

AQUATERRA

ENVIRONMENTAL SOLUTIONS, INC.

September 14, 2006

Ms. Lynne Braddock Zollner
Lawrence-Douglas County Planning Office
P.O. Box 708
Lawrence, KS 66044-0708

**Re: Request for Modification of the TUPR
Presto #25, Lawrence
KDHE Project Code: U4-023-13799
Aquaterra Project 2003.10**

Dear Ms. Braddock Zollner:

On behalf of the Kansas Department of Health and Environment (KDHE), Aquaterra Environmental Solutions, Inc. (Aquaterra) is requesting city permission to install a temporary above ground storage tank (AST) at the site of the groundwater remediation project at 838 Louisiana. The purpose of the AST is to store gasoline being recovered by the remediation system in quantities greater than anticipated by the KDHE contractor that designed the remediation system. Per your request following our September 13th meeting, this letter describes the proposed equipment, the advantages and disadvantages of the modifications. In addition, this letter discusses alternative solutions and the reasons that those alternatives were not selected.

In response to the leak of an underground storage tank and release of petroleum from the Presto gas station located at 602 West 9th Street, a KDHE emergency response contractor installed a groundwater remediation system at 838 Louisiana. The system consists of a cutoff trench located on 838 and 842 Louisiana and a wooden treatment building on the northeast corner of the lot at 838 Louisiana. The treatment system was constructed under approval of a Temporary Use Permit for Review TUPR-06-19-06, approved by the City of Lawrence on June 5, 2006. The duration of the TUPR was one year.

The treatment system, located in the 10 by 20 foot building on the 838 Louisiana property, includes two groundwater extraction wells located in the groundwater cutoff trench and treatment equipment located in the building. Water from the wells flows through an oil/water separator to remove any gasoline mixed with the water. The water from the separator is treated by an air stripper and granular activated carbon before it is discharged to the city sewage system. Gasoline from the separator is stored in a 55 gallon drum.

Since Aquaterra took over operating the system, gasoline recovered by the system has been approximately 25 gallons per day. This gasoline recovery rate greatly exceeds the capacity of the existing system, resulting in the system being shut off several times a week due to inability to dispose of the recovered gasoline.

To solve the gasoline storage problem and to improve the effectiveness of the remediation system, Aquaterra and KDHE agreed that the addition of a 1000-gallon AST on the west side of the existing building would be the most effective solution to the gasoline storage problem. A figure showing the proposed location for the AST is attached to the end of this letter. A 1000-gallon AST is approximately 4 feet in diameter and 12 feet in length.

Aquaterra proposes that the AST be a doubled-wall tank designed for the storage of gasoline and incorporates the required venting and safety devices. A copy of the manufactures information on the tank is attached to the end of this letter. The AST would be located on the west side of the existing treatment building. The AST will be screened from view by a lockable 8-foot high wooden fence. The fence will both screen the AST and reduce the potential for vandalism. If the city believes that more security is warranted due to the nature of the area, the AST can be fenced using a 6-foot high chain link fence top with barb wire for security and the then the area can be screened using the 8-foot high wooden fence. Aquaterra and KDHE are open to the exact location of the fencing and required distances between the AST and the building and the AST and the fencing.

This option has the following advantages:

- The gasoline storage volume would allow the remedial system to operate at maximum efficiency, thereby reducing the length of time to recover the gasoline released to the environment.
- The gasoline would no longer be stored in the treatment building were gasoline vapors in the air have been a concern from an inhalation standpoint.
- The storage and transfer of gasoline in 55-gallon drums would be eliminated.
- Gasoline storage capacity would allow the truck transferring the gasoline for recycling to make only one trip to the site each month.
- The location of the AST on the existing ground would allow the gasoline to flow by gravity from the oil/water separator to the AST (consistent with the current design).
- In the event of an emergency, the AST would not be as concealed from view by firefighters as would be case if the AST is located in a new building or trailer.

An alternative to locating the AST in an outside, fenced enclosure would be to locate the AST in an 8 by 14 foot shed or an 8 by 14 foot cargo trailer located on the west side of the existing treatment building. While these alternatives may be required to comply with existing city zoning requirements, Aquaterra and KDHE do not believe that these alternatives lead to greater safety for the following reasons:

- Enclosing the AST in a small enclosure increases the possibility that gasoline vapors can collect in the enclosure potentially creating a hazardous atmosphere.
- In the event of an emergency, fire department personnel would not be able to physically see the tank, resulting in a less safe situation for the fire fighters.


From an operational standpoint, these alternatives increase the elevation of the AST, thereby requiring expensive modification of the existing treatment system since the gasoline would most likely not flow by gravity from the separator to the AST.

KDHE and Aquaterra are attempting to recover the gasoline from under this neighborhood as quickly as possible. To achieve that goal, the AST will allow us to more efficiently operate the system by being able to effectively and safely store the recovered gasoline. While there is a concern with possible city regulations that may not allow an outside AST in this zoning area, KDHE and Aquaterra request that these regulations be waived as the AST is a temporary situation, required for the overall good of the community. While the recovered gasoline is still volatile, this AST would be differentiated from an AST that a citizen might want to have on their property because this AST will not be storing gasoline for operating equipment or vehicles.

At the present time, the system is not operating while the gasoline storage issue is unresolved. KDHE and Aquaterra request an expedited decision regarding this request so that we can hopefully install the AST and continue the clean up of the impacted neighborhood. If you have any questions or need any additional information, please do not hesitate to contact our office at (913) 681-0030 or Mr. Bill Reetz of KDHE at (785) 291-3103.

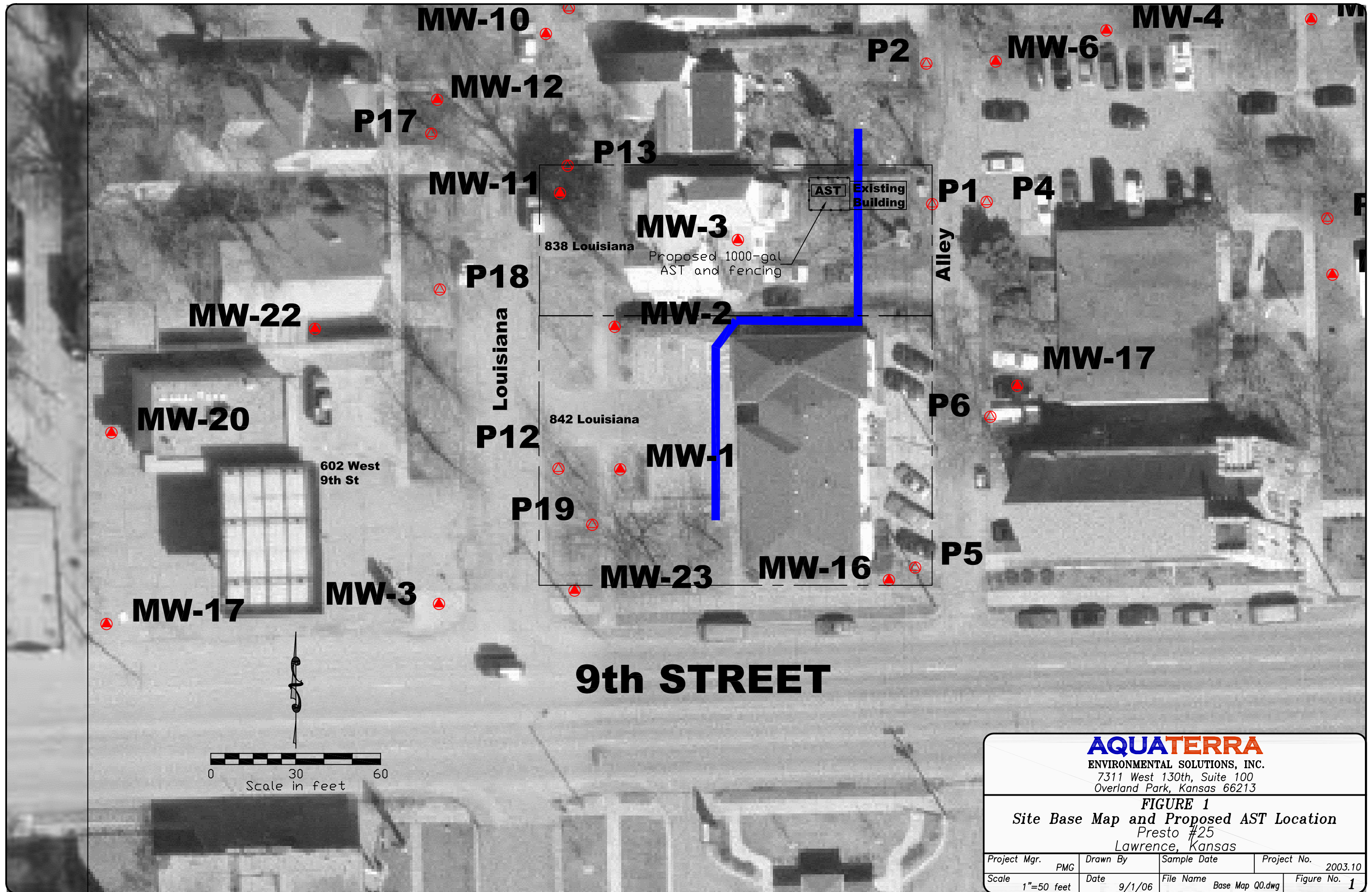
Sincerely,

Aquaterra Environmental Solutions, Inc.



Patrick M. Goeke, P.E.
Senior Project Manager

Attachments: Site Diagram
AST Information



AQUATERRA
ENVIRONMENTAL SOLUTIONS, INC.
7311 West 130th, Suite 100
Overland Park, Kansas 66213

FIGURE 1
Site Base Map and Proposed AST Location
Presto #25
Lawrence, Kansas

Project Mgr.	PMG	Drawn By	Sample Date	Project No.
Scale	1"=50 feet	Date	9/1/06	2003.10
File Name			Base Map Q0.dwg	Figure No. 1

QUOTATION



WE-MAC MANUFACTURING COMPANY

326 East 14th Avenue, P.O. Box 12378
 North Kansas City, Mo. 64116-0378
 Phone 816-221-1850 Toll Free 1-800-444-3218
 Fax Number 816-221-4147

QUOTE NUMBER: A-90906-T

TO: **Jason**
Aquaterra

DATE:	9/8/2006
PROPOSED SHIP DATE:	6 Weeks
TERMS:	Net 15 Days
FREIGHT CHARGES	
PAID BY:	Delivered Price

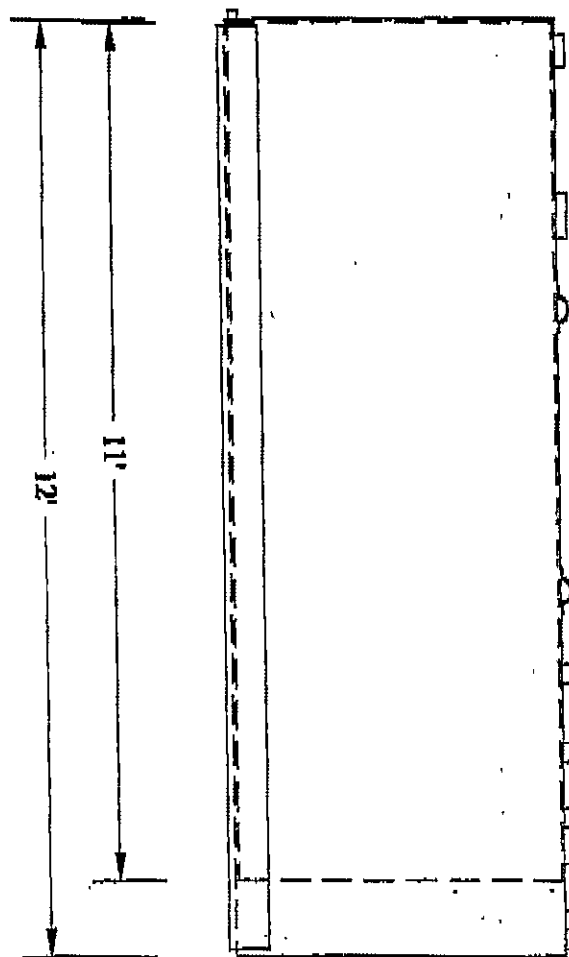
QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	520 Gallon Doublewall Tank Package Unit UL Labeled 49" dia. x 72" Outer Tank	\$2,465.00	\$2,465.00 \$0.00 \$0.00
1	1,000 Gallon Doublewall Tank Package Unit UL Labeled 49" dia. x 12' Outer Tank Package includes: Model 72 Gasboy Pump w/meter, 749 Pressure Vacuum Vent, Two Emergency Vents, Gauge, and Fill Cap Deduct \$510.00 if no pump	\$3,620.00	\$3,620.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00
	Delivered Price FOB: Lawrence, Ks.		\$0.00
Sales Tax Not Included			
TOTAL			

COMMENTS:

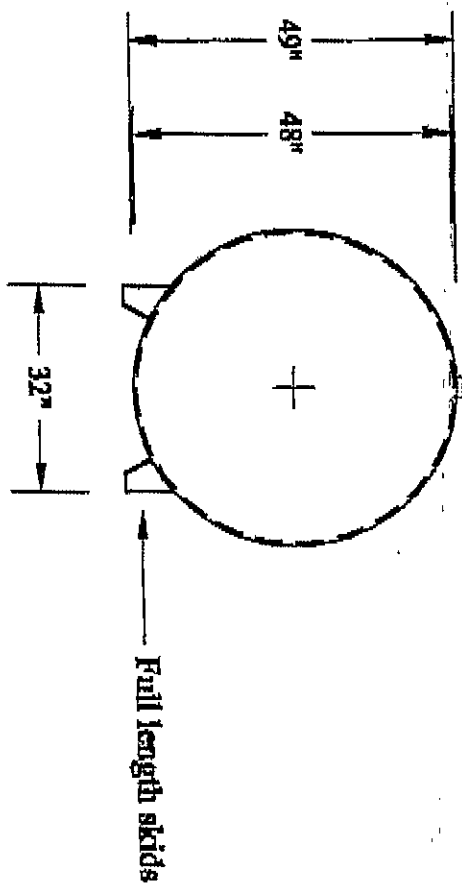
QUOTATION VALID UNTIL: 10/8/06

WE-MAC MANUFACTURING CO.
 PER Tom Funk

1" outlet
(outer tank only)



4" 6" 2" 2" 2" 2" 6" 2" Interstitial openings



Full length skids

- * UL 142 labeled
- * Meets STI F921 spec.
- * 10 gauge carbon steel - inner tank
- * 12 gauge carbon steel - outer tank
- * Weight: 1,893 lbs.
- * Red enamel paint

1,000 GALLON DOUBLE WALL TANK

Approved By

Issuing Number

Customer

