

MAIL HARD COPY SIGNED BY OWNER / OPERATOR TO:

Utah Department of Environmental Quality
 Division of Water Quality, ATTN: UIC
 P.O. Box 144870
 Salt Lake City, Utah 84114-4870

Utah
 Underground
 Injection
 Control
 (UIC)
 Inventory Information
 for

Well Class: _____
 Facility ID No.: UTU- _____
 GW SWPZ: _____
 Date Entered: _____ By: _____
 (For DWQ use only)

Aquifer Remediation-Related Injection Wells

FACILITY LOCATION

Facility Name:	Former C-4 Top Stop				Phone:	
Facility Physical Address:	15 South Main Street			Gunnison (City)		
Facility Mailing Address:	2040 East Murray Holladay Road		Salt Lake City (City)		84117 (Zip Code)	
Facility Geographic Location:	T.	R.	Section	1/4 of		1/4
	Latitude:	39 Degrees	9 Minutes	19 Seconds	UTM Northing (Y): m or ft	
	Longitude:	111 Degrees	49 Minutes	6 Seconds	UTM Easting (X): m or ft	
County:	Sanpete				<input type="checkbox"/> NAD 83 or <input type="checkbox"/> NAD 27	

FACILITY CONTACT

Contact Name:	Craig Larsen		Phone: 801-272-9229	Email:	
Contact Type: (check all that apply)	<input checked="" type="checkbox"/> Owner	<input type="checkbox"/> Operator	<input type="checkbox"/> Facility Manager	<input type="checkbox"/> Contractor / Consultant	
	<input type="checkbox"/> Legal / Official Rep	<input type="checkbox"/> DEQ Engineer	<input type="checkbox"/> Local Health Dept	<input type="checkbox"/> Other: _____	
Title:	President	Organization:	Wind River Petroleum		
Contact Mailing Address:	2040 East Murray Holladay Road		Salt Lake City (City)	84117 (Zip Code)	

Contact Name:	Les Pennington		Phone: 801-972-8400	Email: lp@wasatch-environmental.com
Contact Type: (check all that apply)	<input type="checkbox"/> Owner	<input type="checkbox"/> Operator	<input type="checkbox"/> Facility Manager	<input checked="" type="checkbox"/> Contractor / Consultant
	<input type="checkbox"/> Legal / Official Rep	<input type="checkbox"/> DEQ Engineer	<input type="checkbox"/> Local Health Dept	<input type="checkbox"/> Other: _____
Title:	Principal Engineer	Organization:	Wasatch Environmental, Inc.	
Contact Mailing Address:	2410 West California Ave.		Salt Lake City (City)	84104 (Zip Code)

Contact Name:		Phone:		Email:	
Contact Type: (check all that apply)	<input type="checkbox"/> Owner	<input type="checkbox"/> Operator	<input type="checkbox"/> Facility Manager	<input type="checkbox"/> Contractor / Consultant	
	<input type="checkbox"/> Legal / Official Rep	<input type="checkbox"/> DEQ Engineer	<input type="checkbox"/> Local Health Dept	<input type="checkbox"/> Other: _____	
Title:		Organization:			
Contact Mailing Address:			(City)	(Zip Code)	

LAND OWNERSHIP AT FACILITY

Private
 Public (State or Local)
 Tribal
 Federal: _____
 Other: _____

LAND USE ZONING AT FACILITY

Residential
 Commercial
 Manufacturing / Industrial
 Professional / Institutional
 Agricultural
 Open Space
 Public Lands
 Overlay Zones: _____
 Other: _____

FACILITY DESCRIPTION

Primary NAICS Code: 447110
 Secondary NAICS Code: _____

Description of Business Activity at Facility: Gasoline Station with Convenience Store

The facility was formerly a Top Stop Convenience Store, open to the general public. The products sold at the facility included gasoline, which was stored on site in underground tanks. The tanks were removed in 2007. General merchandise items were also sold at the facility, which were displayed and maintained on shelves inside the store. The store was closed in August 2007.

Is the proposed aquifer remediation associated with a(n):	<input type="checkbox"/> RCRA Site? ID Number: _____	<input type="checkbox"/> CERCLA Site? ID Number: _____	<input type="checkbox"/> Voluntary Clean Up? ID Number: _____
	<input type="checkbox"/> Independent Clean Up? ID Number: _____	<input checked="" type="checkbox"/> LUST? ID Number: UST Facility # 2000220	<input type="checkbox"/> Other? Describe: _____

Regulatory Agency Providing Oversight of this Remediation: Division of Environmental Response and Remediation (DERR)

Project Manager in Oversight Agency: Morgan Atkinson Phone: 801-536-0052

AQUIFER REMEDIATION ACTIVITY INVOLVING INJECTION WELLS

Aquifer Test
 Tracer Test
 in-Situ Bioremediation
 In-Situ Chemical Oxidation
 Air Sparging
 Bioventing / Biosparging
 In Well Air Stripping
 In-Situ Flushing
 Remediation Waste Disposal
 Other: _____

INJECTION WELL OPERATING STATUS (indicate number of wells in appropriate category)

Proposed	Under Construction / Modification	13	Temporarily Abandoned	Permanently Abandoned
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INJECTION WELL CONSTRUCTION AND SUBSURFACE DETAILS

Narrative Description of System Construction and Subsurface Details (see Instructions):

Five soil vapor extraction (SVE) systems are currently operating at the site. Each system incorporates horizontal SVE trenches, which were installed between August 15, 2007 and May 15, 2008. SVE trenches were excavated approximately 12 to 15 feet below ground surface (bgs). The trenches were constructed by placing approximately 3 feet of crushed gravel in the bottom of the trench; a horizontal 4-inch, perforated PVC well screen was installed on the gravel; one foot of gravel was placed over the well screen. The remainder of the trench was backfilled with flow-fill to within one foot of the surface, and with native soil to the surface (See Figure 2). Horizontal trench injection will be conducted at nine injection locations (See Figure 1).

Four vertical wells will be used for injection: Two wells (TW-4 and TW-6) are located in a horizontal SVE trench of the Central SVE System (See Figure 1). The wells were completed during the construction of the horizontal trench to 15 feet bgs and screened in the lower 10 feet. The well pack placed around the casing consisted of gravel from bottom of trench to one foot above the screen, then flow-fill to within one foot of the surface (See Figure 2). Well boxes with flush-mount lids were installed and cemented at the surface.

Two wells (WS-1 and WS-3) are located on the former Top Stop site (See Figure 1). The wells were installed during the over-excavation conducted during the removal of the underground fuel storage tanks in August 2007. The wells were set in test pits by excavating to approximately 15 feet bgs with a track-hoe, placing a 4-inch slotted casing in the pit, then adding gravel to a point above the screen, and reintroducing native soil to within one foot of ground surface. Well boxes with flush-mount lids were installed and cemented at the surface (See Figure 2).

The horizontal SVE plumbing and vertical wells will be utilized to inject nutrients into the subsurface to enhance natural biological activity. The locations and configurations of the trenches and wells to be utilized are presented in Figure 1.

Depth to Ground Water:

Ground Water Class:

INJECTATE CHARACTERIZATION

Narrative Description of Injectate (see Instructions):

Ammonium nitrate is shipped as dry solid granules that must be mixed with water prior to injection. The ammonium nitrate will be injected into contaminated ground water through horizontal and vertical injection wells. Over time, the ammonium nitrate will be consumed by naturally occurring bacteria.

Annual Injectate Volume (gallons):

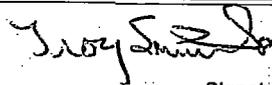
30,000 gallons across the entire site

COMMENTS

SIGNATURE

Troy Smith
Certified UST Consultant
Name & Title (print or type)

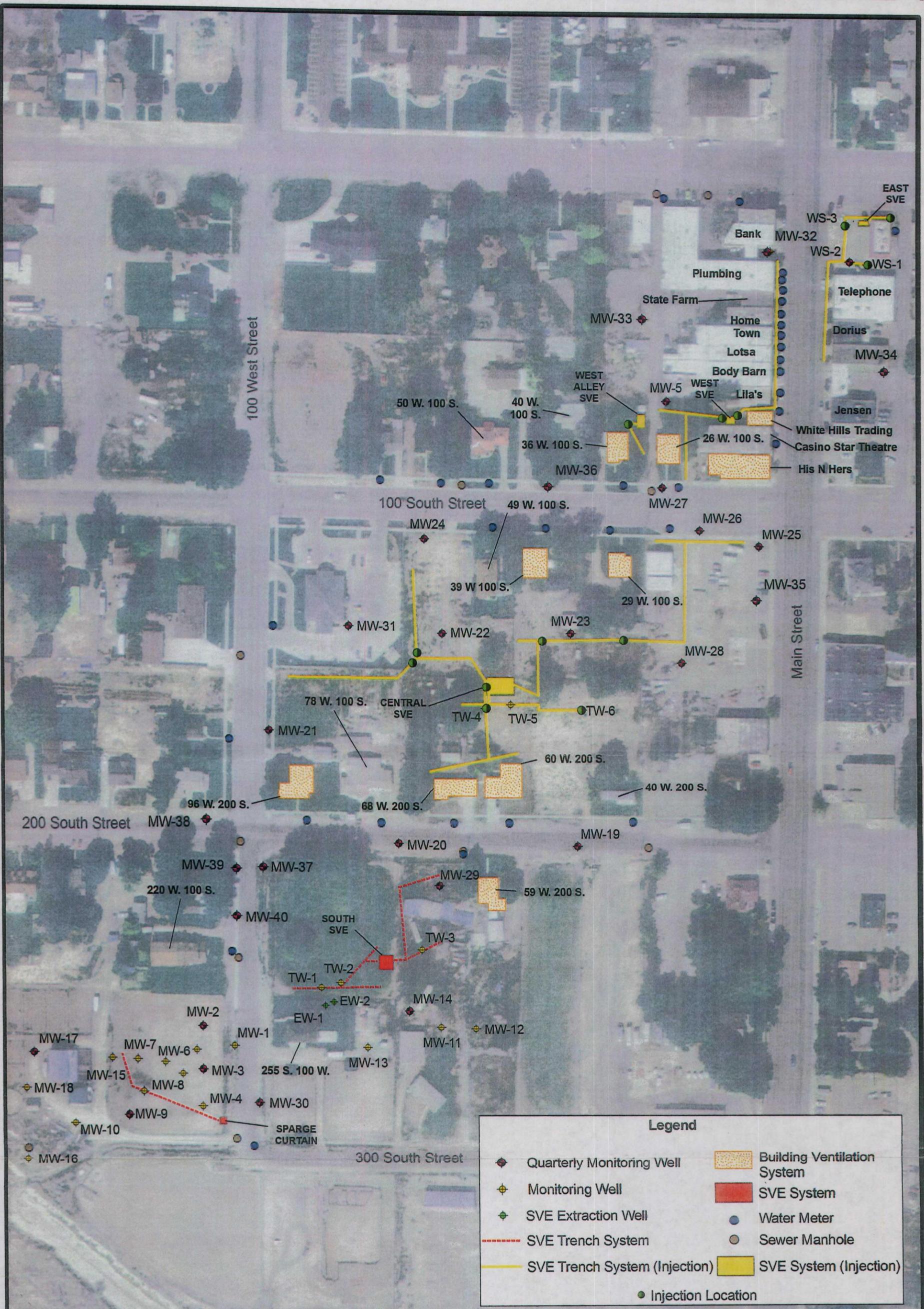
801-972-8400
Phone Number



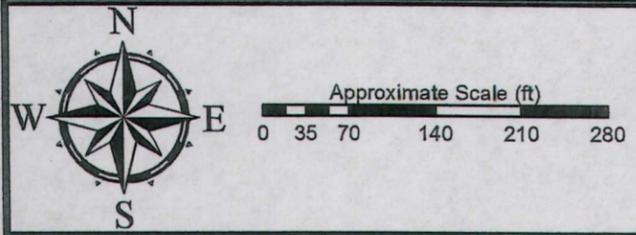
Signature

October 13, 2009

Date Signed



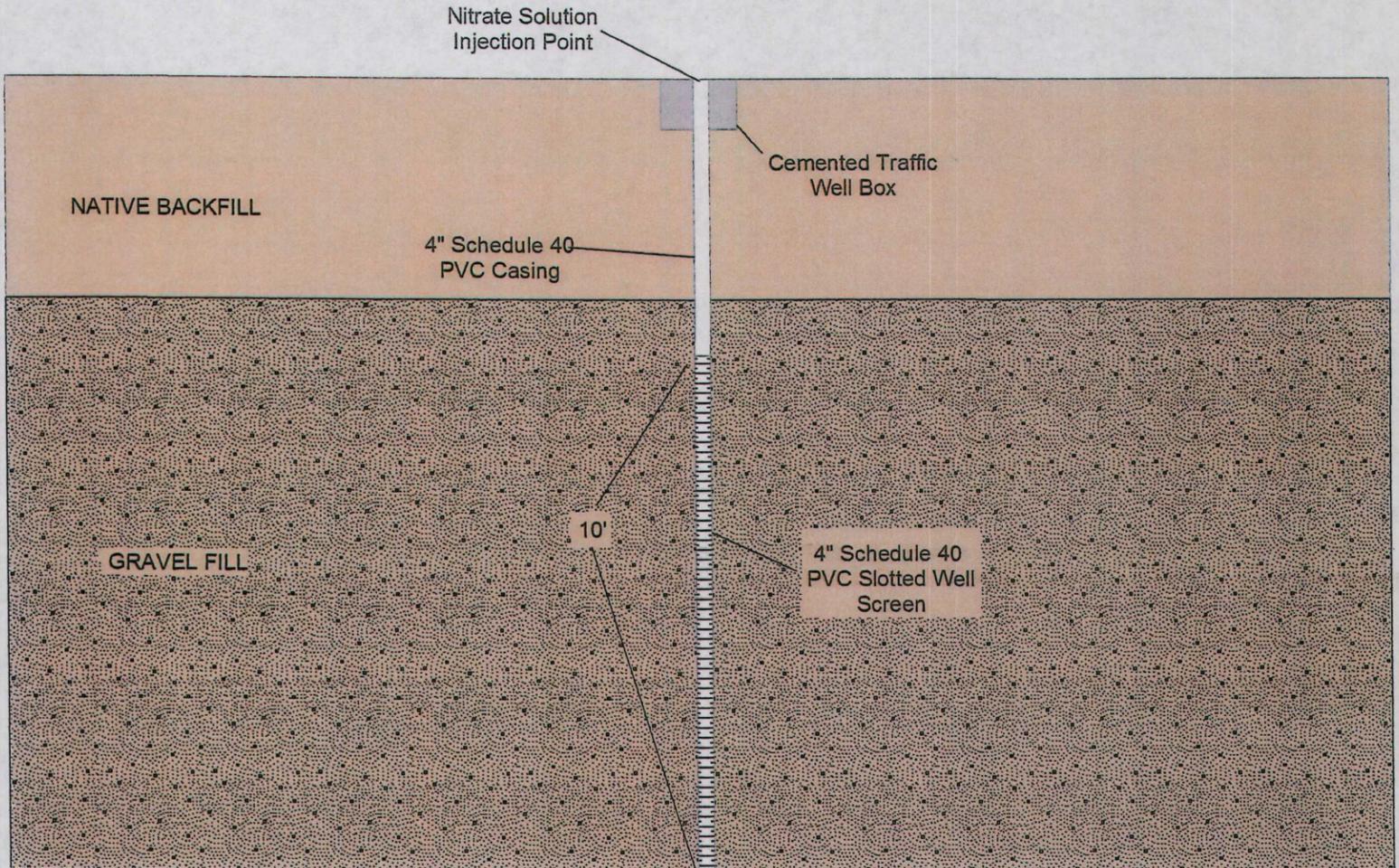
Legend	
	Quarterly Monitoring Well
	Monitoring Well
	SVE Extraction Well
	SVE Trench System
	SVE Trench System (Injection)
	Building Ventilation System
	SVE System
	Water Meter
	Sewer Manhole
	Injection Location



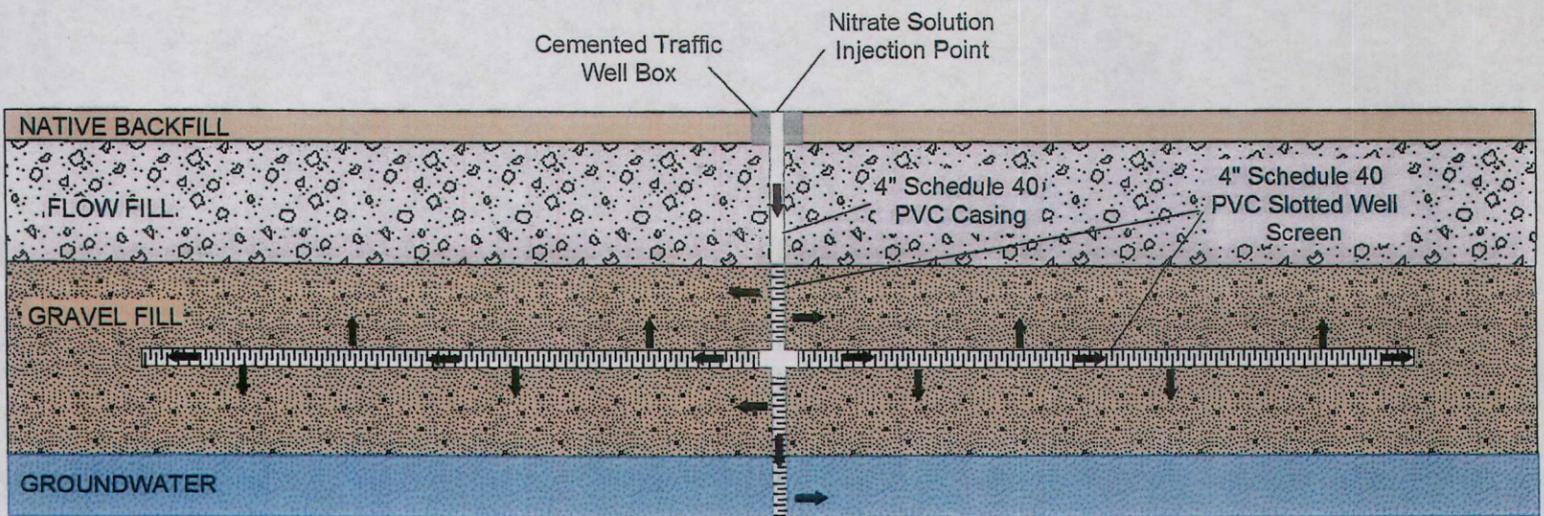
WASATCH
 ENVIRONMENTAL
 Environmental Science and Engineering

Proposed Nitrate Injection Locations		
Gunnison, Utah		
PROJECT NO.	DRAWING DATE	FIGURE D-1
1241-026A	September 22, 2009	

PIT WELL CONSTRUCTION

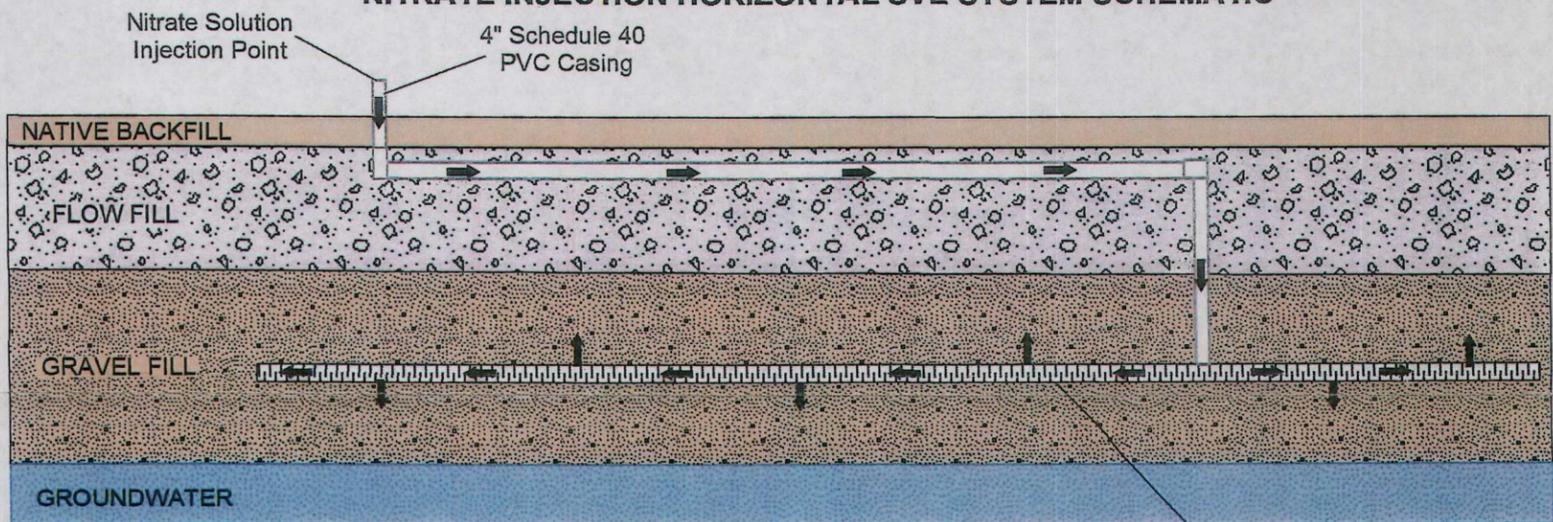


NITRATE INJECTION TRENCH WELL SCHEMATIC



→ Nitrate Solution Injection Flow Direction

NITRATE INJECTION HORIZONTAL SVE SYSTEM SCHEMATIC



→ Nitrate Solution Injection Flow Direction

Nitrate Injection Schematics

Gunnison, Utah

NOT TO SCALE
SCHEMATIC ONLY



Environmental Science and Engineering

PROJECT NO.

1241-026A

DRAWING DATE

October 12, 2009

FIGURE

D-2