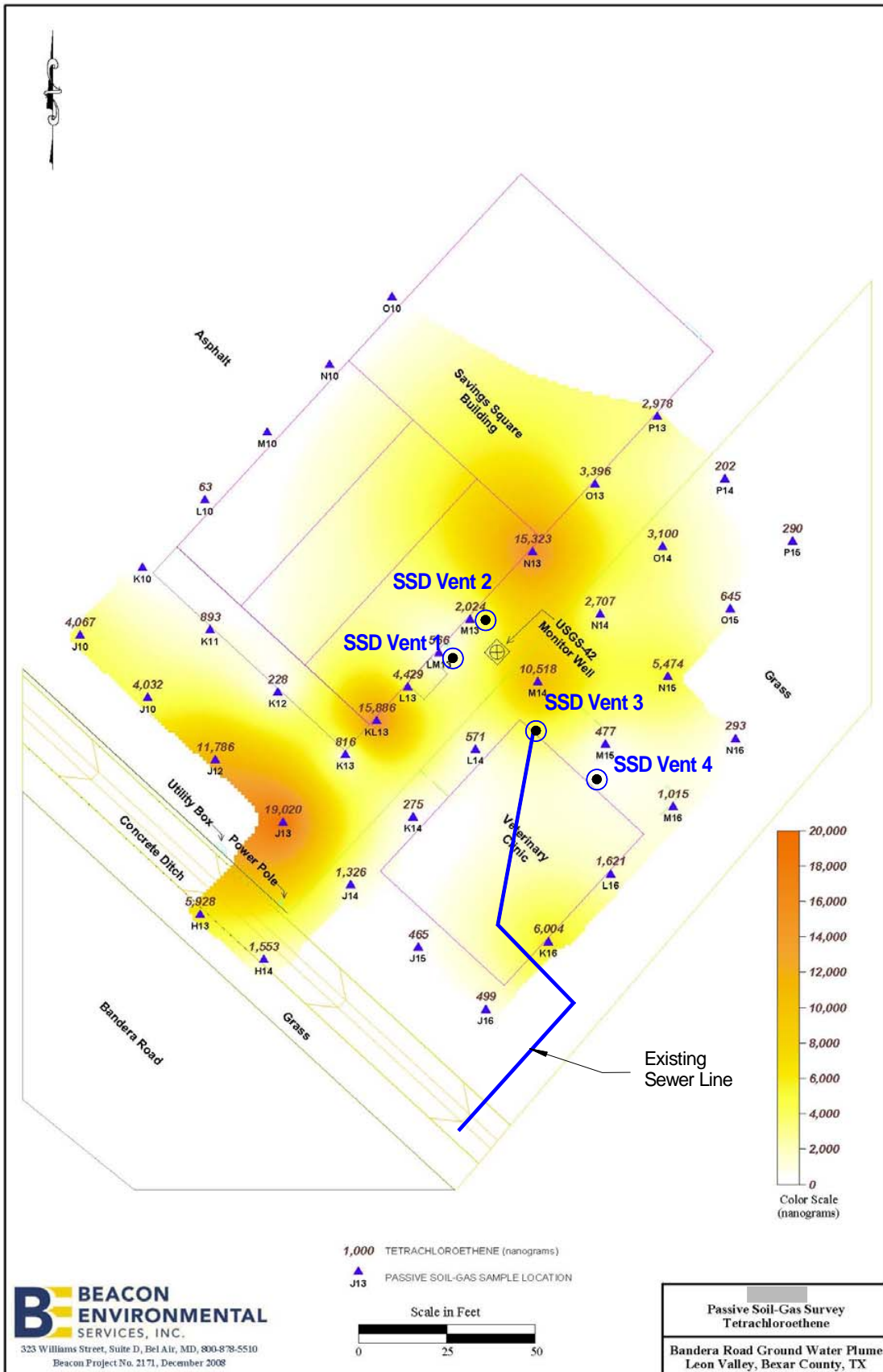
**SEWER LINE LOCATIONS**

**FIG. 3**

002453







23595

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VENTS AND BEACON SURVEY

FIG. 5

Table 1  
 Leon Valley Veterinary Clinic  
 PID Readings  
 June 4, 2009

Location	PID Reading	Map Location
Front wall hall socket	0.0	A
Front bathroom sink, hot & cold piping, sewer water penetration	0.0, 0.0, 0.0, 0.0	B
Front bathroom wall baseboard	0.0	C
Front bathroom sewer	0.0	D
Front bathroomroom mop closet sink	0.0	E
Front storage closet base boards	0.0	F
Exam RM two sink drain, hot & cold piping	0.0, 0.0, 0.0	G
Exam RM two wall socket	0.0	H
Exam RM two counter socket	0.0	I
Exam RM two baseboard	0.0	J
Vet Lab sink	0.0	K
Receptionist/ Waiting room wall sockets (3)	0.0, 0.0, 0.0	L
Washer drain	0.0	M
Sink on entrance to surgery, hot & cold piping	0.0, 0.0, 0.0	N
Treatment room tub drain and piping	0.0, 0.0	O
sink near fridge	12.0	P
Dog kennel wall switches (2)	0.0, 0.0	Q
Dog kennel drain	0.0	R1
Dog kennel drain	0.0	R2

Table 1  
 Leon Valley Veterinary Clinic  
 PID Readings  
 June 4, 2009

Location	PID Reading	Map Location
Light Switch entrance to treatment room	0.0	S
VI-108-CSA	0.0	VI-108-CSA
VI-107-CSA	0.0	VI-107-CSA
Weep Hole 1	0.0	WH-1
Weep Hole 2	46.1	WH-2
Weep Hole 3	50.7	WH-3
Weep Hole 4	1247	WH-4
Weep Hole 5	161	WH-5
Weep Hole 6	0.0	WH-6
Weep Hole 7	0.0	WH-7
Weep Hole 8	2.5	WH-8
Weep Hole 9	0.4	WH-9
Weep Hole 10	4.4	WH-10
Weep Hole 11	0.0	WH-11
Weep Hole 12	0.0	WH-12
Weep Hole 13	0.0	WH-13
Weep Hole 14	3.4	WH-14
Weep Hole 15	0.0	WH-15
Weep Hole 16	0.0	WH-16
Weep Hole 17	0.0	WH-17

Table 2  
 Leon Valley Veterinary Clinic  
 PID Readings  
 July 22, 2009

Location	PID Reading (ppm)	Map Location
Front wall hall socket	0.0	A
Front bathroom sink, hot & cold piping, sewer water penetration	0.0, 0.0, 0.0, 0.0	B
Front bathroom wall baseboard	0.0	C
Front bathroom sewer	0.0	D
Front bathroomroom mop closet sink	0.0	E
Front storage closet base boards	0.0	F
Exam RM two sink drain, hot & cold piping	0.0, 0.0, 0.0	G
Exam RM two wall socket	0.0	H
Exam RM two counter socket	0.0	I
Exam RM two baseboard	0.0	J
Receptionist/ Waiting room wall sockets (3)	0.0, 0.0, 0.0	L
Washer drain	0.0	M
Light Switch entrance to treatment room	0.0	S
VI-108-CSA	0.7	VI-108-CSA
VI-107-CSA	0.4	VI-107-CSA

Table 2  
 Leon Valley Veterinary Clinic  
 PID Readings  
 July 22, 2009

Location	PID Reading (ppm)	Map Location
Weep Hole 2	0.0	WH-2
Weep Hole 3	0.0	WH-3
Weep Hole 4	0.0	WH-4
Weep Hole 5	0.0	WH-5
Weep Hole 6	0.0	WH-6
Weep Hole 7	0.0	WH-7
Weep Hole 8	0.0	WH-8
Weep Hole 9	0.0	WH-9
Weep Hole 11	0.0	WH-10
Weep Hole 12	0.0	WH-11
Weep Hole 13	0.0	WH-12
Weep Hole 14	0.0	WH-13
Weep Hole 15	0.0	WH-14

FarrWest Environmental Supply, Inc.  
PHOTO-IONIZATION DETECTOR

INSTRUMENT MODEL Mini Rae 3000 SERIAL NUMBER 592-000488

COMPANY NAME STC Env. Svcs. CONTACT PERSON Justin  
PHONE NUMBER \_\_\_\_\_

RENTAL PERIOD FROM: \_\_\_\_\_ TO: \_\_\_\_\_

RETURN SHIP DECLARED VALUE: \$ \_\_\_\_\_ SHIPPING WEIGHT: \_\_\_\_\_

PID

- CARRYING CASE
- 10.6 eV LAMP
- 11.7 eV LAMP
- BATTERY CHARGER
- BATTERY full charge VOLTS
- PROBE
- OPERATOR MANUAL
- HYDROPHOBIC FILTER
- Other alk. batt. pack

~~CASES (if included)~~

- ISOBUTYLENE ppm \_\_\_\_\_ PSI \_\_\_\_\_
- HEXANE ppm \_\_\_\_\_ PSI \_\_\_\_\_
- REGULATOR \_\_\_\_\_

INSTRUMENT INSPECTED BY: MC TODAY'S DATE: 7-21-09

CALIBRATION GAS: 100 ppm Isobutylene

INSTRUMENT READINGS:

FRESH AIR- 0.0 PPM

ISOBUTYLENE- 100 PPM

COMMENTS: good

11.7 LAMP

FarrWest Environmental Supply, Inc. CHECKS EACH INSTRUMENT IN OUR SERVICE DEPARTMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS. SHIPPING AND ENVIRONMENTAL CONDITIONS MAY AFFECT CALIBRATION; FarrWest Environmental Supply, Inc. RECOMMENDS THAT YOU CALIBRATE THE INSTRUMENT TO MANUFACTURERS SPECIFICATIONS PRIOR TO USE.

PICKED UP BY: \_\_\_\_\_ DATE: \_\_\_\_\_ RETURNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FarrWest Environmental Supply, Inc.  
PHOTO-IONIZATION DETECTOR

INSTRUMENT MODEL Mini Rae 3000 SERIAL NUMBER 592-001229

COMPANY NAME STC CONTACT PERSON Justin  
PHONE NUMBER \_\_\_\_\_

RENTAL PERIOD FROM: 6/4/09 TO: \_\_\_\_\_

RETURN SHIP DECLARED VALUE: \$ \_\_\_\_\_ SHIPPING WEIGHT: \_\_\_\_\_

PID

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> CARRYING CASE             | <input checked="" type="checkbox"/> PROBE                  |
| <input checked="" type="checkbox"/> 10.6 eV LAMP              | <input checked="" type="checkbox"/> OPERATOR MANUAL        |
| <input type="checkbox"/> 11.7 eV LAMP                         | <input checked="" type="checkbox"/> HYDROPHOBIC FILTER (2) |
| <input checked="" type="checkbox"/> BATTERY CHARGER           | <input type="checkbox"/> Other                             |
| <input checked="" type="checkbox"/> BATTERY <u>FULL</u> VOLTS |  |

GASES (if included)

- |  |                                    |
|--|------------------------------------|
| <input type="checkbox"/> ISOBUTYLENE ppm _____ PSI _____ | <input type="checkbox"/> REGULATOR |
| <input type="checkbox"/> HEXANE ppm _____ PSI _____      | <input type="checkbox"/> _____     |

INSTRUMENT INSPECTED BY: D. Peterson TODAY'S DATE: 6/4/09

CALIBRATION GAS: 100 ppm Isobutylene

INSTRUMENT READINGS:

FRESH AIR- 0.1 PPM

ISOBUTYLENE- 99.8 PPM

COMMENTS: Good!

FarrWest Environmental Supply, Inc. CHECKS EACH INSTRUMENT IN OUR SERVICE DEPARTMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS. SHIPPING AND ENVIRONMENTAL CONDITIONS MAY AFFECT CALIBRATION; FarrWest Environmental Supply, Inc. RECOMMENDS THAT YOU CALIBRATE THE INSTRUMENT TO MANUFACTURERS SPECIFICATIONS PRIOR TO USE.

PICKED UP BY: \_\_\_\_\_ DATE: \_\_\_\_\_ RETURNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Replacement



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 6**  
**1445 Ross Avenue, Suite 1200**  
**Dallas, Texas 75202-2733**

October 6, 2009

Mr. Craig G. Tribley  
STC Environmental Services Inc.  
4754 Research Drive  
San Antonio, Texas 78240

Re: Completed Actions and Proposed Vents Document  
Leon Valley Veterinary Clinic  
6701 Bandera Road  
Leon Valley, Texas

Mr. Tribley:

Enclosed please find the Environmental Protection Agency's comments on the Completed Actions and Proposed Vents document dated September 24, 2009. If you have any questions, please feel free to contact me at 214-665-6758.

Sincerely,

Chris Villarreal  
Remedial Project Manager  
Superfund Division

Enclosure

cc: Erich Birch, Attorney for Savings Square, Ltd.  
Danielle Soule, Texas Commission on Environmental Quality



**EPA Comments on the  
Completed Actions and Proposed Vents Document  
October 6, 2009**

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**1) Section 2.0 PID Survey by STC, Page 2 of 5**

The section states that “A second survey was conducted on July 22, 2009, and was performed to verify and confirm the June data.” In regards to the PID surveys:

Is there any additional information regarding the PID surveys?

What model of PID was used?

Was the PID calibrated?

When and with what calibration gas?

Were all identified weep holes surveyed?

Were any cracks in the slab identified?

Were cracks surveyed with the PID?

What time of day were the surveys conducted?

What were the weather conditions during each survey?

Was it humid outside?

For the interior building survey, was the air conditioner running?

During the June 4, 2009, PID survey, 38 locations were evaluated. During the July 22, 2009 PID survey, 28 locations were evaluated. Locations evaluated in June but not in July include map locations K, N, O, P, Q, R1, R2, and weep holes 14, 15, and 16. Of note, map location P (sink near fridge) which had a PID reading of 12.0 in June was not retested in July.

Figure 5 identifies seventeen weep holes. Readings for sixteen weep holes were reported in Table II. Figure should include weep hole numbers and/or text which indicates the weep hole numbering system used for the corresponding tables.

2) **Section 3.0 Discussion of Results and Areas Targeted for Mitigation, Page 3 of 5**

Section states that “the area near the crack in the north brick veneer wall is targeted because this area may be a focal point for sub-slab vapors to escape and enter the indoor air. The sewer line exit point is targeted because permeable backfill around the sewer line could also serve as a collection point for vapor.”

In regards to the area near the crack in the north brick veneer wall, based in the elevated PID readings found at this location in June and the cracks present, I agree that this area should be targeted for vapor mitigation.

In regards to the second targeted location (near the sewer line exit point), is the proposed location for the vapor mitigation system close enough to the sewer cleanout to have an impact? How does the proposed location compare to the placement of the vapor mitigation system previous installed near the sewer cleanout at the Savings Square Shopping Center?

Figure 7 shows the estimated location of the sewer lines on part of the building and notes that a camera inspection of the sewer line is proposed to locate a portion of the existing system. In addition to camera inspections, plumbers have other tools to identify the location of sewer lines. Knowing the location of the sewer lines for the building would provide valuable insight as to the potential for the vent system to reduce organic vapor concentrations for the entire building sub-slab and not just the area under the north end of the building.