



December 20, 2024

Mr. Adam Looper SCDES UST Management Division 2600 Bull Street Columbia, South Carolina 29201



Re: Corrective Action Plan

Westside Quick Stop 821 W. Parker Road Greenville, South Carolina SCDES UST ID #12430 EnviroSouth Job No. 3570

Dear Mr. Looper:

On behalf of Shree Gajvakra, LLC, EnviroSouth, Inc. is pleased to submit the attached Corrective Action Plan for the above-referenced facility in Greenville, South Carolina.

If you have any questions concerning our submittal, please do not hesitate to call.

Sincerely,

EnviroSouth, Inc. UST Contractor No. 25

William H. Lyons, P.G.

UST Coordinator and Senior Hydrogeologist

S.C. Registration No. 2705

cc: Ankur Patel, Shree Gajvakra, LLC



December 20, 2024

Mr. Adam Looper SCDES UST Management Division 2600 Bull Street Columbia, South Carolina 29201

Re: Corrective Action Plan

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If you have any questions concerning our submittal, please do not hesitate to call.

Sincerely,

EnviroSouth, Inc. UST Contractor No. 257

William H. Lyons, P.G.

UST Coordinator and Senior Hydrogeologist

S.C. Registration No. 2705

cc: Ankur Patel, Shree Gajvakra, LLC

#### Prepared for:

Shree Gajvakra, LLC 205 Fairway Drive Laurens, South Carolina 29360

**CORRECTIVE ACTION PLAN** 

WESTSIDE QUICK STOP 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA

> Job No. 3570 SCDES UST ID #12430

> > Prepared by:

EnviroSouth, Inc. 3440 Augusta Road Greenville, South Carolina 29605

**UST Contractor #257** 

**December 20, 2024** 

A report prepared for:

Shree Gajvakra, LLC 205 Fairway Drive Laurens, South Carolina 29360

CORRECTIVE ACTION PLAN WESTSIDE QUICK STOP 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA

EnviroSouth Job No. 3570 SCDHEC UST Permit No. 12430

Prepared by:

William H. Lyons, P.G. Senior Hydrogeologist S.C. Registration No. 2705 Reviewed by:

Keigan K. Mennetti, P.E. Environmental Engineer S.C. License No. 40996

Keigm K. nemetri

EnviroSouth, Inc.

3440 Augusta Road Greenville, South Carolina 29605 864-236-9010

**UST Contractor #257** 

December 20, 2024

#### **TABLE OF CONTENTS**

INTRODUCTION	
SUMMARY OF ASSESSMENT	
PROPOSED CORRECTIVE ACTION	
Permitting	
Groundwater Monitoring	4
Contingency Plan	5
Spill Prevention	
Waste Materials	
Equipment Deactivation	6
Parcel Information	6
Site-Specific Health and Safety Plan	6
Pertinent Contacts	
Implementation Schedule	

#### **APPENDICES**

**FIGURES** 

REGENESIS TECHNICAL DESIGN

REGENOX PART A SAFETY DATA SHEET

REGENOX PART B SAFETY DATA SHEET

REAGENT SPECIFICATION SHEET

MEMO FROM STATE TOXICOLOGIST

TAX PARCEL INFORMATION

**HEALTH AND SAFETY PLAN** 

**GANTT SCHEDULE** 

COST AGREEMENT

#### INTRODUCTION

EnviroSouth, Inc. has completed this Corrective Action Plan (CAP) for the Westside Quick Stop facility as requested by the South Carolina Department of Environmental Services (SCDES) in a letter dated October 11, 2024. This document outlines the plan for targeted-scope corrective action to achieve regulatory closure for release #1 and release #2 at the Westside Quick Stop facility.

The Westside Quick Stop facility is located at 821 W. Parker Road, in the city of Greenville, Greenville County, South Carolina at the location displayed on Figure 1. The facility is located in a light commercial/residential corridor at the southern quadrant of the intersection of W. Parker Road with W. Blue Ridge Drive. The site is an active gasoline station that maintains four (4) regulated underground storage tanks (USTs) and associated piping and dispensers. The site has two (2) documented and open petroleum UST releases. Release #1 was reported in June 2012 and release #2 was reported in October 2012. Both releases are the subject of this targeted scope corrective action. An unnamed tributary of Long Branch is also located approximately 500 feet to the southeast of the site.

#### SUMMARY OF ASSESSMENT

An Initial Groundwater Assessment (IGWA), Tier I Assessment, and an initial Tier II Assessment were completed in response to these two (2) releases. As a result of the presence of free-phase gasoline in groundwater monitoring well MW-1 during a May 2016 groundwater gauging event conducted by the South Carolina Department of Environmental Services (SCDES; formerly known as the SCDHEC), an additional Tier II Assessment and two 96-hour Aggressive Fluid Vapor Recovery/Mobile Multi-Phase Extraction (AFVR/MMPE) events were completed at the site in early 2017. Additional 96-hour AFVR/MMPE events were completed at the site in May 2018, January 2020, February 2021, March 2021, February 2022, and March 2022. Four (4) additional 96-hour AFVR/MMPE events and a comprehensive groundwater sampling event were performed between September 2023 to October 2023. A Comprehensive Groundwater Monitoring report detailing these field activities was submitted in December 2023.

After completing twelve (12) 96-hour AFVR events (as detailed above), widespread free-phase product remains at thicknesses up to 1.14 feet (November 2023).

While product thickness reductions have been observed, these releases cannot be closed until product thicknesses are reduced to less than 0.01 feet and dissolved contaminant concentrations are below site-



specific target levels (SSTLs). Based on the persistence of free-phase product, it has become evident that an alternative, more aggressive, approach to reach closure is needed. Therefore, the SCDES calculated SSTLs and requested a Strategy to Closure in a letter dated July 19, 2024.

A Strategy to Closure was submitted to the SCDES on August 20, 2024. Following the Strategy to Closure submittal, a meeting with the SCDES to discuss the Strategy to Closure and requested changes from the department occurred. Following the meeting, the SCDES requested a Corrective Action Plan in a letter dated October 11, 2024.

#### PROPOSED CORRECTIVE ACTION

#### Permitting

A SCDES underground injection control (UIC) permit application has been prepared and will be submitted to the UIC program at the SCDES. A memo from the State Toxicologist's office referencing the safety of RegenOx® for the intended purpose is also attached.

#### **Source Area Groundwater Treatment Approach and Execution Details**

The remediation strategy proposed in the source area surficial aquifer is by enhanced AFVR, which will consist of three (3) rounds of in-situ chemical oxidation with each round being followed by three (3) 96-hour AFVR events for a total of nine (9) 96-hour AFVR events. A solution of water and RegenOx® placed by temporary underground injection wells will be utilized to oxidize and de-sorb the petroleum hydrocarbons in the source area. Each of the three (3) injection events will utilize forty-nine (49) temporary injection wells and will be spaced approximately four (4) months apart. Each series of three (3) enhanced AFVR events will begin approximately six (6) weeks following their respective injection events over a three (3) week time period. The AFVR events will utilize monitoring wells MW-1 and MW-24 as well as recovery wells RW-1, RW-2, RW-3, RW-4, RW-5, and RW-6 on a rotating schedule. Please see the attached Gantt Schedule for a more detailed treatment schedule as well as which wells will be utilized during which AFVR event. The treatment area is approximately 2,400 square feet, and the injection interval extends from 21 to 42 feet bgs. Approximately 32,760 pounds of RegenOx® mixed with 46,108 gallons of water will be necessary to meet the stoichiometric demands of the planned enhanced AFVR approach.

The temporary injection wells will be installed using a Geoprobe 7822DT drill rig with 1.50-inch diameter probe rods and a five-foot injection rod utilized in a bottom-up injection fashion. Figure 5 is a schematic



diagram showing the general diagram of all injection well locations. Figures 6 through 8 are proposed

temporary injection well locations per round.

Each injection well borehole will be properly abandoned using pressure-injected neat cement grout

immediately upon completion.

**Recovery Well and Replacement Well Installation** 

Prior to injection and AFVR activities, three (3) 4-inch diameter recovery wells (RW-4, RW-5, and RW-6) will

be installed at the locations on the attached Figure 2. The recovery wells will be completed by a South

Carolina licensed driller using decontaminated hollow stem augers to a depth of 42 feet bgs with 4-inch

diameter schedule 40 casing and 20-foot sections of 0.010-inch slotted screen. A recovery well schematic is

included as Figure 3.

Since monitoring wells MW-1 and MW-24 will be utilized in the AFVR events, they will not be utilized during

post injection / AFVR monitoring events. Instead, replacement monitoring wells MW-1R and MW-24R will be

installed and utilized during the sampling events after all injection and AFVR activities are completed. The

wells will be installed as close to the original locations of each well as possible. The replacement wells will

be completed by a South Carolina licensed driller using decontaminated hollow stem augers, 2-inch

diameter schedule 40 casing, and a 10-foot section of 0.010-inch slotted screen set to bracket the water

table [see attached schematic diagram (Figure 4)].

The monitoring and recovery wells will be completed at grade with a steel manhole cover and concrete pad.

Water well record forms and development forms for each well will be completed by the licensed driller and

submitted to the department in the first reports following the respective installation of the recovery and

monitoring wells.

Well Abandonment

Monitoring well MW-7 will be abandoned during the recovery well installation detailed above. This well has

been obstructed during the past two (2) sampling events, remains obstructed currently, and has not had

concentrations of petroleum compounds detected at concentrations of regulatory concern since 2015.

Monitoring well MW-28, immediately above well MW-7, will remain and continues to define the plume in this

direction as a "clean" well. MW-7 will be abandoned in accordance with the South Carolina Well Standards

**Environmental Consultants** 

and Regulations R. 61-71. MW-7 will be abandoned by pressure injecting neat cement grout from the bottom up. Well abandonment records and photos will be included in the first injection report.

#### **Baseline Monitoring**

Monitoring and recovery wells MW-X, MW-1, MW-2, MW-21, MW-24, RW-1, RW-2, RW-3, RW-4, RW-5, and RW-6 will be sampled during a baseline monitoring event prior to the injection and AFVR activities at the site. Surface water SW-1 (Figure 2) will also be sampled during the event. This data will be compared to the interim performance monitoring data (as detailed in the section below) and used to evaluate the effectiveness of the source area treatment. Samples will be analyzed for benzene, toluene, ethylbenzene, xylenes (total), methyl-tert-butyl ether, naphthalene, (BTEXMN), 1,2-dichloroethane (1,2-DCA), and eight (8) oxygenates by EPA method 8260 and 1,2-dibromoethane (EDB) by EPA method 8011.

#### **Interim Performance Monitoring**

Monitoring and recovery wells MW-X, MW-1, MW-2, MW-21, MW-24, RW-1, RW-2, RW-3, RW-4, RW-5, and RW-6 will be sampled during two (2) interim performance monitoring events to evaluate the effectiveness of each series of three (3) enhanced AFVR events. Surface water SW-1 (Figure 2) will also be sampled during the events. The interim sampling events will take place approximately two (2) weeks after the end of the 1<sup>st</sup> AFVR event series and 2<sup>nd</sup> AFVR event series. Each well will be gauged for free-phase gasoline and sampled using the low-flow sampling technique. Samples will be analyzed for BTEXMN, 1,2-DCA, and eight (8) oxygenates by EPA method 8260 and EDB by EPA method 8011.

#### **Groundwater Monitoring**

It is anticipated that SSTLs will be attained within six (6) months after enhanced AFVR activities are completed. Two (2) limited quarterly sampling events will be performed utilizing select wells (wells MW-1R, MW-2, MW-3, MW-4, MW-4I, MW-12I, MW-14I, MW-14I, MW-17I, MW-17I, MW-20, MW-22, MW-22I, MW-24R, MW-25, MW-26I, MW-X, and MW-XR). Surface water SW-1 (Figure 2) will also be sampled during the limited quarterly sampling events.

Two (2) comprehensive sampling events utilizing all remaining wells and a surface water sample will be performed in the third and fourth quarters after remedial activities are completed. All samples collected during the limited and comprehensive sampling quarterly events will be analyzed for benzene, toluene, ethylbenzene, xylenes (total), methyl-tert-butyl-ether, naphthalene, 1,2-dichloroethane, and eight (8) oxygenates by EPA method 8260 and 1,2-dibromoethane by EPA method 8011.



Recovery wells RW-1, RW-2, RW-3, RW-4, RW-5, and RW-6 and monitoring wells MW-1 and MW-24 will be gauged only for the presence of free-phase gasoline during all post-remedial activity sampling events

due to their usage during the AFVR events.

Because of the high mass of petroleum hydrocarbons present in the source area, 100% reduction is not

expected. Residual hydrocarbons, including those listed above are expected to remain at levels lower than

the SSTLs. The three (3) proposed applications are expected to reduce the starting petroleum hydrocarbon

concentrations below SSTLs.

Contaminant migration as a result of the planned injection activities is not expected to occur. No potential

exposure pathways for humans, animals, or the environment is expected. This opinion is based on the fact

that the injection area is located outside of the footprint of any structures and the injection depth interval is

from 21 to 42 feet bgs. The nearest receptor is a creek located approximately 500 feet to the southeast of

the site.

Following the quarterly groundwater sampling events detailed above, confirmation of continuing

groundwater concentrations below SSTLs, and SCDES approval, all monitoring and recovery wells at the

site will be properly abandoned by a South Carolina licensed driller.

**Contingency Plan** 

In the event that interim performance monitoring indicates the planned enhanced AFVR is insufficient to

achieve site-closure, alternative techniques will be utilized with remaining approved funds to reach closure.

EnviroSouth will submit addendums to the Corrective Action Plan and Underground Injection Control

Permit, as necessary, in the event that a contingency plan is required.

**Spill Prevention** 

The sodium percarbonate mixture will come in two (2) separate packings. Part A of the injectate will be

packaged in sealed 40-pound plastic bags and not opened until ready for mixing. Part B of the injectate will

be packaged in sealed 400-pound drums and not opened until ready for mixing. The solution of water and

sodium percarbonate will be contained in plastic tanks/totes with secured lids during the mixing and

ENVIROSOUTH

Corrective Action Plan Westside Quick Stop 821 W. Parker Road Greenville, South Carolina injection process. A spill containment kit will be onsite at all times during the operation. The kit will contain absorbent pads, socks and booms, absorbent clay, and a wet-vac capable of capturing any spills or leaks that may arise during the operation.

#### **Waste Materials**

Sodium percarbonate bags will be emptied of all contents and placed in heavy-duty contractor trash bags daily for future disposal at an approved landfill.

Electron acceptor drums will be emptied of all contents and disposed of at an approved landfill.

Spent absorbent pads, socks, booms, and absorbent clay necessary to manage spills or leaks will be managed as investigation derived waste (IDW) and will be placed in labeled 55-gallon steel drums and disposed under manifest control at an approved landfill.

#### **Equipment Deactivation**

After completion of each injection application, all equipment brought to the site will be removed.

#### **Parcel Information**

The subject property and adjoining properties parcel information are attached.

#### Site-Specific Health and Safety Plan

A site-specific health and safety plan for this work is included.

#### **Pertinent Contacts**

#### South Carolina Department of Health and Environmental Control

SCDES Project Manager: Mr. Adam Looper Telephone Number: (803) 898-0631

#### **Environmental Consultant**

Contractor: EnviroSouth

Site Contact: Mr. William Lyons, P.G.



Telephone Number: (864) 979-7862

Address: 3440 Augusta Road

Greenville, South Carolina 29605

#### **Chemical Manufacturer**

Injectate: RegenOx®

Provider: Regenesis

Contact: Mr. Daniel Pile

Telephone: (470) 757-8560

Address: 1101 Calle Sombra

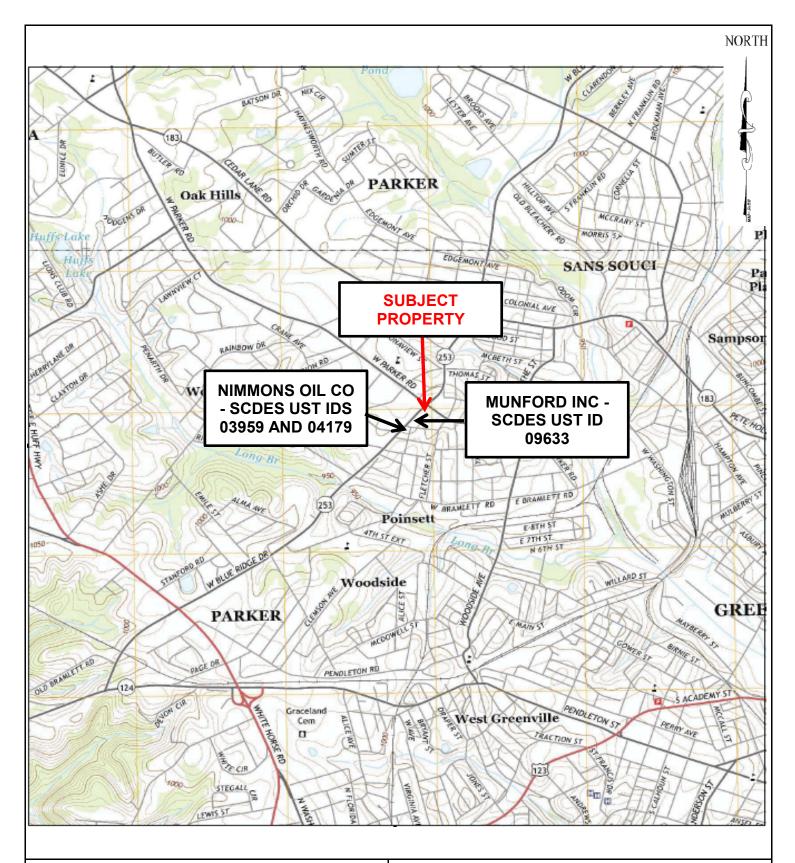
San Clemente, California 92673

#### Implementation Schedule

A Gantt chart showing the proposed implementation schedule is attached.



### **FIGURES**



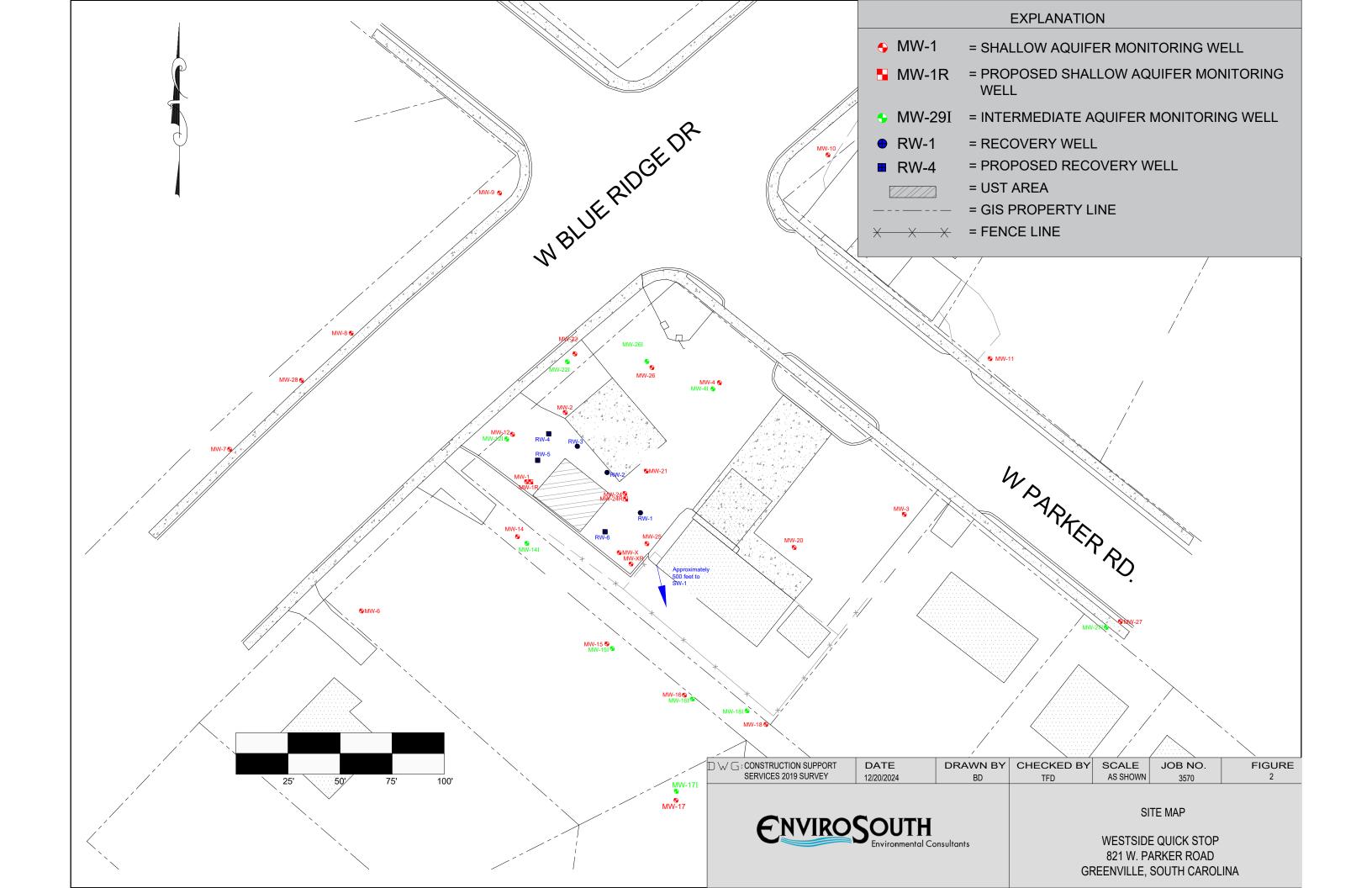
SOURCE: USGS 7.5' QUADRANGLE MAP 2014, GREENVILLE, SC

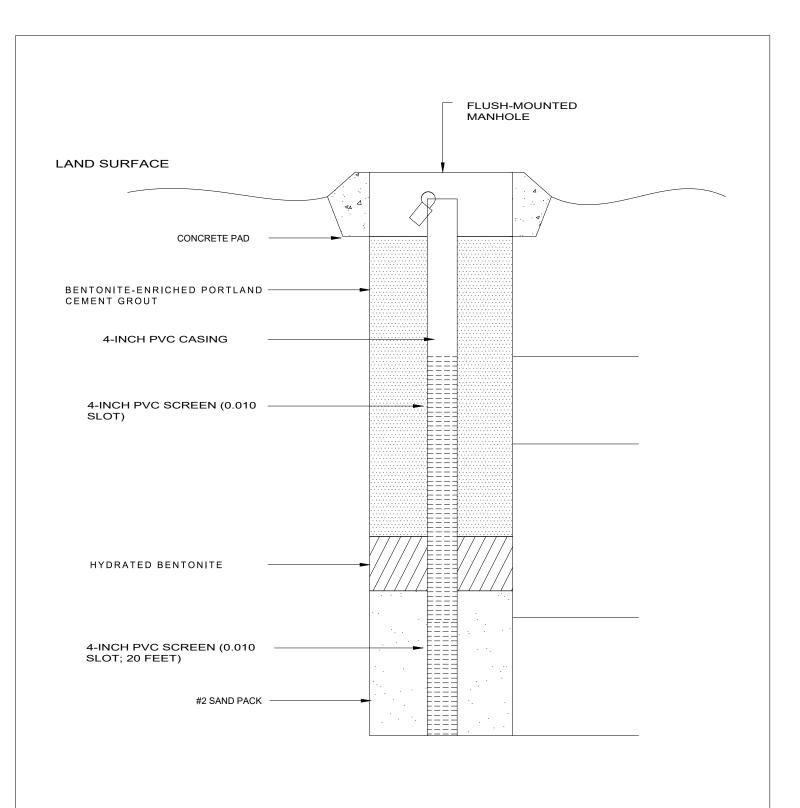


#### SITE VICINITY MAP

COMMERCIAL PROPERTY 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA SCDES UST ID NO. 12430

JOB NO.: 3570 CHECKED BY: KM FIGURE: 1
SCALE: NOT SHOWN DRAWN BY: BD DATE: 11/21/2024

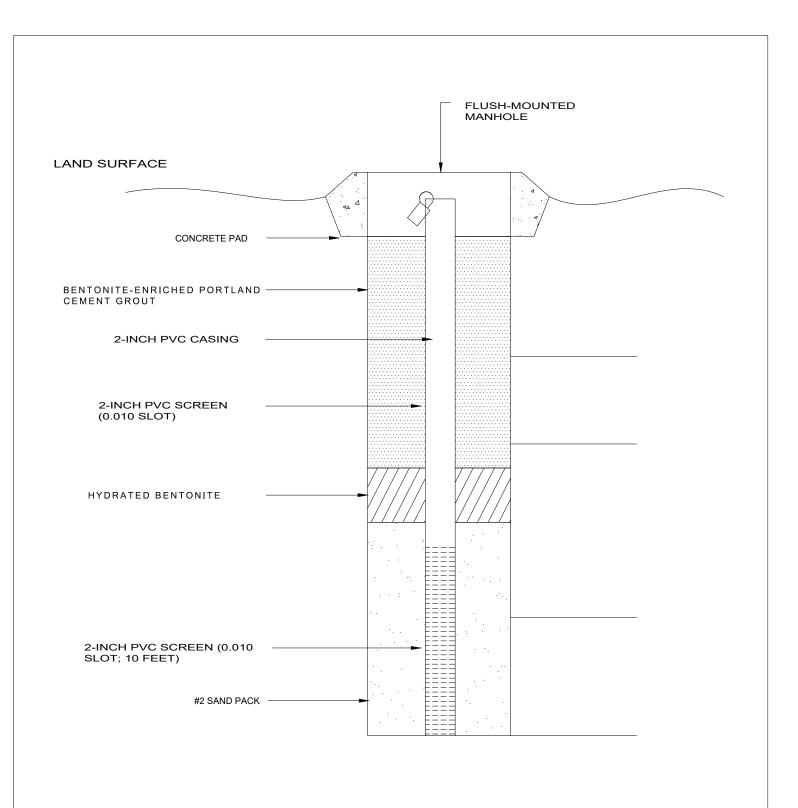






RECOVERY WELL DIAGRAM
WESTSIDE QUICK STOP
821 W. PARKER ROAD
GREENVILLE, SOUTH CAROLINA

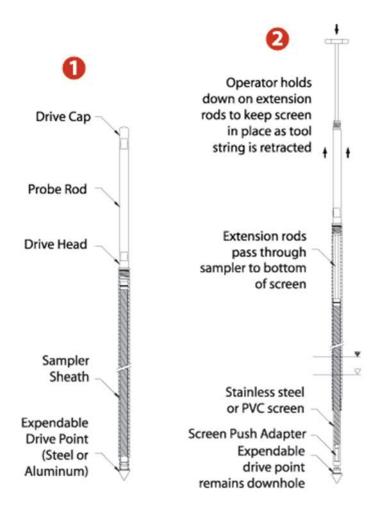
FIGURE: 3

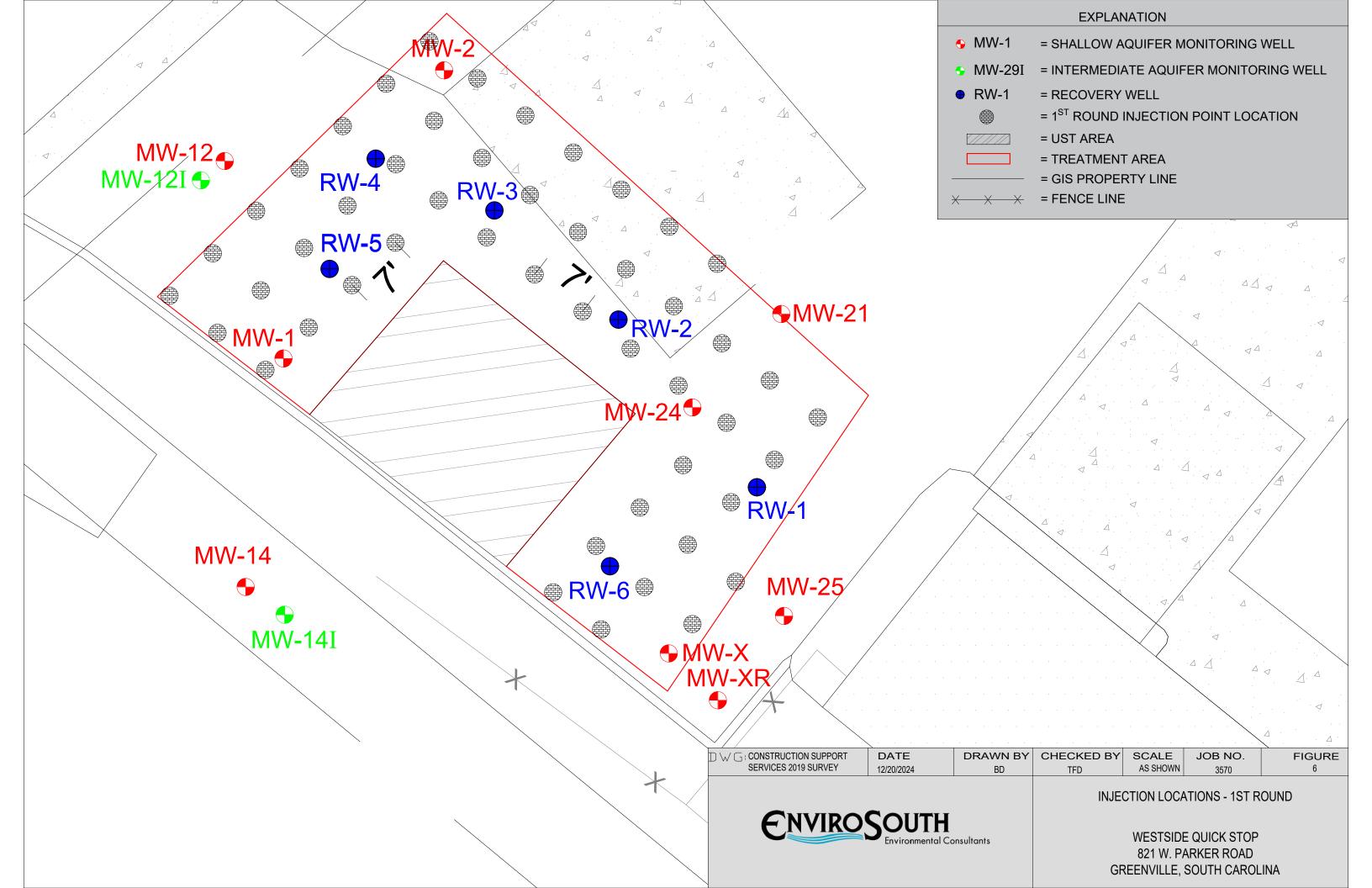


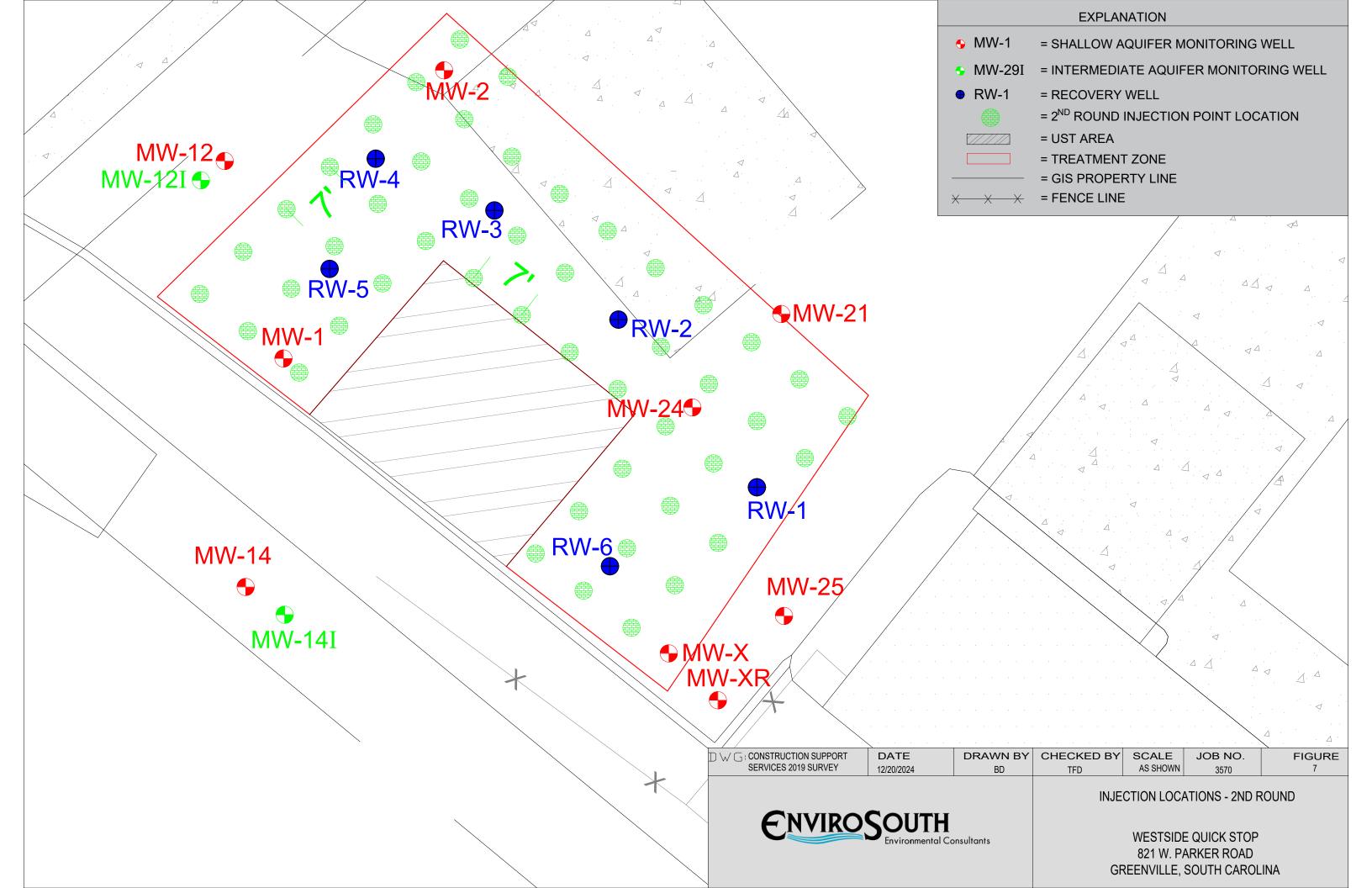


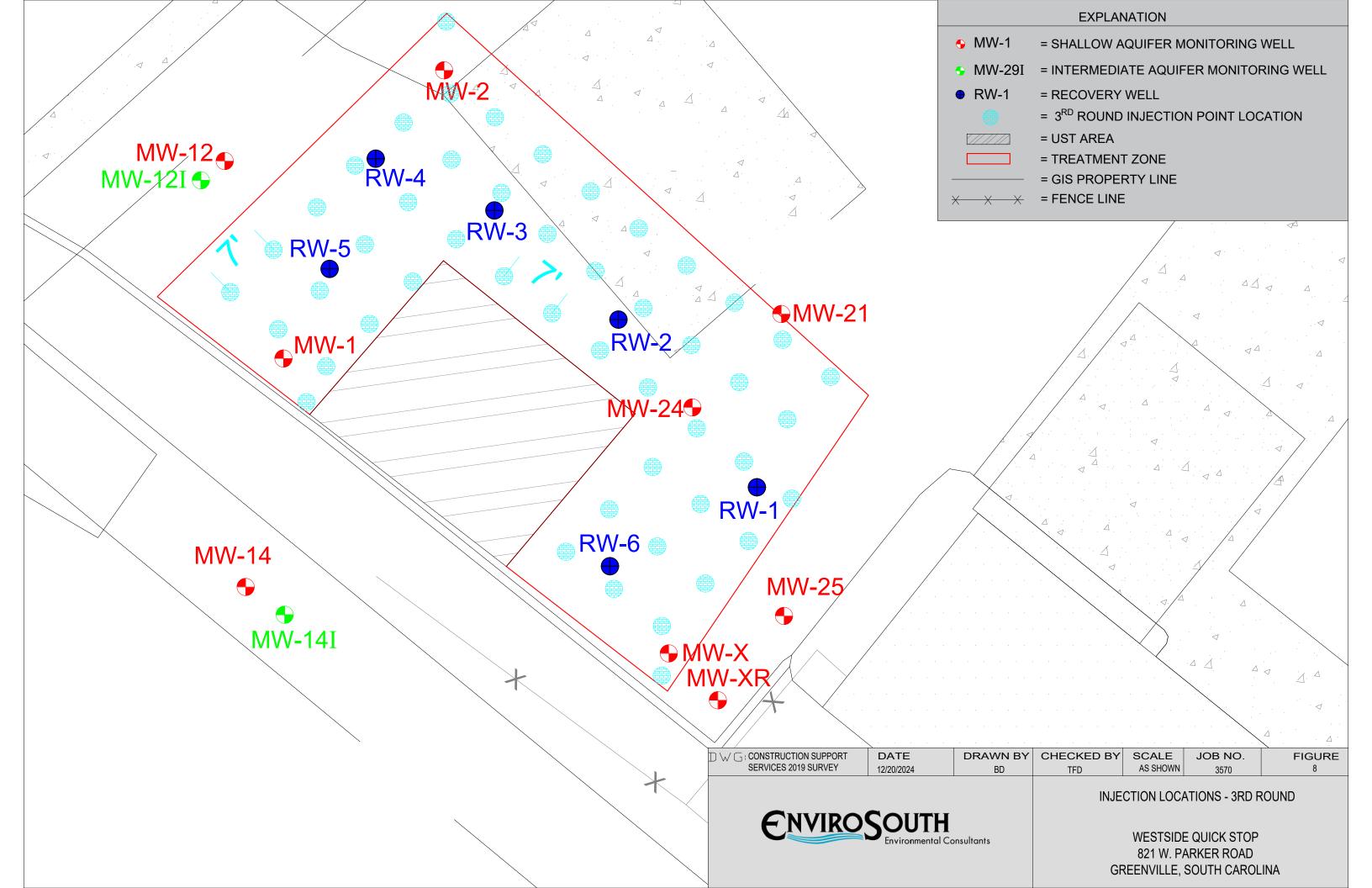
MONITORING WELL DIAGRAM
WESTSIDE QUICK STOP
821 W. PARKER ROAD
GREENVILLE, SOUTH CAROLINA

FIGURE: 4













Technology-Based Solutions for the Environment

**PROJECT NAME** 

# Westside Quick Stop

**Preliminary Cost Proposal** 

Rev 01

#### **PREPARED FOR**

EnviroSouth William Lyons wlyons@envirosouth.com

#### **PREPARED BY**

**REGENESIS** 

Daniel Pile dpile@regenesis.com

lan Doliana idoliana@regenesis.com

## **Project Summary**

REGENESIS appreciates the opportunity to provide EnviroSouth our remedial design and cost estimate for the Westside Quick Stop project. This proposal includes an overview of our proposed solution, the project goals, technologies proposed, application design summary table and a treatment area map.

#### **Proposed Solution**

We propose treatment with RegenOx to address residual petroleum hydrocarbon impacts within the defined treatment area. These reagents will be applied via direct push injection. We are also recommending extraction events following each application. The target extraction volume should be approximately 120% of each event's injection volume and should occur 2-3 weeks after each event. Reagent quantities are estimated based on provided site information. Adjustments may be needed after further investigation.

#### **Project Goals**

- Remove NAPL from MW-1, RW-1, RW-2, and MW-24
- Reduce groundwater concentrations to below solubility limits

#### **Technologies Proposed**

RegenOx®

Click above to access product specification sheets

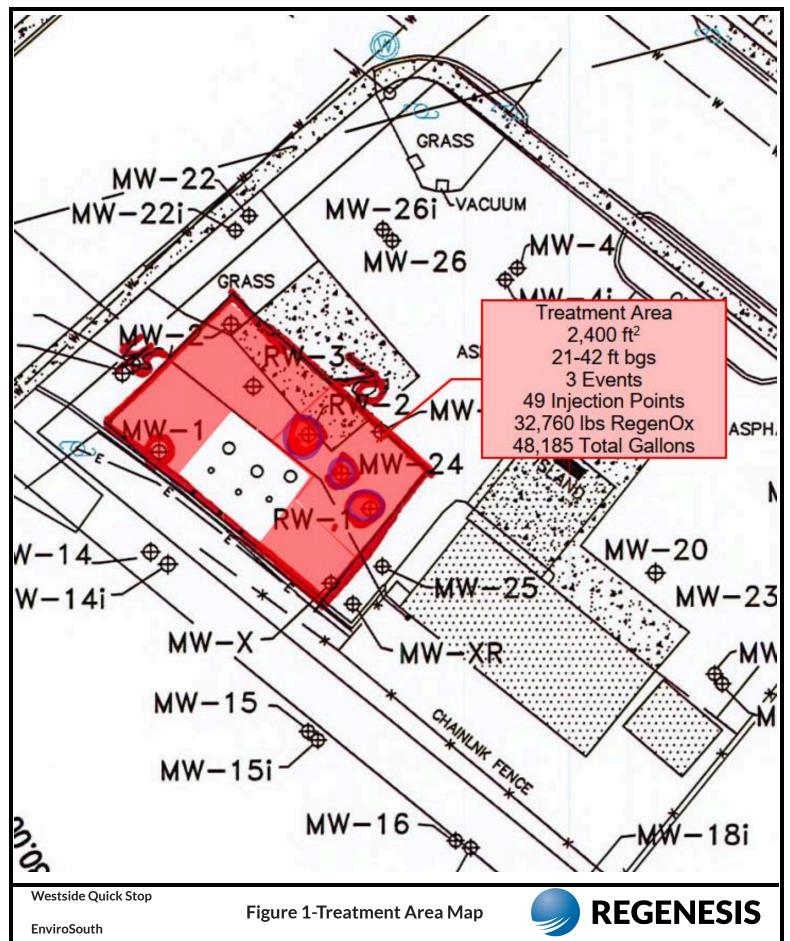
#### Technical Resources

- RegenOx® Technical Bulletin: Compatibility with Underground Storage Structures and Pipes
- RegenOx® Technical Bulletin: Increased Solubility
   Effects When Treating Total Petroleum Hydrocarbons
- RegenOx® Technical Bulletin: Chemical Oxidation of Petroleum Hydrocarbons in High Total Organic (TOC) Environments

#### **Design Summary**

Treatment Area					
Design Parameters	Unit	Value			
Treatment Area	ft sq.	2,400			
Top Treat Depth (ft. bgs)		21			
Bottom Treat Depth (ft. bgs)		42			
Vertical Treatment Interval	ft	21			
Soil Type		Sandy silt			
Porosity	cm3/cm3	0.40			
Effective Porosity	cm3/cm3	0.15			
Hydraulic Gradient	ft/ft	0.01			
GW Velocity	ft/yr	60.88			
Application Summary					
Spacing Within Rows (ft)		7			
Spacing Between Rows (ft)		7			
Injection Points (per app.)		49			
Number of Applications		3			
RegenOx Part A Solution %		6%			
Eff. Pore Voume Occupancy		85%			
Product Dosage					
RegenOx Part A	lbs	24,560			
RegenOx Part B	lbs	8,200			
Water Required	gallons	46,108			
Total Volume Applied	gallons	48,185			





August 26, 2024

Technology-Based Solutions for the Environment

## **Technical Approach**

Our review of the site data indicates that non-aqueous phase liquids (NAPLs) are present. RegenOx is an advanced chemical oxidation technology that destroys contaminants through powerful, yet controlled chemical reactions. This product maximizes *in-situ* performance while using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. RegenOx directly oxidizes contaminants while its unique catalytic component generates a range of highly oxidizing free radicals that rapidly and effectively destroy a range of target contaminants including both petroleum hydrocarbons and chlorinated compounds. The secondary ability of RegenOx is to increase the desorption rates of hydrocarbons bound in saturated soil and make them available for more efficient and rapid treatment using a range of mass recovery technologies including multi-phase extraction as proposed here. Each RegenOx application is expected to result in oxidant longevity of 2 to 3 weeks, while the activator will persist longer. For this reason, multiple applications, at an application event spacing of approximately 2 to 3 weeks, coupled with an enhanced recovery technology, are recommended for use in this project.

Due to the unique surfactant characteristics of RegenOx, which is designed to allow for mass transfer from sorbed to dissolved phase and/or free-phase, we recommend that use of this product be coupled with multi-phase extraction (MPE) at this site. MPE is best conducted using a mobile vacuum tanker truck or similar high-vacuum system which can quickly remove dissolved and free-phase mass. The events should be conducted approximately 2-3 weeks after each RegenOx application (i.e., immediately prior to each subsequent RegenOx application). Each extraction event should remove approximately 120% of the injection volume from each event.

#### **Treatment Zone Design Parameters**

The table below summarizes pertinent treatment zone information used for developing the remedial application design. Where site-specific data were unavailable, default values based on soil type were used.

Target Treatment Zone (TTZ) Info	Unit	Value
Treatment Area	ft <sup>2</sup>	2,400
Top Treatment Depth	ft	21.0
Bottom Treatment Depth	ft	42.0
Vertical Treatment Interval	ft	21.0
Treatment Zone Volume	ft³	50,400
Treatment Zone Volume	су	1,867
Soil Type		Sandy silt
Porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.40
Effective Porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.15
Treatment Zone Pore Volume	gals	150,807
Treatment Zone Effective Pore Volume	gals	56,553
Soil Density	g/cm <sup>3</sup>	1.67
Hydraulic Conductivity	ft/day	5.0
Hydraulic Gradient	ft/ft	0.005
GW Velocity	ft/yr	61





#### PRICE QUOTATION

(Valid for only 30 days from date of quote)\*

Contact Name William Lyons Account Name EnviroSouth
Created Date 11/21/2024 Prepared By Aaron Hazen
Quote Name 40840 - idoli77597 - Westside Quick Stop - SC - Quote Number 00040840

Event 1

Thank you for your interest in Regenesis Products. Please find below the sales price and related shipping, handling and tax costs per your request.

Please note that a Price Quotation is not a sales order. To place an order please contact our customer service department at 949 366-8000 or order online at <a href="http://www.regenesis.com/order">http://www.regenesis.com/order</a>.

Products					
Product Code	Product		Quantit	y Sales Price	Total Price
2200	RegenOx® Part A Bags (40 lb) (RBP)		8,200.0	USD 3.85	USD 31,570.00
2210	RegenOx® Part B Pails (40 lb) (RBP)		2,760.0	USD 3.85	USD 10,626.00
FRE001	Freight		1.0	USD 2,955.78	USD 2,955.78
Special Delivery Instructions	R+L Carriers (1-2 transit days) - Delivery Appointment Required - Lift Gate & Pallet Jack at delivery  Quote valid for 90 days - expires 2/19/2025 -	Subtot Tax Grand		USD 45,151.78 USD 2,531.76 USD 47,683.54	
Payment Terms	Net 90				

#### F.O.B. Origin

**PAYMENT TERMS**: A monthly finance fee of 1.5% will be applied to accounts over the listed payment terms. Volume discounts pricing will be rescinded on accounts outstanding over 90 days. An early payment discount of 1.5% NET 10, is available for cash or check payment only. Discount applied to product, services, and any applicable sales tax. Discount does not apply to any freight and handling. We accept MasterCard, Visa, and American Express.

Sales Tax: a valid Reseller Certificate or Tax Exempt Certificate must be presented to the Customer Service Department at the time an order is placed. Sales tax charges on the quote/ sales confirmations are estimated based on delivery location. The actual sales tax rate is calculated at the time of invoice. Liability for all taxes and import or export duties, imposed by any city, state, federal, or other government authority, shall be assumed and paid by the buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or cost incurred by seller in connection therewith.

**RETURN POLICY**: All requests to return product must be pre-approved by Regenesis. A 15% re-stocking fee will be charged for all returned goods. Return freight must be prepaid and product must be in saleable condition. No product will be accepted for return after of 90 days from original delivery date.



SHIPPING POLICY: the following terms and conditions shall apply

- 1. As a service Regenesis will assist and coordinate with independent trucking brokers/carriers the delivery of product. Regenesis will also coordinate a "will call" pick up at one of its warehouse locations with a customer's freight carrier of choice. Please note that product availability will vary by warehouse location.
- 2. All quoted rates and delivery dates are based on Standard Delivery Terms, which allow or provide only an estimated date and time of delivery of product to a site. Delivery times will vary per carrier. A guaranteed delivery may be available for an additional cost and must be requested when placing an order. If the carrier fails to meet the Guaranteed delivery per the specified date and time, *per the carrier's terms and conditions*, carrier will waive this additional charge.
- 3. Shipping /Freight costs are estimates and may change pending requirement of any additional equipment or change in volume or delivery instructions at time of placing your order.

**SHIPPING DISCLAIMER**: Regenesis is not in the business of shipping or transportation of its products. We will strive to assist in meeting shipping requirements, but please realize that all shipments are subject to carrier's availability, weather, mechanical problems, or other unforeseen circumstances. As a result, Regenesis cannot be held responsible for project/site costs incurred due to shipping related delays.

Handling Fee: Handling Fees may be subject to sales tax based on point of delivery.

Freight Freight charges are estimates and actual freight charges are calculated at the time of invoice. Additional freight charges may be assessed for any accessorial (can include, but not limited to lift gate and pallet jack at delivery, inside delivery, time definite deliveries, and delivery appointments) requested at the time of delivery. Please communicate any requirements for delivery with the customer service department at the time the order is placed. Standard delivery is 8am-5pm, Monday – Friday. \*Full truck rates are valid for 7 days from date of quote.



#### PRICE QUOTATION

(Valid for only 30 days from date of quote)\*

Contact Name William Lyons Account Name EnviroSouth
Created Date 11/21/2024 Prepared By Aaron Hazen
Quote Name 40841 - idoli77597 - Westside Quick Stop - SC - Quote Number 00040841

Event 2

Thank you for your interest in Regenesis Products. Please find below the sales price and related shipping, handling and tax costs per your request.

Please note that a Price Quotation is not a sales order. To place an order please contact our customer service department at 949 366-8000 or order online at <a href="http://www.regenesis.com/order">http://www.regenesis.com/order</a>.

Products					
Product Code	Product		Quantity	/ Sales Price	Total Price
2200	RegenOx® Part A Bags (40 lb) (RBP)		8,200.00	USD 3.85	USD 31,570.00
2210	RegenOx® Part B Pails (40 lb) (RBP)		2,760.00	USD 3.85	USD 10,626.00
FRE001	Freight		1.00	USD 2,955.78	USD 2,955.78
Special Delivery Instructions	R+L Carriers (1-2 transit days)  - Delivery Appointment Required - Lift Gate & Pallet Jack at delivery  Quote valid for 90 days  - expires 2/19/2025 -	Subtot Tax Grand		USD 45,151.78 USD 2,531.76 USD 47,683.54	
Payment Terms	Net 90				

#### F.O.B. Origin

**PAYMENT TERMS**: A monthly finance fee of 1.5% will be applied to accounts over the listed payment terms. Volume discounts pricing will be rescinded on accounts outstanding over 90 days. An early payment discount of 1.5% NET 10, is available for cash or check payment only. Discount applied to product, services, and any applicable sales tax. Discount does not apply to any freight and handling. We accept MasterCard, Visa, and American Express.

Sales Tax: a valid Reseller Certificate or Tax Exempt Certificate must be presented to the Customer Service Department at the time an order is placed. Sales tax charges on the quote/ sales confirmations are estimated based on delivery location. The actual sales tax rate is calculated at the time of invoice. Liability for all taxes and import or export duties, imposed by any city, state, federal, or other government authority, shall be assumed and paid by the buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or cost incurred by seller in connection therewith.

**RETURN POLICY**: All requests to return product must be pre-approved by Regenesis. A 15% re-stocking fee will be charged for all returned goods. Return freight must be prepaid and product must be in saleable condition. No product will be accepted for return after of 90 days from original delivery date.



SHIPPING POLICY: the following terms and conditions shall apply

- 1. As a service Regenesis will assist and coordinate with independent trucking brokers/carriers the delivery of product. Regenesis will also coordinate a "will call" pick up at one of its warehouse locations with a customer's freight carrier of choice. Please note that product availability will vary by warehouse location.
- 2. All quoted rates and delivery dates are based on Standard Delivery Terms, which allow or provide only an estimated date and time of delivery of product to a site. Delivery times will vary per carrier. A guaranteed delivery may be available for an additional cost and must be requested when placing an order. If the carrier fails to meet the Guaranteed delivery per the specified date and time, *per the carrier's terms and conditions*, carrier will waive this additional charge.
- 3. Shipping /Freight costs are estimates and may change pending requirement of any additional equipment or change in volume or delivery instructions at time of placing your order.

**SHIPPING DISCLAIMER**: Regenesis is not in the business of shipping or transportation of its products. We will strive to assist in meeting shipping requirements, but please realize that all shipments are subject to carrier's availability, weather, mechanical problems, or other unforeseen circumstances. As a result, Regenesis cannot be held responsible for project/site costs incurred due to shipping related delays.

Handling Fee: Handling Fees may be subject to sales tax based on point of delivery.

Freight Freight charges are estimates and actual freight charges are calculated at the time of invoice. Additional freight charges may be assessed for any accessorial (can include, but not limited to lift gate and pallet jack at delivery, inside delivery, time definite deliveries, and delivery appointments) requested at the time of delivery. Please communicate any requirements for delivery with the customer service department at the time the order is placed. Standard delivery is 8am-5pm, Monday – Friday. \*Full truck rates are valid for 7 days from date of quote.



#### PRICE QUOTATION

(Valid for only 30 days from date of quote)\*

Contact Name William Lyons Account Name EnviroSouth
Created Date 11/21/2024 Prepared By Aaron Hazen
Quote Name 40842 - idoli77597 - Westside Quick Stop - SC - Quote Number 00040842

Event 3

Thank you for your interest in Regenesis Products. Please find below the sales price and related shipping, handling and tax costs per your request.

Please note that a Price Quotation is not a sales order. To place an order please contact our customer service department at 949 366-8000 or order online at <a href="http://www.regenesis.com/order">http://www.regenesis.com/order</a>.

Products					
Product Code	Product		Quantity	/ Sales Price	Total Price
2200	RegenOx® Part A Bags (40 lb) (RBP)		8,200.00	USD 3.85	USD 31,570.00
2210	RegenOx® Part B Pails (40 lb) (RBP)		2,760.00	USD 3.85	USD 10,626.00
FRE001	Freight		1.00	USD 2,955.78	USD 2,955.78
Special Delivery Instructions	R+L Carriers (1-2 transit days)  - Delivery Appointment Required - Lift Gate & Pallet Jack at delivery  Quote valid for 90 days  - expires 2/19/2025 -	Subtot Tax Grand		USD 45,151.78 USD 2,531.76 USD 47,683.54	
Payment Terms	Net 90				

#### F.O.B. Origin

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Sales Tax: a valid Reseller Certificate or Tax Exempt Certificate must be presented to the Customer Service Department at the time an order is placed. Sales tax charges on the quote/ sales confirmations are estimated based on delivery location. The actual sales tax rate is calculated at the time of invoice. Liability for all taxes and import or export duties, imposed by any city, state, federal, or other government authority, shall be assumed and paid by the buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or cost incurred by seller in connection therewith.

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# Acknowledgement

This scope and associated costs are budgetary and should not be considered final. Listed below are the next steps to secure a final design and cost estimate from REGENESIS.

#### **Steps to Final Design and Scope of Work**

- 1. Signature notifying REGENESIS to proceed with final design.
- 2. REGENESIS technical team contacts EnviroSouth to review final scope of work and provide detailed design and cost estimate
- 3. Provide Detailed Remediation Services Scope of Work, if applicable.
- 4. Confirm Implementation Schedule
- 5. Submit Detailed Design and Cost Estimate to EnviroSouth for review and final approval

Signature below confirms signee accepts this preliminary scope of work and would like REGENESIS to proceed with a detailed design and cost estimate.



Not yet accepted

EnviroSouth | William Lyons, Senior Hydrogeologist



### **Terms & Conditions**

- 1. **PAYMENT TERMS.** Net 90 Days. Accounts outstanding after 90 days will be assessed 1.5% monthly interest. Volume discount pricing will be rescinded on all accounts outstanding over 90 days. An early payment discount of 1.5% Net 10 is available for cash or check payments only. We accept Master Card, Visa and American Express.
- 2. **RETURN POLICY.** A 15% re-stocking fee will be charged for all returned goods. All requests to return product must be pre-approved by seller. Returned product must be in original condition and no product will be accepted for return after a period of 90 days.
- 3. **FORCE MAJEURE.** Seller shall not be liable for delays in delivery or services or failure to manufacture or deliver due to causes beyond its reasonable control, including but not limited to acts of God, acts of buyer, acts of military or civil authorities, fires, strikes, flood, epidemic, war, riot, delays in transportation or car shortages, or inability to obtain necessary labor, materials, components or services through seller's usual and regular sources at usual and regular prices. In any such event Seller may, without notice to buyer, at any time and from time to time, postpone the delivery or service dates under this contract or make partial delivery or performance or cancel all or any portion of this and any other contract with buyer without further liability to buyer. Cancellation of any part of this order shall not affect Seller's right to payment for any product delivered or service performed hereunder.
- 4. **LIMITED WARRANTY.** Seller warrants the product(s) sold and services provided as specified on face of invoice, solely to buyer. Seller makes no other warranty of any kind respecting the product and services, and expressly DISCLAIMS ALL OTHER WARRANTIES OF WHATEVER KIND RESPECTING THE PRODUCT AND SERVICES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND NON-INFRINGEMENT.
- 5. **DISCLAIMER.** Where warranties to a person other than buyer may not be disclaimed under law, seller extends to such a person the same warranty seller makes to buyer as set forth herein, subject to all disclaimers, exclusions and limitations of warranties, all limitations of liability and all other provisions set forth in the Terms and Conditions herein. Buyer agrees to transmit a copy of the Terms and Conditions set forth herein to any and all persons to whom buyer sells, or otherwise furnishes the products and/or services provided buyer by seller and buyer agrees to indemnify seller for any liability, loss, costs and attorneys' fees which seller may incur by reason, in whole or in part, of failure by buyer to transmit the Terms and Conditions as provided herein.
- 6. LIMITATION OF SELLER'S LIABILITY AND LIMITATION OF BUYER'S REMEDY. Seller's liability on any claim of any kind, including negligence, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair or use of any goods or performance of any services covered by or furnished hereunder, shall in no case exceed the lesser of (1) the cost of repairing or replacing goods and repeating the services failing to conform to the foregoing warranty or the price of the goods and/or services or part thereof which gives rise to the claim. IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, OR FOR DAMAGES IN THE NATURE OF PENALTIES.
- 7. **INDEMNIFICATION.** Buyer agrees to defend and indemnify seller of and from any and all claims or liabilities asserted against seller in connection with the manufacture, sale, delivery, resale or repair or use of any goods, and performance of any services, covered by or furnished hereunder arising in whole or in part out of or by reason of the failure of buyer, its agents, servants, employees or customers to follow instructions, warnings or recommendations furnished by seller in connection with such goods and services, by reason of the failure of buyer, its agents, servants, employees or customers to comply with all federal, state and local laws applicable to such goods and services, or the use thereof, including the Occupational Safety and Health Act of 1970, or by reason of the negligence or misconduct of buyer, its agents, servants, employees or customers.



- 8. **EXPENSES OF ENFORCEMENT.** In the event seller undertakes any action to collect amounts due from buyer, or otherwise enforce its rights hereunder, Buyer agrees to pay and reimburse Seller for all such expenses, including, without limitation, all attorneys and collection fees.
- 9. **TAXES.** Liability for all taxes and import or export duties, imposed by any city, state, federal or other governmental authority, shall be assumed and paid by buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or costs incurred by seller in connection therewith.
- 10. **ASSISTANCE AND ADVICE.** Upon request, seller in its discretion will furnish as an accommodation to buyer such technical advice or assistance as is available in reference to the goods and services. Seller assumes no obligation or liability for the advice or assistance given or results obtained, all such advice or assistance being given and accepted at buyer's risk.
- 11. SITE SAFETY. Buyer shall provide a safe working environment at the site of services and shall comply with all applicable provisions of federal, state, provincial and municipal safety laws, building codes, and safety regulations to prevent accidents or injuries to persons on, about or adjacent to the site.
- 12. **INDEPENDENT CONTRACTOR.** Seller and Buyer are independent contractors and nothing shall be construed to place them in the relationship of partners, principal and agent, employer/employee or joint ventures. Neither party will have the power or right to bind or obligate the other party except as may be expressly agreed and delegated by other party, nor will it hold itself out as having such authority.
- 13. **REIMBURSEMENT.** Seller shall provide the products and services in reliance upon the data and professional judgments provided by or on behalf of buyer. The fees and charges associated with the products and services thus may not conform to billing guidelines, constraints or other limits on fees. Seller does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where seller may serve as a supplier or subcontractor to an entity that seeks reimbursement from the Government for all or part of the services performed or products provided by seller, it is the sole responsibility of the buyer or other entity seeking reimbursement to ensure the products and services and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity that seeks reimbursement from the Government, seller does not knowingly present or cause to be presented any claim for payment to the Government.
- 14. APPLICABLE LAW/JURISDICTION AND VENUE. The rights and duties of the parties shall be governed by, construed, and enforced in accordance with the laws of the State of California (excluding its conflict of laws rules which would refer to and apply the substantive laws of another jurisdiction). Any suit or proceeding hereunder shall be brought exclusively in state or federal courts located in Orange County, California. Each party consents to the personal jurisdiction of said state and federal courts and waives any objection that such courts are an inconvenient forum.
- 15. **ENTIRE AGREEMENT.** This agreement constitutes the entire contract between buyer and seller relating to the goods or services identified herein. No modifications hereof shall be binding upon the seller unless in writing and signed by seller's duly authorized representative, and no modification shall be effected by seller's acknowledgment or acceptance of buyer's purchase order forms containing different provisions. Trade usage shall neither be applicable nor relevant to this agreement, nor be used in any manner whatsoever to explain, qualify or supplement any of the provisions hereof. No waiver by either party of default shall be deemed a waiver of any subsequent default.



# **Detailed Design Table**

Project Information						
Westside (						
Greenville, So	outh Card	lina				
Treatme	nt Area					
Prepare	ed For:					
Enviro <b>S</b> o	uth. Inc.					
Target Treatment Zone (TTZ) Info	Unit	Value				
Treatment Area ft <sup>2</sup> 2,400						
	ft					
21.0						
Bottom Treatment Depth Vertical Treatment Interval	ft	42.0				
	ft <sup>3</sup>	21.0				
Treatment Zone Volume		50,400				
Treatment Zone Volume	су	1,867				
Soil Type	 v, v	Sandy silt				
Porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.40				
Effective Porosity	cm <sup>3</sup> /cm <sup>3</sup>	0.15				
Treatment Zone Pore Volume	gals	150,807				
Treatment Zone Effective Pore Volume	gals	56,553				
Soil Density g/cm <sup>3</sup> 1.67						
Hydraulic Conductivity ft/day 5.0						
Hydraulic Gradient	ft/ft	0.005				
GW Velocity	ft/yr	61				
Application De	sign Summ	ary				
Treatment Area	ft <sup>2</sup>	2400.0				
Top Treatment Depth	ft bgs	21.0				
Bottom Treatment Depth	ft bgs	42.0				
Application Method	- Direct Push					
Spacing Within Rows	ft	7.0				
Spacing Between Rows	ft	7.0				
Injection Points (per app.)		49				
Number of Applications	_	3				
Total RegenOx to be Applied	lbs	32,760				
RegenOx Part A	lbs	24,560				
RegenOx Part B	lbs	8,200				
RegenOx Part A per Point	lbs	167				
RegenOx Part B per Point	lbs	56				
RegenOx Part A Solution %	%	6.0%				
Volume Water						
Total Solution Volume	gals	46,108				
Application Volume per Foot	gals	48,185				
	gals	16				
Injection Volume per Point	gals	328				
Application Dosing						
RegenOx to be Applied	RegenOx to be Applied lbs 32,760					
RegenOx Part A to be Applied	lbs	24,560				
RegenOx Part B to be Applied	lbs	8,200				
Prepared By: lan Doliana - Design Specialist						
Date: 8/26/2024						





# $RegenOx @-Part\ A\ (Oxidizer\ Complex)$

# **Material Safety Data Sheet (MSDS)**

Last Revised: September 27, 2013

# **Section 1 – Supplier Information and Material Identification**

## **Supplier:**



# **REGENESIS**

1011 Calle Sombra

San Clemente, CA 92673 Telephone: 949.366.8000

Fax: 949.366.8090

E-mail: info@regenesis.com

Chemical Description: A mixture of sodium percarbonate [2Na<sub>2</sub>CO<sub>3</sub>·3H<sub>2</sub>O<sub>2</sub>],

sodium carbonate [Na<sub>2</sub>CO<sub>3</sub>], sodium silicate and silica gel.

Chemical Family: Inorganic Chemicals

Trade Name: RegenOx® – Part A (Oxidizer Complex)

Product Use: Used to remediate contaminated soil and groundwater

(environmental applications)

# **Section 2 – Chemical Information/Other Designations**

CAS No.	<u>Chemical</u>	<b>Percentage</b>
15630-89-4	Sodium Percarbonate	60 -100 %
7699-11-6	Silicic Acid	< 1 %
63231-67-4	Silica Gel	< 1 %

# Section 3 – Physical Data

Form: Powder
Color: White
Odor: Odorless

Melting Point: NA
Boiling Point: NA

# Section 3 – Physical Data (cont)

**Flammability/Flash Point:** NA

Vapor Pressure: NA

**Bulk Density:**  $0.9 - 1.2 \text{ g/cm}^3$ 

**Solubility:** Min 14.5g/100g water @ 20 °C

Viscosity: NA

**pH (3% solution):**  $\approx 10.5$ 

**Decomposition** Self-accelerating decomposition with oxygen release starts

**Temperature:** at 50 °C.

# Section 4 – Reactivity Data

**Stability:** Stable under normal conditions

Conditions to Acids, bases, salts of heavy metals, reducing agents, and

**Avoid/Incompatibility:** flammable substances

**Hazardous Decomposition** 

**Products:** 

Oxygen. Contamination with many substances will cause decomposition. The rate of decomposition increases with increasing temperature and may be very vigorous with

rapid generation of oxygen and steam.

## **Section 5 – Regulations**

**TSCA Inventory Listed:** Yes

**CERCLA Hazardous Substance (40 CFR Part 302)** 

Listed Substance: No
Unlisted Substance: Yes

SARA, Title III, Sections 313 (40 CFR Part 372) – Toxic Chemical Release Reporting:

**Community Right-To-Know** 

**Extremely Hazardous** 

**Substance:** 

No

**WHMIS Classification:** C, D2B

**Canadian Domestic** 

Appears

**Substance List:** 

# Section 6 - Protective Measures, Storage and Handling

#### **Technical Protective Measures**

**Storage:** Oxidizer. Store in a cool, well ventilated area away from

all sources of ignition and out of the direct sunlight. Store in a dry location away from heat and in temperatures less

than 40 °C.

Keep away from incompatible materials and keep lids tightly closed. Do not store in improperly labeled

containers.

Protect from moisture. Do not store near combustible

materials. Keep containers well sealed.

Store separately from reducing materials. Avoid contamination which may lead to decomposition.

**Handling:** Avoid contact with eyes, skin and clothing. Use with

adequate ventilation.

Do not swallow. Avoid breathing vapors, mists or dust.

Do not eat, drink or smoke in the work area.

Label containers and keep them tightly closed when not in

use.

Wash hands thoroughly after handling.

# **Personal Protective Equipment (PPE)**

**Engineering Controls:** General room ventilation is required if used indoors. Local

exhaust ventilation, process enclosures or other

engineering controls may be needed to maintain airborne levels below recommended exposure limits. Avoid

creating dust or mists. Maintain adequate ventilation at all times. Do not use in confined areas. Keep levels below recommended exposure limits. To determine actual exposure limits, monitoring should be performed on a

routine basis.

**Respiratory Protection:** For many conditions, no respiratory protection is

necessary; however, in dusty or unknown conditions or when exposures exceed limit values a NIOSH approved

respirator should be used.

**Hand Protection:** Wear chemical resistant gloves (neoprene, rubber, or

PVC).

**Section 6 – Protective Measures, Storage and Handling (cont)** 

**Eye Protection:** Wear chemical safety goggles. A full face shield may be

worn in lieu of safety goggles.

**Skin Protection:** Try to avoid skin contact with this product. Chemical

resistant gloves (neoprene, PVC or rubber) and protective

clothing should be worn during use.

**Other:** Eye wash station.

**Protection Against Fire &** 

**Explosion:** 

Product is non-explosive. In case of fire, evacuate all nonessential personnel, wear protective clothing and a selfcontained breathing apparatus, stay upwind of fire, and use

water to spray cool fire-exposed containers.

## **Section 7 – Hazards Identification**

**Potential Health Effects** 

**Inhalation:** Causes irritation to the respiratory tract. Symptoms may

include coughing, shortness of breath, and irritations to

mucous membranes, nose and throat.

**Eye Contact:** Causes irritation, redness and pain.

**Skin Contact:** Causes slight irritation.

**Ingestion:** May be harmful if swallowed (vomiting and diarrhea).

#### Section 8 – Measures in Case of Accidents and Fire

**After Spillage/Leakage:** Eliminate all ignition sources. Evacuate unprotected

personnel and never exceed any occupational exposure limit. Shovel or sweep spilt material into plastic bags or vented containers for disposal. Do not return spilled or

contaminated material to the inventory.

**Extinguishing Media:** Water

First Aid

Eye Contact: Flush eyes with running water for at least 15 minutes with

eyelids held open. Seek a specialist.

**Inhalation:** Remove affected person to fresh air. Seek medical

attention if the effects persist.

**Ingestion:** If the individual is conscious and not convulsing, give two-

four cups of water to dilute the chemical and seek medical

attention immediately. **<u>Do Not</u>** induce vomiting.

**Section 8 – Measures in Case of Accidents and Fire (cont)** 

**Skin Contact:** Wash affected areas with soap and a mild detergent and

large amounts of water.

**Section 9 – Accidental Release Measures** 

**Precautions:** 

**Cleanup Methods:** Shovel or sweep spilt material into plastic bags or vented

containers for disposal. Do not return spilled or

contaminated material to the inventory.

**Section 10 – Information on Toxicology** 

**Toxicity Data** 

**LD50 Oral (rat):** 2,400 mg/kg

**LD50 Dermal (rabbit):** Min 2,000 mg/kg

**LD50 Inhalation (rat):** Min 4,580 mg/kg

**Section 11 – Information on Ecology** 

**Ecology Data** 

**Ecotoxicological** 

**Information:** 

NA

**Section 12 – Disposal Considerations** 

**Waste Disposal Method** 

**Waste Treatment:** Dispose of in an approved waste facility operated by an

authorized contactor in compliance with local regulations.

**Package (Pail) Treatment:** The empty and clean containers are to be recycled or

disposed of in conformity with local regulations.

# **Section 13 – Shipping/Transport Information**

**D.O.T. Shipping Name:** Oxidizing Solid, N.O.S. [A mixture of sodium

percarbonate [2Na<sub>2</sub>CO<sub>3</sub>·3H2O<sub>2</sub>], sodium carbonate

[Na<sub>2</sub>CO<sub>3</sub>], sodium silicate and silica gel.]

UN Number: 1479

Hazard Class: 5.1

**Labels:** 5.1 (Oxidizer)

Packaging Group: III

### **Section 14 – Other Information**

**HMIS**<sup>®</sup> **Rating** Health – 1 (slight) Reactivity – 1 (slight)

Flammability – 0 (none) Lab PPE – goggles, gloves,

and lab coat

HMIS<sup>®</sup> is a registered trademark of the National Painting and Coating Association.

#### **Section 15 – Further Information**

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.



# SAFETY DATA SHEET



#### 1. Identification

Product identifier RegenOx® Part B

Other means of identification None.

Recommended use Soil and Groundwater Remediation.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Regenesis

Address 1011 Calle Sombra

San Clemente, CA 92673 USA

General information 949-366-8000

E-mail CustomerService@regenesis.com

Emergency phone number For Hazardous Materials Incidents ONLY (spill, leak, fire, exposure or accident), call

CHEMTREC 24/7 at:

**USA, Canada, Mexico** 1-800-424-9300 **International** 1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.

**Health hazards** Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

OSHA defined hazards Not classified.

Label elements



Signal word Warning

**Hazard statement** Causes skin irritation. Causes serious eye irritation.

Precautionary statement

**Prevention** Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get

medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off

contaminated clothing and wash before reuse.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

#### 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	CAS number	%	
Silicic Acid, Sodium Salt, Sodium Silicate	1344-09-8	25-40	
Silicon dioxide (amorphous silica gel)	63231-67-4	<10	

RegenOx® Part B SDS US

924385 Version #: 03 Revision date: 19-November-2017 Issue date: 02-April-2015

Ferrous sulfate 7720-78-7 2-5

**Composition comments** 

All concentrations are in percent by weight unless otherwise indicated.

#### 4. First-aid measures

Inhalation

Move to fresh air. Keep victim at rest in a position comfortable for breathing. Call a physician if

symptoms develop or persist.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get

medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion**Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth. Get medical attention if symptoms occur.

Most important

symptoms/effects, acute and delayed

Indication of immediate medical attention and special treatment needed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Spray mist may irritate the respiratory system. Symptoms may include coughing, difficulty breathing and shortness of breath.

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

Suitable extinguishing media Unsuitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

None known.

Specific hazards arising from

the chemical

Special protective equipment and precautions for firefighters

During fire, gases hazardous to health may be formed. Combustion products may include: silicon oxides, metal oxides, sulfur oxides.

oxides, metal oxides, sullur oxides.

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Move containers from fire area if you can do so without risk.

Specific methods
General fire hazards

Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

# 7. Handling and storage

Precautions for safe handling

Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in a cool, dry, well-ventilated place. Maintain storage temperatures between 50°F to 140°F (10°C to 60°C). Store away from incompatible materials (see Section 10 of the SDS). Recommended storage containers: steel or plastic. Do not use containers made of aluminum, fiberglass, copper, brass, zinc or galvanized containers.

RegenOx® Part B SDS US

924385 Version #: 03 Revision date: 19-November-2017 Issue date: 02-April-2015

#### 8. Exposure controls/personal protection

#### Occupational exposure limits

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Туре	Value	
Silicon dioxide (amorphous silica gel) (CAS 63231-67-4)	TWA	0.8 mg/m3	
•		20 mppcf	
US. ACGIH Threshold Limit Values			
Components	Type	Value	
Ferrous sulfate (CAS 7720-78-7)	TWA	1 mg/m3	
US. NIOSH: Pocket Guide to Chen	nical Hazards		
Components	Type	Value	
Ferrous sulfate (CAS 7720-78-7)	TWA	1 mg/m3	
Silicon dioxide (amorphous	TWA	6 mg/m3	

63231-67-4) **Biological limit values** 

silica gel) (CAS

Appropriate engineering

controls

No biological exposure limits noted for the ingredient(s).

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

#### Individual protection measures, such as personal protective equipment

Eye/face protection To avoid contact with eyes, wear chemical goggles or shielded safety glasses.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Skin protection

Other Wear appropriate chemical resistant clothing.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Recommended use: Wear NIOSH

approved respirator appropriate for airborne exposure at the point of use.

Wear appropriate thermal protective clothing, when necessary. Thermal hazards

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants.

# 9. Physical and chemical properties

**Appearance** 

Liquid. Physical state Liquid. **Form** 

Green to dark blue. Color

Odor Odorless. Odor threshold Not available.

11 (10% solution/water)

Melting point/freezing point Not available. Initial boiling point and boiling Not available.

range

Flash point Not available. **Evaporation rate** Not available. Flammability (solid, gas) Not applicable.

RegenOx® Part B

924385 Version #: 03 Revision date: 19-November-2017 Issue date: 02-April-2015 Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit - upper

(%)

Not available.

Explosive limit - lower (%) Not available. Not available. Explosive limit - upper (%)

Not available. Vapor pressure Vapor density Not available. 1.2 - 1.4Relative density

Solubility(ies)

Miscible. Solubility (water) Partition coefficient

(n-octanol/water)

Not available.

Not available. **Auto-ignition temperature Decomposition temperature** Not available. **Viscosity** < 10,000cP

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Hydrogen fluoride, Fluorine, Oxygen difluoride, Chlorine trifluoride, Strong acids, Strong bases, Incompatible materials

Oxidizers. Aluminum metal. Copper. Brass. Zinc. Galvanized metals.

Hazardous decomposition

products

Thermal decomposition or combustion may produce: silicon oxides, metal oxides, sulfur oxides.

## 11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful. Spray mists may cause respiratory tract irritation.

Causes skin irritation. Skin contact

Causes serious eye irritation. Eye contact

Ingestion Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Inhalation may irritate lungs causing coughing

and/or shortness of breath.

Information on toxicological effects

**Acute toxicity** Not available.

Causes skin irritation. Skin corrosion/irritation

Serious eye damage/eye

Causes serious eye irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

No data available to indicate product or any components present at greater than 0.1% are Germ cell mutagenicity

mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Silicon dioxide (amorphous silica gel) (CAS 63231-67-4) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Not listed.

RegenOx® Part B SDS US

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

This product is not expected to cause reproductive or developmental effects. Reproductive toxicity

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

**Aspiration hazard** 

Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

#### 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data is available on the degradability of this product.

**Bioaccumulative potential** 

No data available.

Mobility in soil

This product is water soluble and may spread in the water system.

Other adverse effects None known.

#### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Empty containers should be taken to an approved waste handling site for recycling or disposal. Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

#### 14. Transport information

DOT

Not regulated as dangerous goods.

ΙΔΤΔ

Not regulated as dangerous goods.

**IMDG** 

Not regulated as dangerous goods.

Transport in bulk according to

Annex II of MARPOL 73/78 and

the IBC Code

#### 15. Regulatory information

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication US federal regulations

Standard, 29 CFR 1910,1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

**CERCLA Hazardous Substance List (40 CFR 302.4)** 

Ferrous sulfate (CAS 7720-78-7) Listed.

Not established.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

RegenOx® Part B SDS US SARA 311/312 Hazardous

chemical

Skin corrosion or irritation

Classified hazard Serious eye damage or eye irritation categories

Yes

SARA 313 (TRI reporting)

Not regulated.

#### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

#### **US** state regulations

#### **US. Massachusetts RTK - Substance List**

Ferrous sulfate (CAS 7720-78-7)

#### US. New Jersey Worker and Community Right-to-Know Act

Ferrous sulfate (CAS 7720-78-7)

#### US. Pennsylvania Worker and Community Right-to-Know Law

Ferrous sulfate (CAS 7720-78-7)

#### **US. Rhode Island RTK**

Ferrous sulfate (CAS 7720-78-7)

#### **California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

#### **International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

<sup>\*</sup>A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

#### 16. Other information, including date of preparation or last revision

02-April-2015 Issue date 19-November-2017 **Revision date** 

Version #

**Further information** HMIS® is a registered trade and service mark of the American Coatings Association (ACA).

Health: 2 **HMIS®** ratings Flammability: 0

Physical hazard: 0

RegenOx® Part B

924385 Version #: 03 Revision date: 19-November-2017 Issue date: 02-April-2015 SDS US 6/7

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## **NFPA** ratings



#### Disclaimer

Regenesis cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

RegenOx® Part B SDS US





# RegenOx® Technical Description

RegenOx is an advanced chemical oxidation technology that destroys contaminants through powerful, yet controlled chemical reactions. This product maximizes *in situ* chemical oxidation (ISCO) performance through use of a two-part product system; a sodium percarbonate oxidizer complex activated by a patented surface catalyst system. The technology degrades pollutants through direct oxidation, as well as through the generation of a suite of free radical compounds which in turn oxidize recalcitrant contaminants. RegenOX rapidly and effectively destroys a range of target contaminants including petroleum hydrocarbons and chlorinated compounds.

RegenOx is especially effective in destroying target contaminants present in high concentration source areas within the saturated and vadose zones. For petroleum hydrocarbon treatment, RegenOx produces oxygen as a result of its reactions, providing seamless transition from ISCO to enhanced aerobic bioremediation.



Close up of RegenOx

RegenOx produces minimal heat when applied, and continues to destroy contaminants for up to 30 days on a single application. RegenOx is safe for use in direct contact with underground utilities, since it is non-corrosive to concrete and most metals.

```
C_2Cl_4 + 4/3 Na_2CO_3 \cdot 2H_2O_2 + 4NaOH \rightarrow 2CO_2 + 4NaCI + 4H_2O + 4/3 Na_2CO_3
```

- . Free Radical Oxidation via production of:
  - Perhydroxyl Radical (HO₂ •) Hydroxyl Radical (OH •) Superoxide Radical (O₂ •)

For a list of treatable contaminants with the use of RegenOx, view the Range of Treatable Contaminants Guide

# Chemical Composition - Part A Oxidant

- Sodium Percarbonate CAS #15630-89-4
- Sodium Carbonate Monohydrate CAS #5968-11-6
- Silicic Acid CAS #7699-11-6
- Silica Gel CAS #63231

# Chemical Composition - Part B Activator Complex

- Silicic Acid, Sodium Salt, Sodium Silicate CAS#1344-09-08
- Silica Gel CAS #63231
- Ferrous Sulfate CAS #7720-78-7
- Water CAS#7732-18-5

# **Properties**

- Bulk Density Part A 0.9-1.2 g/cm3; Part B 1.39 g/cm3
- pH 10-11 per recommended mixing ratios (3-5% oxidant in solution)
- Solubility Oxidant 14.5 g/100 g water; Activator miscible in water
- Appearance Brown to orange-brown when mixed with water
- Odor Not detectable
- Vapor Pressure None
- Non-hazardous



# RegenOx® Technical Description

# Storage and Handling Guidelines

# Storage

Store in a cool, dry place out of heat/direct sunlight Store at temperatures not to exceed 40°C/104°F

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Protect from contamination

Provide appropriate exhaust ventilation in places where dust is formed

# Handling

Minimize dust generation and accumulation

Observe good industrial hygiene practices

Keep away from clothing and combustible materials

Take any precaution to avoid mixing with combustibles

Avoid contact with eyes

Do not taste or swallow

Do not eat, drink or smoke nearby

Wear appropriate personal protective equipment

Wash hands thoroughly after handling

Avoid release to the environment

# **Applications**

RegenOx is applied using direct-injection techniques or wells. The application process enables the two- part product to be combined, then pressure-injected into the zone of contamination and moved out into the aquifer media. Application instructions for this product are contained in the RegenOx Application Instructions Guide.

# Health and Safety

Material is relatively safe to handle; however, we recommend avoiding contact with eyes, skin and clothing. OSHA Level D personal protection equipment including vinyl or rubber gloves, eye protection and dust mask are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, packaging, usage, and handling requirements here: RegenOx Part A SDS and RegenOx Part B SDS.





Trevor Hudson Environmental Engineer EnviroSouth

> 3440 Augusta Road Greenville, SC 29605

Dear Mr. Hudson,

I have conducted a review of the RegenOx specification sheet and Safety Data Sheets provided in email correspondence. Sodium Percarbonate, the primary oxidizing agent in the product, would be expected to release hydrogen peroxide when injected in groundwater. The addition of the sodium silicate and ferrous sulfate activator would enable additional oxidation reactions that should break down any organic compounds present in the aquifer, including petroleum hydrocarbons.

Neither the sodium persulfate nor activator solution would be expected to substantially contribute to the degradation of the quality of off-Site groundwater used for drinking water or released in the aquatic receiving environment.

Don't hesitate to contact me at 803-608-0875 or by email at ray.holberger@des.sc.gov if you have any questions or comments concerning this review.

**Ray Holberger** 

**Environmental Risk Specialist** 

cc'd:

Fran Marshall – Environmental Affairs, Environmental Public Health, Courtney Milledge - Bureau of Water, Groundwater Protection Division



# Greenville County, SC



Greenville County GIS Division, Greenville, South Carolina, Greenville County GIS Division, Greenville County, South Carolina GIS Division



# Prepared for submittal to:

South Carolina Department of Environmental Services
UST Management Division
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201

## SITE-SPECIFIC HEALTH AND SAFETY PLAN

WESTSIDE QUICK STOP 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA

SCDES UST Site ID No. 12430

Job No. 3570

Prepared by:

EnviroSouth, Inc. 3440 Augusta Road Greenville, South Carolina 29605 Prepared for submittal to:

South Carolina Department of Environmental Services UST Program
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201

Attention: Mr. Adam Looper

SITE-SPECIFIC HEALTH AND SAFETY PLAN WESTSIDE QUICK STOP 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA

SCDES UST Site ID No. 12430

EnviroSouth Job No. 3570

Prepared by:

William H. Lyons, P.G. Senior Hydrogeologist

S.C. Registration No. 2705

Reviewed by:

Keigan K. Mennetti, P.E. Environmental Engineer

S.C. License No. 40996

EnviroSouth, Inc.

3440 Augusta Road Greenville, South Carolina 29605

864-236-9010

December 20, 2024

# **Disclaimer**

ENVIROSOUTH, INC. DOES NOT GUARANTEE THE HEALTH OR SAFETY OF ANY PERSON ENTERING THIS SITE. DUE TO THE POTENTIAL HAZARDS OF THIS SITE AND THE ACTIVITY OCCURRING THEREON, IT IS NOT POSSIBLE TO DISCOVER, EVALUATE, AND PROVIDE PROTECTION FOR ALL POSSIBLE HAZARDS WHICH MAY BE ENCOUNTERED. STRICT ADHERENCE TO THE HEALTH AND SAFETY GUIDELINES SET FORTH HEREIN WILL REDUCE, BUT NOT ELIMINATE, THE POTENTIAL FOR INJURY AT THIS SITE. THE HEALTH AND SAFETY GUIDELINES IN THIS PLAN WERE PREPARED SPECIFICALLY FOR THIS SITE FOR USE UNDER DIRECT ENVIROSOUTH SUPERVISION AND SHOULD NOT BE USED ON ANY OTHER SITE.

# **TABLE OF CONTENTS**

SECT	ION		PAGE
1.0	EME	RGENCY PHONE NUMBERS	1
2.0	INTR	RODUCTION	2
	2.1 2.2 2.3 2.4	Purpose and Scope General Information Site Description Personnel Designations	2 3
3.0	ARE	AS OF ENVIRONMENTAL CONCERN	4
	3.1	Scope of Work	4
4.0	HAZ	ARD ANALYSIS	5
	4.1 4.2 4.3	Physical, Chemical and Environmental Hazards  Confined Space Entry  Monitoring Procedures	5
5.0	ENG	INEERING CONTROL MEASURES	8
	5.1 5.2	Air MonitoringProtective Zones	
6.0	PER	SONAL PROTECTIVE EQUIPMENT (PPE)	9
	6.1	Level of Protection	9
7.0	DEC	ONTAMINATION	10
	7.1 7.2	Decontamination Procedures Emergency Decontamination	
8.0	EME	RGENCY ACTION PLAN	12
9.0	TRAI	INING/MEDICAL SURVEILLANCE	14
	9.1	Training Requirements	
	9.2	Pre-Entry Briefing	
10.0	AUTI	HORIZATIONS	16
11.0	FIELD TEAM REVIEW		

# **APPENDICES**

## **FIGURES**

- 1 Site Vicinity Map
- 2 Rally Point Map
- 3 Hospital Route and Map

## **TABLES**

- Personnel Assignments
   Chemical Hazards Known or Suspected On-Site
   Health & Safety Hazard Analysis
- 4 Personal Protective Equipment

# **PERSONNEL LOG**

SUPERVISOR'S INVESTIGATION REPORT

**EQUIPMENT CALIBRATION LOG** 

# 1.0 EMERGENCY PHONE NUMBERS

Site Name: Westside Quick Stop
Address: 821 W. Parker Road

City, State: <u>Greenville, South Carolina</u>

Site Contact: Ankur Patel
Phone: 864-354-1729

In case of emergency, the following phone numbers should be used. Site personnel should familiarize themselves with the location of the nearest telephones. The Emergency Action Plan is contained in Section 8.0.

<u>NOTE:</u> When contacting the local authorities be sure to give: your name, facility name, full address, telephone number, and the nature of the emergency.

Local Fire Department, Ambulance, Police Department: 911

Poison Control Center: (800) 343-2722 SCDES Spill Reporting: (888) 481-0125 National Response Center: (800) 424-8802

Local Hospital:

Prisma Health Greenville Memorial Hospital 701 Grove Road Greenville, South Carolina 29605

Hospital Telephone: 864-455-7000

Distance to Prisma Health Greenville Memorial Hospital is approximately 5.2 miles (est. 13 minutes)

A map showing the route to Prisma Health Greenville Memorial Hospital is attached as Figure 3.



# 2.0 INTRODUCTION

# 2.1 Purpose and Scope

This Site-Specific Health and Safety Plan (HASP) addresses the health and safety practices that will be employed by all EnviroSouth personnel and our subcontractors participating in enhanced aggressive fluid vapor and recovery (AFVR) remedial activities at the site. Potential contaminants principally include petroleum compounds and sodium percarbonate (injectate).

This HASP has been developed in accordance with EnviroSouth's Corporate Safety and Health Program as required under OSHA's Hazardous Waste Operations standard (29 CFR 1910.120). As previously mentioned, this plan has been developed to establish minimum standards for project oversight and enhanced AFVR-related activities to protect the health and safety of EnviroSouth personnel and EnviroSouth's subcontractors. All EnviroSouth site personnel have received the required level of training and field experience as required under subpart (e) of the standard and have received medical examinations in accordance with EnviroSouth's medical surveillance program as required under subpart (f) of the standard. Non-EnviroSouth personnel will not be permitted in the Exclusion Zones unless they have received training and medical surveillance under the standard.

This plan is to be used only for project oversight and enhanced AFVR-related activities conducted by EnviroSouth and EnviroSouth's subcontractors. All EnviroSouth personnel and EnviroSouth's subcontractors shall be familiar with this HASP prior to conducting proposed site work. This plan must be present on-site and be available for reference/inspection when the subject site work is being conducted.

# 2.2 **General Information**

Site Name: Westside Quick Stop
Site Address: 821 W. Parker Road

Greenville, South Carolina

Site Contact: Ankur Patel
Phone Number: 864-354-1729



## 2.3 Site Description

The property is located at 821 W. Parker Road, Greenville, South Carolina. The property is in a light commercial/residential corridor at the southern quadrant of the intersection of W. Parker Road and W. Blue Ridge Drive.

The site is an active gasoline station and convenience store with a parking lot.

# 2.4 <u>Personnel Designations</u>

The EnviroSouth personnel listed on Table 1 are designated to perform the stated project activities and to assure that the requirements of the HASP are met. No investigation activities shall be performed within the Areas of Environmental Concern (AOEC) unless EnviroSouth's Health and Safety Officer (HSO) or Alternate is present. Personnel assignments are listed in Table 1.



# 3.0 AREAS OF ENVIRONMENTAL CONCERN

# 3.1 Scope of Work

In general, the work to be performed by EnviroSouth and EnviroSouth's subcontractors consists of three (3) applications of a sodium percarbonate-based solution into one hundred and forty-seven (147) temporary injection wells and post-injection AFVR in the vicinity of the current tank basin.



4.0 HAZARD ANALYSIS

The overall health & safety risk from environmental investigation activities is considered

moderate because of the number of potential hazardous constituents identified on-site. It is

anticipated that EnviroSouth personnel and subcontractors may come in contact with the

chemical solution that is being used for in-situ chemical oxidation at Westside Quick Stop.

4.1 Physical, Chemical and Environmental Hazards

Table 2 provides a list of chemical substances potentially present on site along with

odor threshold, permissible exposure limit (PEL), threshold limit value (TLV), OSHA

ceiling, immediately dangerous to life or health (IDLH) concentration, route of

exposure, and symptoms of acute exposure, if any.

See the Hazard Analysis Summary presented in Table 3 for a listing of the various

hazards related to project environmental investigation activities and proposed

methods to minimize these risks.

4.2 Confined Space Entry

EnviroSouth personnel are authorized and trained to enter confined spaces. No

confined space entry is planned for the current work plan at the Westside Quick

Stop site. If the need for confined space arises the health and safety plan may be

revised, and an entry permit will be written.

4.3 Monitoring Procedures

The following environmental monitoring instruments/procedures shall be used on-

site at the specified intervals.

<u>Instrument/Procedure</u>

Sampling Interval

Photoionization Detector (PID)

Periodically as deemed by HSO

in the breathing zone

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Background ambient air levels will be established outside the exclusion zone prior to commencement of site work. Ambient air sampling will occur in the breathing zone of site workers for comparison to the action levels (described below). Additionally, air sampling will be conducted in the vicinity of any intrusive exploration (i.e., near excavations, test borings, etc.) to determine if any contaminants are present.

The following Action Levels will be used:

Instrument	Action Level	Level of Protection or Action Required
PID	No reading above background	<ul><li>No action required.</li><li>Continue PID monitoring.</li><li>Level D protection.</li></ul>
PID	Up to 100 ppm above background	<ul> <li>Evacuate exclusion zone.</li> <li>Recheck levels after 15 minutes.</li> <li>If levels are sustained, contact Health and Safety Manager.</li> <li>Use engineering controls to lower breathing zone vapors.</li> <li>Level C protection (at the Health &amp; Safety Manager's direction).</li> </ul>
PID	>100 ppm above background	<ul> <li>Evacuate exclusion zone.</li> <li>Recheck levels after 15 minutes.</li> <li>Use engineering controls to lower breathing zone vapors.</li> <li>If levels are sustained, contact Health and Safety Manager, and re-evaluate HASP.</li> </ul>

When an action level is equaled or exceeded, the work area should be evacuated, and the area re-tested with the sampling device. If the appropriate action level continues to be exceeded, the HSO will assess the use of engineering controls to lower vapor levels or availability of required increased personal protection equipment before authorizing re-entry.



Calibration of all instruments will occur at least once per day. A calibration log has been included in the appendices.



5.0 **ENGINEERING CONTROL MEASURES** 

5.1 <u>Air Monitoring</u>

In order to determine potential health hazards and to determine the level of personal

protection needed during sampling activities within the areas of concern, a photo-

ionization detector will be periodically operated to monitor air quality for the purpose

of ensuring minimal exposure to volatile organic compounds. Please refer to

Section 4.3 of this plan for specific air monitoring procedures/action levels.

5.2 Protective Zones

Protective zones specific for each phase of the plan will be established by the

Health and Safety Officer prior to the start of field work associated with those

phases of the plan. The purpose of the protective zones is to prevent potential

cross-contamination of adjacent areas as well as to protect project personnel from

exposure to contaminated areas.

Protective zones shall be delineated in the field prior to work as follows:

Exclusion Zone: This is the contaminated area in which intrusive activities are

performed. The exclusion zone is an area surrounding the mixing tank,

chemical storage area, and active injection well-field. A single access point for

entrance and exit should be established and maintained, if possible.

Support Zone: This zone will be utilized by equipment and vehicle storage and

will be kept free of contaminated material. The Site Safety Officer will determine

the location of this zone.

• Contaminant Reduction Zone: This zone is a transition zone located between

the Exclusion Zone and the Support Zone and is utilized to decontaminate

personnel and equipment.

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Site Specific Health and Safety Plan Westside Quick Stop 821 W. Parker Road Greenville, South Carolina

### 6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 6.1 <u>Level of Protection</u>

As previously discussed in Section 4.0, the overall health and safety risk associated with chemical hazards for EnviroSouth and EnviroSouth's subcontractors is considered moderate. This is primary because of the number of potential hazardous constituents identified on-site. It is anticipated that EnviroSouth personnel and subcontractors may come in contact with chemical solution that is being used for insitu chemical oxidation at the Westside Quick Stop facility. Therefore, the minimal level of protection for EnviroSouth and EnviroSouth's subcontractors during the conduct of the work performed at the site will be level D and consist of the personal protective equipment listed in Table 4. Level D PPE will be required for all workers present at all stations except for the mixing station. Personnel responsible for chemical mixing will be required to utilize modified Level C protection including the use of a full-face respirator with appropriate acid gas cartridges.

If site conditions warrant, the level of protection will be upgraded to Level C (refer to Section 4.3 for the appropriate action levels).

If it is determined protection beyond Level C is required, EnviroSouth will reevaluate the HASP as well as the site conditions and may revise the HASP, as necessary.



7.0 <u>DECONTAMINATION</u>

7.1 <u>Decontamination Procedures</u>

All personnel and equipment leaving the exclusion zone must be properly cleaned

and decontaminated. When there is evidence of chemical contamination during the

site operations, all personnel will be decontaminated under the direction of the HSO.

Cleanup and/or decontamination of personnel shall consist of washing off

excessively soiled PPE with an Alconox detergent scrub and water. At the very

least, all personnel should wash their hands and face before leaving the exclusion

zone. After washing, all disposable clothing (tyvek, gloves, etc.) will be removed

and placed in a double lined plastic bag.

Sampling tools and any other non-disposable items will be decontaminated between

sampling points, and at the direction of the EnviroSouth Project Manager, to prevent

cross contamination of work areas or environmental samples.

All injection equipment will be decontaminated prior to and between installation of

temporary injection wells.

7.2 Emergency Decontamination

If immediate medical attention is required in an emergency, decontamination will be

performed after the victim has been stabilized. If a worker has been exposed to an

extremely toxic or corrosive material, then emergency decontamination will consist

of flushing with copious amounts of water. If the victim can not be decontaminated

because it will interfere with emergency medical aid being administered, then the

victim should be wrapped with plastic or other available items (i.e., an

uncontaminated coverall) to reduce potential contamination of other personnel or

medical equipment.

If a site worker has been overcome by a heat related illness, then any protective

clothing should be removed immediately. In the case of non-medical emergency

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Site Specific Health and Safety Plan Westside Quick Stop 821 W. Parker Road Greenville, South Carolina evacuation, decontamination should be performed as quickly as possible, unless instant evacuation is necessary to save life or prevent injury.



8.0 EMERGENCY ACTION PLAN

In the event of a worker injury, fire, explosion, spill, flood, or other emergency that threatens

the safety and health of site workers, the following procedure will be followed.

1. If the emergency originates within the work area covered by this plan, EnviroSouth's

HSO shall act as the Emergency Coordinator. The emergency evacuation signal is an

<u>air horn or a loud yell</u>. All emergency situations (including worker injuries, no matter

how small) will be reported to the HSO, who will determine the appropriate emergency

response, up to and including evacuation. Only the HSO may initiate evacuation of the

work area. The HSO will be responsible for reporting any emergency situation to the

appropriate authorities using a telephone or other appropriate method.

2. In the case of an evacuation, site workers will exit the site along the safest route(s) and

assemble with team members at the rally point (Figure 2). Those workers in the

Exclusion Zone will follow the emergency decontamination procedures outlined in

Section 7.2. Accounting of all site personnel will be conducted by the HSO using the

personnel log at a location determined by the HSO.

3. EnviroSouth personnel are not permitted to participate in handling the emergency. Fire

and medical emergencies will be handled by the local fire department and ambulance

service. In the case of a spill of hazardous materials, the following commercial spill

clean-up firm should be contacted:

VLS Recovery Services, LLC

Spartanburg, South Carolina

Phone: 864-583-2717

In addition, the HSO/Project Manager must advise the site contact that the South

Carolina Department of Health and Environmental Control Oil and Chemical Spill

section should be contacted and, if the spill quantity is greater than the Reportable

Quantity (RQ) under CERCLA and/or SARA, the National Response Center and Local

Emergency Planning Committee should also be contacted.

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If the spill begins to flow over land and threatens to contaminate a storm drain or surface water, EnviroSouth personnel may attempt to contain and isolate the spill using any available resources, but only if, in the judgement of the HSO, such action will not expose the workers to dangerous levels of hazardous substances and is necessary to preserve life or property.

- 4. Once initial emergency procedures to protect worker safety and health and to control the emergency have been completed, the HSO will apprise the site contact and the EnviroSouth Health and Safety Manager of the nature of the emergency and the control actions taken. The HSO will also complete a Supervisor's Investigation Report form (a blank investigation report form is included in the appendices) and submit this form to EnviroSouth's Project Manager and Health and Safety Manager within 24 hours.
- 5. All site workers will be familiarized with the above procedures during the pre-entry briefing to be conducted before site work begins.



### 9.0 TRAINING/MEDICAL SURVEILLANCE

### 9.1 <u>Training Requirements</u>

All EnviroSouth and EnviroSouth subcontractor personnel who enter the work zone and/or Exclusion Zone must have successfully completed the 40-hour or 24-hour training requirement outlined in 29 CFR 1910(e). If the 40-hour or 24-hour training of any person occurred more than 12 months prior to commencement of work, then that person must have attended an 8-hour refresher course within the 12 months prior to commencement of work. If respirators are in use in the Exclusion Zone, then all personnel must have undergone respirator training and a fit test within the last 12 months. Training certificates and records for each EnviroSouth employee are on file at EnviroSouth. EnviroSouth subcontractors will be required to supply written proof of training before being allowed in the Exclusion Zone.

## 9.2 Pre-Entry Briefing

Prior to commencement of work in area of suspected contamination, EnviroSouth's Health and Safety officer will conduct a pre-entry briefing with on-site drilling representatives to include:

- Name of the HSO and person responsible for the personnel log.
- Description of the parcel as well as location of emergency telephones and the location/boundaries of the Exclusion Zone, Contamination Reduction Zone, and Support Zone, if established.
- Review of hospital location and directions.
- Review of tasks to be conducted within the parcel by the Contractor's personnel.
- Review of the Emergency Action Plan and rally point (Figure 2), including the nearest emergency communications and telephone numbers.
- The nature, level, and degree of anticipated hazards (physical, chemical, environmental, etc.) involved in the site work.
- Required personal protective equipment.



• Decontamination procedures.

The HSO should also, at this time, ensure that all on-site EnviroSouth personnel and EnviroSouth subcontractor personnel have read the HASP and signed the last page of the original (Section 11.0). If additional information on the site becomes available, the HSO will call additional briefings, as necessary.



## 10.0 <u>AUTHORIZATIONS</u>

Personnel authorized to enter the Exclusion Zone include the personnel listed in Table 1. Persons not listed in Table 1 may enter the exclusion Zone only if the appropriate training and medical fitness certifications have been supplied to either the EnviroSouth Project Manager or the Health and Safety Manager and the HSO or their designee on-site has approved site entry. All personnel entering or leaving the Exclusion Zone must sign in and sign out with the recordkeeper.



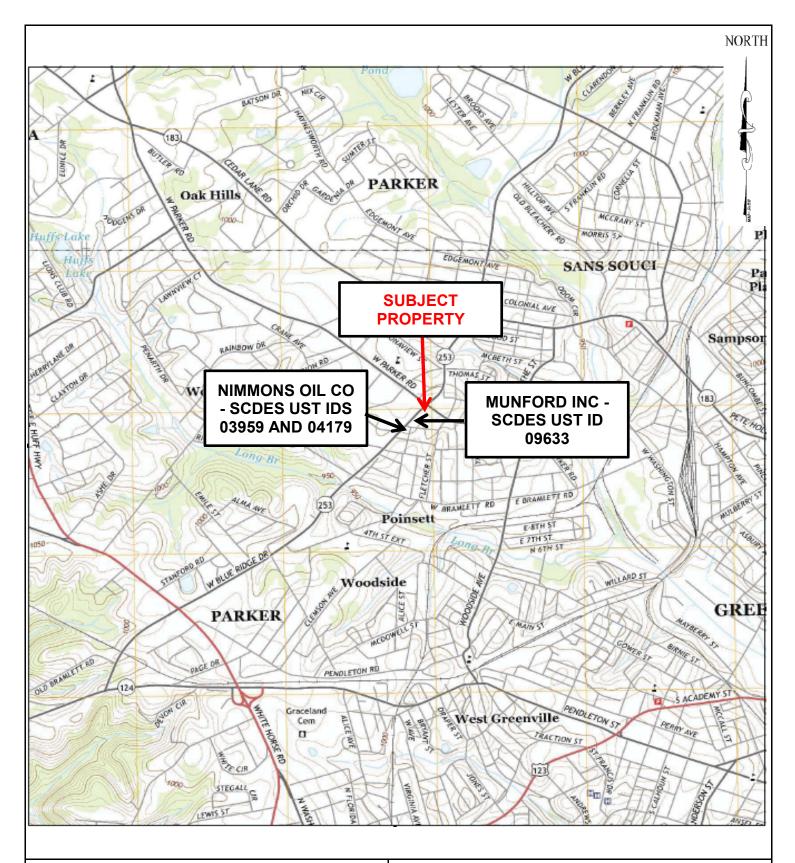
## 11.0 FIELD TEAM REVIEW

All EnviroSouth and EnviroSouth subcontractor personnel shall sign below after reading the HASP and before entering any exclusion zones as set forth by the contractor's site safety officer. Personnel shall agree with the following statement:

"I have read and understand this Site-Specific Health and Safety Plan. I will comply with the provisions set forth therein."

Printed Name	Signature	Date





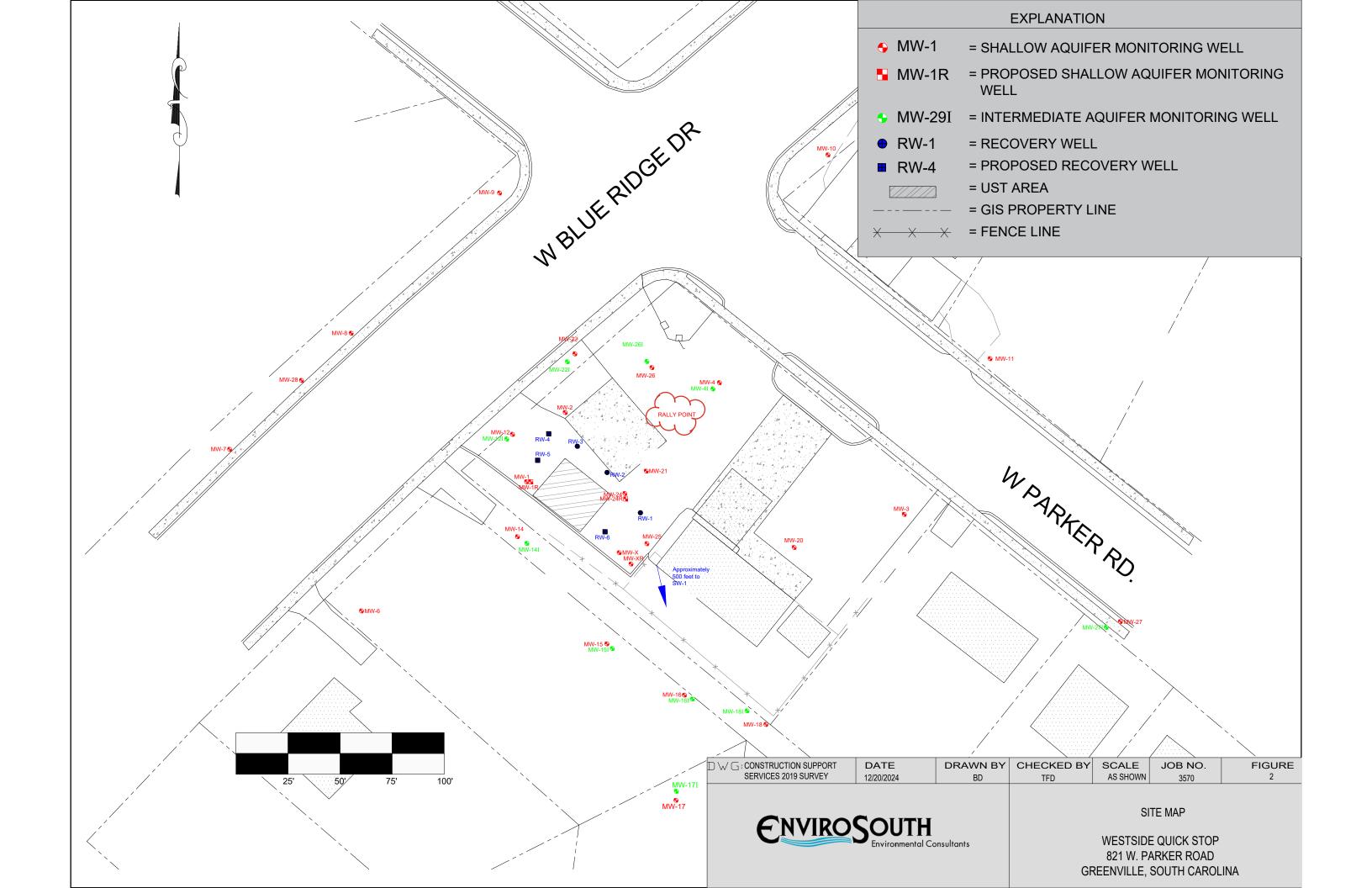
SOURCE: USGS 7.5' QUADRANGLE MAP 2014, GREENVILLE, SC



#### SITE VICINITY MAP

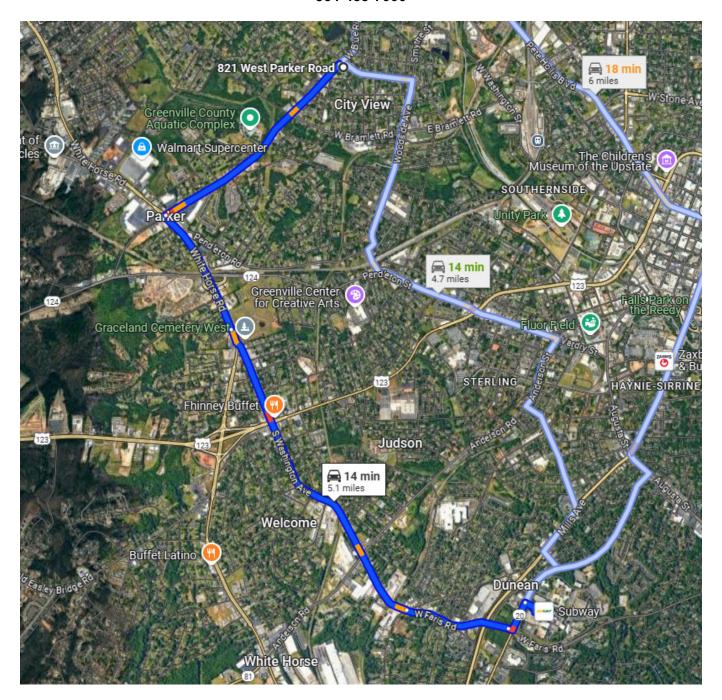
COMMERCIAL PROPERTY 821 W. PARKER ROAD GREENVILLE, SOUTH CAROLINA SCDES UST ID NO. 12430

JOB NO.: 3570 CHECKED BY: KM FIGURE: 1
SCALE: NOT SHOWN DRAWN BY: BD DATE: 11/21/2024



# FIGURE 3 MAP AND ROUTE TO PRISMA HEALTH GREENVILLE MEMORIAL HOSPITAL

#### 701 Grove Road Greenville, South Carolina 864-455-7000



Directions from Westside Quick Stop to Prisma Health Greenville Memorial Hospital (total distance = 5.1 miles):

- 1. Head west to W. Blue Ridge Drive for 115 feet.
- 2. Turn left onto W. Blue Ridge Drive and continue for 1.3 miles.
- 3. Turn left onto White Horse Road and continue 0.8 miles.
- 4. Take a slight left onto N. Washington Avenue and continue 2.0 miles.
- 5. Stay straight onto W. Faris Road and continue 0.6 miles.
- 6. Turn left onto Grove Road and continue 0.2 miles.
- 7. Prisma Health Greenville Memorial Hospital will be on the right.

		TABLE PERSONNEL AS			
Project Manager	Health & Safety Officers (HSO)	Security Officer (SO) Recordkeeper	HSO/SO Designated Alternate	Field Team Members	Public Information Officer
Will Lyons	Trevor Hudson	Will Lyons	Will Lyons	Will Lyons Trevor Hudson Allen Meadows Keigan Mennetti	Will Lyons
		PERSONNEL RESP	ONSIBILITIES		
General project supervisor and director of hazardous waste operations	<ul> <li>Implementation of HASP</li> <li>Stop work if poor work practices or conditions endanger worker health &amp; safety</li> <li>Act as Emergency Coordinator if necessary</li> <li>Provide pre-entry briefing</li> </ul>	Maintain site records     Enforce site control program	Perform     HSO/SO duties     if so designated	<ul> <li>Perform site work tasks</li> <li>Supervision of subcontractors</li> <li>Mixing of chemical solution</li> <li>Supervision of pumping activities</li> </ul>	Provide public information as necessary

# TABLE 2 CHEMICAL HAZARDS KNOWN OR SUSPECTED ON-SITE

CONTAMINANT	ODOR THRESHOLD	OSHA PEL <sup>1</sup>	TLV (ACGIH)	OSHA CEILING <sup>2</sup> /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE <sup>3</sup>
Benzene	4.7 ppm	1 ppm	0.5 ppm	5 ppm	[500] ppm	Inh, Ing, Abs, Con	Irrit Eyes, Nose, Throat; Head, Nau, Derm, Ftg, Anor, Lass
Ethylbenzene	870 ppm	100 ppm	100 ppm			Head. Irrit, Derm, Marc., Irrit Eyes, Skin, Coma	
1,2-Dichloroethane	26 ppm	50 ppm	10 ppm	2 ppm	50 ppm Inh, Abs		Narco, Nau, vomit
Methyl-tert-butyl ether (MTBE)			50 ppm			Inh, Abs	
Naphthalene	0.084 ppm	10 ppm	10 ppm		250 ppm	Inh, Abs, Ing, Con	Eye Irritation; Headache; Confusion, Excitement, Malaise (vague feeling of ill-being); Nausea, Vomiting, Abdominal Pain; Irritated Bladder; Profuse Sweating; Renal Shutdown; Dermatitis
Toluene	2.14 ppm	200 ppm	50 ppm	300 ppm	500 ppm	Inh, Abs, Ins, Con	Resp, Irrit, Ftg, Conf, Dizz, Head, Derm, Euph, Head, Dilated Pupils, Lac, Ner, Musc FTs, Insom, Pares, Derm, Lass
Xylene	4.5 mg/m <sup>3</sup>	100 ppm	100 ppm	150 ppm	900 ppm	Inh, Ing, Abs, Con	Dizz, Drow, Irrit, Excite, Nau, Vomit, Eyes, Skin, Nose, Throat
EDB	76.8 mg/m <sup>3</sup>	20 ppm		30 ppm		Inh, Abs	Resp. Irr, Eye Irr. [Carc]

# TABLE 2 CHEMICAL HAZARDS KNOWN OR SUSPECTED ON-SITE

CONTAMINANT	ODOR THRESHOLD	OSHA PEL <sup>1</sup>	TLV (ACGIH)	OSHA CEILING <sup>2</sup> /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE <sup>3</sup>
RegenOx®	Not Available					Inh, ing, Abs	Skin irritation, allergic skin reaction, serious eye irritation, allergy or asthma symptoms or breathing difficulties, respiratory irritation

## **NOTES**

<sup>&</sup>lt;sup>1</sup>PEL = Permissible Exposure Limit. If no PEL is available, then the NIOSH Threshold Limit Value (TLV) should be used, if available.

<sup>&</sup>lt;sup>2</sup>Ceiling limit or Short-Term Exposure Limit (STEL), if available. Again, the NIOSH TLV may be used if no OSHA standard exists.

<sup>&</sup>lt;sup>3</sup>Abbreviations are contained on the next page

#### **ABBREVIATIONS**

abdom = Abdominal insom = Insomnia abs = Absorption irrit = Irritation

aggress = Agressiveness lac = Lacrimination (discharge of tears) agit = Agitation lass = Lassitude (weakness, exhaustion)

li-head = Lightheadedness anor = Anorexia

anos = Anosmia (loss of the sense of smell) liq = Liquid

Anxi = anxiety low-wgt = Weight loss

anem - Anemia mal = Malaise (vague feeling of discomfort)

aspir = Aspiration malnut = Malnutrition

methem = Methemoglobinemia asph - asphyxia bron = Bronchitis myo = Myochonic (jerks of limbs) [carc] = Potential occupational carcinogen mg/m = milligrams/cubic meter

muc memb = Mucous membrane Card = Cardiac arrhythmias CNS = Central nervous system narco = Narcosis

conf = Confusion nau = Nausea constip = Constipation ner = Nervousness con = Skin and/or eye contact numb = Numbness

conv = Convulsions optic = Optic nerve damage (blindness)

corn = Corneal parap = Paralysis defat = Defatting ppm = Parts per million pares = Paresthesia

depres = Depressant/Depression derm = Dermatitis paresi = Paresis

diarr = Diarrhea peri neur = Peripheral neuropathy dist = Disturbance pneu = Pneumonia dizz = Dizziness prot = Proteinuria drow = Drowsiness pulm = Pulmonary

dry = Dry mouth peri neur = Peripheral neuropathy

dysp = Dyspnea (breathing difficulty) pneu = Pneumonia emphy = Emphysema prot = Proteinuria epil-conv = Epileptiform convulsions pulm = Pulmonary

eryth = Erythema repro = Reproductive euph = Euphoria resp = Respiratory

skin sen = skin sensitization frost = frostbite som = Somnolence (sleepiness unnatural drowsiness) ftg = Fatigue subs = Substernal (occurring beneath the sternum)

flush = Flushing stup = Stupor GI = Gastrointestinal sys = System head = Headache tingle = tingle limbs hyperpig = Hyperpigmentation trem - Tremors

inco = Incoordination vis dist = Visual disturbance

ing = Ingestion vomit = Vomiting inh = Inhalation weak = Weakness

inj = Injury

fib = Fibrosis

TABLE 3	
<b>HEALTH AND SAFETY HAZARD ANALYSIS</b>	

Description of Hazard	Methods to Identify and Minimize	Potential for Occurrence of Hazard
Activity: Site Mobilization and	Utility Clearance	
Biological Hazards	Wear appropriate clothing and tape sleeves and pant cuffs in tick infested areas.	Low
	Use insect repellant.	
	Maintain awareness of surroundings, avoid poisonous plants and areas that may shelter snakes and spiders.	
	Mow/brush hog, if needed.	
2. Slip/Trip/Fall	Wear appropriate footwear.	Moderate
	Be aware of surroundings.	
	Maintain safe and orderly work areas.	
	Unloading areas should be on even terrain.	
	Identify and repair potential tripping hazards.	
3. Adverse Weather	Monitor weather daily.	Moderate
	Discontinue work as necessary based on lightning, limited visibility, impaired mobility, etc.	
4. Heat/Cold Stress	Determine probable weather conditions prior to arrival at site.	Moderate
	Wear proper clothing.	
	Monitoring of yourself and teammates.	
	Drink plenty of fluids containing electrolytes.	
	Utilize work breaks as often as necessary.	
	Avoid working in extreme heat or cold conditions.	
5. Noise	Distancing from noise sources.	Moderate
	Wear hearing protection.	

	TABLE 3 HEALTH AND SAFETY HAZARD ANALYSIS	
Description of Hazard	Methods to Identify and Minimize	Potential for Occurrence of Hazard
Activity: Injection Well Installa	ion and Sample Collection	
Operating Heavy Equipment	Inspect equipment before operation.	Moderate
	Utilizing proper equipment operation methods.	
	Maintain safe clearance distances.	
	Wear appropriate eye/ear protection according to manufacturer's recommendations.	
2. Utilities	Complete a Call Before You Dig (CBYD) mark-up prior to the work start date.	Moderate
	<ul> <li>Obtain information concerning buried private lines from site contact and clearance of sampling locations from site contact.</li> </ul>	
	<ul> <li>Avoid using heavy equipment or drill rig in close proximity to overhead utilities.</li> </ul>	
	<ul> <li>Inspect sampling areas for CBYD markings as well as inspecting catch basins and manholes to determine buried pipeline directions prior to sampling.</li> </ul>	
	Avoid sampling within area of pavement cuts that may be indicative of buried lines.	
3. Inhalation of volatile organic	Monitor borehole/well with PID.	Moderate
compounds	Implement and strictly adhere to action levels stipulated in air monitoring program for volatile organics.	
	Wear appropriate protective equipment.	
	Report potential exposure symptoms immediately.	

• Utilize engineering controls such as fans.

TABLE 3
<b>HEALTH AND SAFETY HAZARD ANALYSIS</b>

Description of Hazard	Methods to Identify and Minimize	Potential for Occurrence of Hazard
Activity: Injection Well Install	ation and Sample Collection	
4. Contaminant Contact	Wear appropriate protective clothing (e.g., Tyvek® coveralls, apron, nitrile gloves, safety glasses) when handling samples.	Moderate
	Follow proper decontamination procedures.	
	Report potential exposure symptoms immediately.	
5. Slip/Trip/Fall	Wear appropriate footwear.	Moderate
	Be aware of surroundings.	
	Maintain safe and orderly work areas.	
	Unloading areas should be on even terrain.	
	Identify and repair potential tripping hazards.	
6. Adverse Weather	Monitor weather daily.	Moderate
	Discontinue work as necessary based on lightning, limited visibility, impaired mobility, etc.	
7. Heat/Cold Stress	Determine probable weather conditions prior to arrival at site.	Moderate
	Wear proper clothing.	
	Monitoring of yourself and teammates.	
	Drink plenty of fluids.	
	Utilize work breaks as often as necessary.	
	Avoid working in extreme heat or cold conditions.	
	Set-up fans or heater in the Support Zone.	
8. Noise	Distancing from noise sources.	Moderate
	Wear hearing protection.	

# TABLE 3 HEALTH AND SAFETY HAZARD ANALYSIS

Description of Hazard	Methods to Identify and Minimize	Potential for Occurrence of Hazard
Activity: Chemical Injection		
Inhalation of volatile organic	Monitor core with PID.	Moderate
compounds	Implement and strictly adhere to action levels stipulated in air monitoring program for volatile organics.	
	Wear appropriate protective equipment.	
	Report potential exposure symptoms immediately.	
	Utilize engineering controls such as fans.	
2. Contaminant Contact	Wear appropriate protective clothing (e.g., Tyvek® coveralls, apron, nitrile gloves, safety glasses) when handling samples.	Moderate
	Follow proper decontamination procedures.	
	Report potential exposure symptoms immediately.	
	Person mixing chemicals will wear a respirator.	
3. Slip/Trip/Fall	Wear appropriate footwear.	Moderate
	Be aware of surroundings.	
	Maintain safe and orderly work areas.	
	Unloading areas should be on even terrain.	
	Identify and repair potential tripping hazards.	
4. Adverse Weather	Monitor weather daily.	Moderate
	Discontinue work as necessary based on lightning, limited visibility, impaired mobility, etc.	

	TABLE 3 HEALTH AND SAFETY HAZARD ANALYSIS							
Description of Hazard	Methods to Identify and Minimize	Potential for Occurrence of Hazard						
Activity: Chemical Injection								
5. Heat/Cold Stress	Determine probable weather conditions prior to arrival at site.	Moderate						
	Wear proper clothing.							
	Monitoring yourself and teammates.							
	Drink plenty of fluids.							
	Utilize work breaks as often as necessary.							
	Avoid working in extreme heat or cold conditions.							
	Set-up fans and or heater in the Support Zone.							
6. Noise	Distancing from noise sources.	Moderate						
	Wear hearing protection.							

Modified level D personal protective equipment is suitable to protect against the anticipated hazards at this site. This equipment is listed below. *Prior to entry and periodically throughout the duration of the project, the HSO must confirm that this level of protection is appropriate through air monitoring and evaluation of identified hazards.* 

TABLE 4 - PERSONAL PROTECTIVE EQUIPMENT

WORK TASK	TABLE 4 – PERSONAL PROTECTIVE EQUIPMENT													
SAMPLING/ROUTINE TASKS					MININ			ECTI	VE E	QUIP	MEN	Т		
Air Sampling	WORK TASK	Respirator	Work Clothes	Steel Toe Shoes	Work Gloves	Chem. Resistant Gloves <sup>1</sup>	Safety Glasses	Hearing Profection	Tyvek	Apron	Hard Hat	Face Shield	Fall Protection <sup>2</sup>	Visibility Vest
Bridge Inspection/Const. Supervision					S	AMPL	ING/	ROUT	INE	TASK	(S			
Bridge Inspection/Const. Supervision	Air Sampling		Χ	Х		Χ								
Chemical Injection								Χ			Χ			Χ
Drilling		Χ			Χ	Х	Х		Χ					
Drum Sampling & Moving														
Ground Water Sampling (MW,RW)					Χ							Х		
Hand Sampling (shovel, auger)											-	-		
Landfill Sampling (soil, sediment, gw, sw, leachate)					Χ									
Phase 1 Site Inspection	Landfill Sampling (soil, sediment, gw, sw,						Х		Χ					
Probing			Χ	Χ										
Product Sampling (RW)         X						Х	Х	Х			Х			
Remediation Monitoring (air systems)         X				X				,	Х					
Remediation Monitoring (water systems)								Χ						
Soil Gas Sampling					Χ									
Stack Testing         X         <					- / \									
Stormwater Sampling											Х		Х	
Surface Water Sampling         X														
Surveying         X         X         X         X         X           Wastewater Sampling         X<							Х							
Wastewater Sampling         X	, Č					7.								Х
Wastewater Benchmark Test         X <td></td> <td></td> <td></td> <td></td> <td></td> <td>Х</td> <td>Х</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						Х	Х							
CHEMICAL HANDLING           Filling Decon Bottles         X <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Х</td><td></td><td>Х</td><td></td><td></td></th<>										Х		Х		
Filling Decon Bottles         X	7.0000000000000000000000000000000000000			-,-				AL HA	MDI					
Soil Sample Disposal         X	Filling Decon Bottles		Χ	Χ										
POWER EQUIPMENT           Circular Saw         X						Х								
Circular Saw X X X X														
	Circular Saw		Χ	Χ										
Goncrete Gore Machine	Concrete Core Machine		X	X	Χ		X	X						
Drill Press X X X X X					- `									
Generators X X X X X X					Х									
Industrial Vacuum X X X X X X X X X X X X X X X X X X														
Pavement Saw X X X X X X X X X X X X X X X X X X X														
Power Equipment (handrills, grinder, etc.)  X X X X X X X X X X X X X X X X X X X														
Power Washer X X X X X X					- •	Χ								
Regenerative Blowers/Air Compressors X X X X X X					Χ	- `								
Rotary Percussion Hammer X X X X X X														
	Sawzall		X	X			X	X						

Notes: Minimum protective equipment means the minimally acceptable protective gear to be donned when performing or using the equipment listed above. Additional protective equipment (i.e., respirators) may be required as described in the site-specific health and safety plan or based on the anticipated hazards associated with the project. Work clothes include long pants, short or long sleeve shirt and other winter clothing. If upgrade to level C respiratory protection is necessary the appropriate respirator cartridges will provide protection against hydrogen sulfide and volatile organics, but not oxygen deficient atmospheres due to methane gas displacement of ambient air.

<sup>1</sup>The type of chemical resistant glove (i.e., disposable rubber, nitrile, other) must be selected based on the anticipated chemical hazards. <sup>2</sup>Must be reviewed on a case-by-case basis.

	PERSONNEL L	OG		
NAME	REPRESENTING	DATE	TIME IN	TIME OUT



# ENVIROSOUTH SUPERVISOR'S INVESTIGATION REPORT

Name		Age	Time	Date	
Department/Project Manager		Site Name/Loo	cation		
WHAT HAPPENED?			Describe what caused you to investigation.	o make thi	
WHY DID IT HAPPEN?			Get all the far job and situa Question by WHY – WHA WHEN – WH	tion involvouse of T – WHEF	ed.
WHAT SHOULD BE DONE?			Determine who will be under EMP real attention.		
			Equipment Select Arrange Use Maintain	Material Select Place Handle Process	People Select Place Train Lead
WHAT HAVE YOU DONE THU	S FAR?		Take or recordepending up Follow up – v	oon your a	uthority.
HOW WILL THIS IMPROVE OF	PERATIONS?		OBJECTIVE Eliminate job	hindrance	es
Investigated by:	Date		Reviewed B	<u>v</u> Date	

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EQUIPI	MENT CALIBRATION LO	3
Instrument	Calibration Date	Calibrated By

# **GANTT SCHEDULE**

# WESTSIDE QUICK STOP CORRECTIVE ACTION SCHEDULE

					Actua	al (be	yond pl	lan)		% Com	nplete (b	beyon	d plan)		Actual	Start	% (	Complet	e <b>///</b> A	ctual (	beyond	d plan)	%	Comple	te (be	yond	plan)						
ACTIVITY	PLAN START (DATE)	PLAN DURATION (DAYS)	ACTUAL START (DATE)	ACTUAL PERCENT COMPLETE		1/6/2025	1/13/2025	1/27/2025	2/3/2025 2/10/2025	2/17/2025 2/24/2025	3/3/2025	3/17/2025	3/24/2025	4/1/2025	4/21/2025	5/5/2025	5/19/2025 5/26/2025	6/2/2025	6/16/2025	7/7/2025	7/21/2025	8/4/2025	8/18/2025	9/1/2025 9/8/2025	9/15/2025	9/29/2025	10/13/2025	10/27/2025	11/3/2025	11/17/2025	12/1/2025	12/15/2025	12/23/2020
Corrective Action Plan and Underground Injection Control Permit Application Submittal	12/16/2024	7	12/16/2024	100%																													
Public Notice	1/13/2025	30		0%																													
CAP and UIC Approval	4/7/2025	7		0%																													
Order, Receive, and Store Chemicals for 1st Injection Event	4/21/2025	7		0%																													1
Ground Penetrating Radar Survey	4/21/2025	1		0%																													
Install Additional Recovery and Monitoring Wells	4/28/2025	2		0%																													1
Baseline Sampling Event	5/5/2025	2		0%																													1
1st Injection Event	5/12/2025	11		0%																													
Report and Invoice #1	5/26/2025	5		0%																													1
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing	7/7/0005	,																															1
Wells MW-24, RW-1, and RW-6 96-Hour Aggressive Fluid Vapor Recovery Event Utilizing	7/7/2025	4		0%																													
Wells MW-24, RW-2, and RW-3	7/14/2025	4		0%																													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-5	7/21/2025	4		0%														Ш		Ш		- man							Щ	$\perp \! \! \perp$		$\perp \perp \downarrow$	
Interim Sampling Event #1	8/4/2025	2		0%		$\perp$																	4111110						$\perp \perp$	$\perp \! \! \! \! \! \! \! \! \perp \! \! \! \! \! \! \! \! \! \!$		$\perp \perp \perp$	
Report and Invoice #2	8/18/2025	5		0%																													
Order, Receive, and Store Chemicals for 2nd Injection Event	9/8/2025	7		0%																										Ш			
2nd Injection Event	9/15/2025	11		0%																													
Report and Invoice #3	9/29/2025	5		0%																													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-1, and RW-6	11/3/2025	4		0%																													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-2, and RW-3	11/10/2025	4		0%																										$\prod$			
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	11/17/2025	4		0%																													
Interim Sampling Event #2	12/1/2025	2		0%																													
Report and Invoice #4	12/15/2025	5		0%																													1
Order, Receive, and Store Chemicals for 3rd Injection Event	1/5/2026	7		0%																													
3rd Injection Event	1/12/2026	11		0%																													
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96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	3/16/2026	4		0%																										$\perp \! \! \! \! \! \! \! \! \! \perp$			_
Report and Invoice #6	3/30/2026	5		0%																												+	
1st Quarter Limited Sampling Event	6/15/2026	2		0%		+		+												+		+				H			+	4		+++	-
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4th Quarter Comprehensive Sampling Event	3/15/2027	4		0%																													
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Well Abandonment	5/3/2027	4		0%																													
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# WESTSIDE QUICK STOP CORRECTIVE ACTION SCHEDULE

							Actua	l (bey	ond	plan)	%	% Comp	lete (b	eyond	l plan	) Act	tual St	art	% Cc	mple	te 🎆	Actua	al (be	yond	d plan)		% Com	plete	e (beyo	nd pl	an)				
ACTIVITY	PLAN START (DATE)	PLAN DURATION (DAYS)	ACTUAL START (DATE)	ACTUAL DURATION (DAYS)	PERCENT COMPLETE	1/5/2026	1/12/2026 1/19/2026	1/26/2026	2/9/2026	2/16/2026 2/23/2026	3/2/2026	3/9/2026	3/30/2026	4/6/2026 4/13/2026	4/20/2026 4/27/2026	5/4/2026 5/11/2026	5/18/2026 5/25/2026	6/1/2026	6/15/2026	6/29/2026	7/6/2026 7/13/2026	7/20/2026 7/27/2026	8/3/2026	8/10/2026	8/24/2026	8/31/2026 9/7/2026	9/14/2026 9/21/2026	9/28/2026	10/12/2026	10/26/2026	11/2/2026	11/16/2026	11/23/2026	12/7/2026	12/14/2026 12/21/2026 12/28/2026
Corrective Action Plan and Underground Injection Control Permit Application Submittal	12/16/2024	7	12/16/2024		100%																														
Public Notice	1/13/2025	30			0%																														
CAP and UIC Approval	4/7/2025	7			0%																														
Order, Receive, and Store Chemicals for 1st Injection Event	4/21/2025	7			0%																														
Ground Penetrating Radar Survey	4/21/2025	1			0%																		Ш												
Install Additional Recovery and Monitoring Wells	4/28/2025	2			0%																														
Baseline Sampling Event	5/5/2025	2			0%																														
1st Injection Event	5/12/2025	11			0%																														
Report and Invoice #1	5/26/2025	5			0%																														
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-1, and RW-6	7/7/2025	4			0%																														
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-2, and RW-3	7/14/2025	4			0%																														
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-5	7/21/2025	4			0%																														
Interim Sampling Event #1	8/4/2025	2			0%															Ш												$\perp$			
Report and Invoice #2	8/18/2025	5			0%																		Ш					_							
Order, Receive, and Store Chemicals for 2nd Injection Event	9/8/2025	7			0%																														
2nd Injection Event	9/15/2025	11			0%	Ш																												Ш	
Report and Invoice #3	9/29/2025	5			0%																							_							
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-1, and RW-6	11/3/2025	4			0%																														
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-2, and RW-3	11/10/2025	4			0%	Ш																													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	11/17/2025	4			0%																													Ш	
Interim Sampling Event #2	12/1/2025	2			0%	Ш																	Ш			4		4						Ш	
Report and Invoice #4	12/15/2025	5			0%									$\perp$												_									
Order, Receive, and Store Chemicals for 3rd Injection Event	1/5/2026	7			0%																		Н			+		+					_	Н	
3rd Injection Event	1/12/2026	11			0%									++									Н		-	4		4						Н	+
Report and Invoice #5	1/26/2026	5			0%									$\perp$												_									
96-Hour Aggressive Fluid Vapor Recover Event Utilizing Wells MW-24, RW-1, and RW-3	3/2/2026	4			0%																														
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-2, and RW-3	3/9/2026	4			0%	П																	П			T		T						П	
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	3/16/2026	4			0%																														
Report and Invoice #6	3/30/2026	5			0%																														
1st Quarter Limited Sampling Event	6/15/2026	2			0%																														
Report and Invoice 1st Quarter Limited Sampling Event	7/13/2026	5			0%								$\prod$															T							
2nd Quarter Limited Sampling Event	9/14/2026	2			0%																														
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3rd Quarter Comprehensive Sampling Event	12/14/2026	4		_	0%																														
Report and Invoice 3rd Quarter Comprehensive Sampling Event	1/18/2027	5			0%																														
4th Quarter Comprehensive Sampling Event	3/15/2027	4			0%																														
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Well Abandonment	5/3/2027	4			0%																														
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# WESTSIDE QUICK STOP CORRECTIVE ACTION SCHEDULE

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	PLAN	PLAN	ACTUAL	ACTUAL		1		_				_	- 1					
ACTIVITY	START (DATE)	DURATION (DAYS)		DURATION (DAYS)	PERCENT COMPLETE	2027	8/202	5/202	2027	2/202	2027	5/202	2/202	2027	2/202/	6/202	3/2027	7/202
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Corrective Action Plan and Underground Injection Control Permit Application Submittal	12/16/2024	7	12/16/2024		100%													
Public Notice	1/13/2025	30			0%													
CAP and UIC Approval	4/7/2025	7			0%	П												
Order, Receive, and Store Chemicals for 1st Injection Event	4/21/2025	7			0%													
Ground Penetrating Radar Survey	4/21/2025	1			0%													
Install Additional Recovery and Monitoring Wells	4/28/2025	2			0%													
Baseline Sampling Event	5/5/2025	2			0%													
1st Injection Event	5/12/2025	11			0%													
Report and Invoice #1	5/26/2025	5			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-1, and RW-6	7/7/2025	4			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing																		
Wells MW-24, RW-2, and RW-3	7/14/2025	4			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-5	7/21/2025	4			0%									$\perp$				
Interim Sampling Event #1	8/4/2025	2			0%													
Report and Invoice #2	8/18/2025	5			0%													
Order, Receive, and Store Chemicals for 2nd Injection Event	9/8/2025	7			0%													
2nd Injection Event	9/15/2025	11			0%													
Report and Invoice #3	9/29/2025	5			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-1, and RW-6	11/3/2025	4			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-24, RW-2, and RW-3	11/10/2025	4			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	11/17/2025	4			0%													
Interim Sampling Event #2	12/1/2025	2			0%				$oxed{T}$								$_{\bot}$ $\top$	
Report and Invoice #4	12/15/2025	5			0%													
Order, Receive, and Store Chemicals for 3rd Injection Event	1/5/2026	7			0%													
3rd Injection Event	1/12/2026	11			0%													
Report and Invoice #5	1/26/2026	5			0%													
96-Hour Aggressive Fluid Vapor Recover Event Utilizing	0/5/5/																	
Wells MW-24, RW-1, and RW-3 96-Hour Aggressive Fluid Vapor Recovery Event Utilizing	3/2/2026	4			0%													
Wells MW-24, RW-2, and RW-3	3/9/2026	4			0%													
96-Hour Aggressive Fluid Vapor Recovery Event Utilizing Wells MW-1, RW-4, and RW-6	3/16/2026	4			0%													
Report and Invoice #6	3/30/2026	5			0%													
1st Quarter Limited Sampling Event	6/15/2026	2			0%													
Report and Invoice 1st Quarter Limited Sampling Event	7/13/2026	5			0%													
2nd Quarter Limited Sampling Event	9/14/2026	2			0%													
Report and Invoice 2nd Quarter Limited Sampling Event	10/12/2026	5			0%													
3rd Quarter Comprehensive Sampling Event	12/14/2026	4			0%													
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Event	1/18/2027	5			0%													
4th Quarter Comprehensive Sampling Event	3/15/2027	4			0%			4		$\perp$				7///////		$\perp$		
Report and Invoice 4th Quarter Comprehensive Sampling Event	4/5/2027	5			0%													
Well Abandonment	5/3/2027	4			0%													
Report and Invoice Well Abandonment	5/17/2027	5			0%													

# **COST AGREEMENT**



## TARGETED COMPONENT INVOICE

South Carolina

Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account
August 9, 2023

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Facility Name: Westside Quick Stop

UST Permit #: 12430 Cost Agreement #:

	·			
ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
C. Survey				
1.2 Comprehensive Survey		each	\$1,270.36	\$0.00
5.1 Ground Penetrating Radar Survey (100 x 100)	1	each	\$1,111.57	\$1,111.57
D. Mob/Demob				
1.2 Equipment	9	each	\$1,245.93	\$11,213.37
2.2 Personnel	20	each	\$516.69	\$10,333.80
3.2 Adverse Terrain Vehicle		each	\$610.75	\$0.00
E. Soil Borings*				
1.1 Soil Borings (hand auger)		foot	\$21.80	\$0.00
F. Soil Borings (requiring equipment, push technolo	ogy, etc) or			
Field Screening (including sampling and analyst)	*			
1.2 Standard	6174	per foot	\$33.50	\$206,829.00
2.2 Fractured Rock		per foot	\$41.40	\$0.00
H. Well Abandonment (does not include Field Scree	ening)*			
1.2 2" diameter or less	7566.15	per foot	\$3.79	\$28,675.71
2.2 Greater than 2" to 6" diameter	244.77	per foot	\$5.50	\$1,346.24
3.2 Dug/Bored well (up to 6 feet diameter)		per foot	\$18.32	\$0.00
I. Well Installation (In accordance with R.61-71)*				
1.2 Water Table (hand augered)		per foot	\$31.40	\$0.00
2.B Water Table (drill rig) 2" Diameter	67	per foot	\$54.90	\$3,678.30
2.2 Single-cased 2" Diameter Monitoring Well >50ft		per foot	\$59.80	\$0.00
3.2 Telescoping		per foot	\$84.70	\$0.00
4.2 Rock Drilling		per foot	\$81.80	\$0.00
5.2 2" Rock Coring		per foot	\$88.50	\$0.00
6.2 Multi-sampling ports/screens		per foot	\$59.40	\$0.00
7.2 Recovery Well (4" diameter)	126	per foot	\$69.60	\$8,769.60
9.2 Rotosonic (2" diameter)		per foot	\$119.00	\$0.00
10.2 Re-develop Existing Well	563.2	per foot	\$13.44	\$7,569.41
J. Groundwater Sample Collection / Gauging Depth	to Water/Pro	oduct *		
1.2 Groundwater Purge		per well	\$73.29	\$0.00
2.2 Air or Vapors		sample	\$14.66	\$0.00
3.2 Water Supply Sample		sample	\$26.87	\$0.00
4.1A HydraSleeve		sample	\$34.20	\$0.00
4.2B No-purge Groundwater Sample/Surface water	7	sample	\$57.24	\$400.68
5.2 Gauge Well only	32	sample	\$8.55	\$273.60

6.2 Sample Below Product		sample	\$14.66	\$0.00
7.2 Passive Diffusion Bag		sample	\$31.75	\$0.00
8.2 Field Duplicates (MWs & WSWs) and Field Bla	27	sample	\$30.06	\$811.62
9.2 Groundwater (low flow purge)	135	sample	\$111.16	\$15,006.60
10.2 Equipment Blank		sample	\$30.06	\$0.00
11.1 Sample Product		per well	\$52.66	\$0.00
K. Laboratory Analyses-Groundwater		po	<b>\$52.00</b>	<b>\$6.60</b>
1.2 BTEXNM+Oxyg's+1,2 DCA+Eth(8260D)	185	per sample	\$149.02	\$27,568.70
2.2 Lead, Filtered		per sample	\$16.85	\$0.00
3.2 Rush EPA Method 8260B		per sample	\$187.62	\$0.00
4.2 Trimethal, Butyl, and Isopropyl Benzenes		per sample	\$34.20	\$0.00
5.2 PAH's		per sample	\$74.02	\$0.00
6.2 Lead		per sample	\$19.54	\$0.00
7.2 EDB by EPA 8011	169	per sample	\$55.21	\$9,330.49
8.2 EDB by EPA Method 8011 Rush		per sample	\$83.31	\$0.00
9.2 8 RCRA Metals		per sample	\$77.45	\$0.00
10.2 TPH (9070)		per sample	\$50.09	\$0.00
11.2 PH		per sample	\$6.35	\$0.00
12.2 BOD		per sample	\$24.42	\$0.00
13.2 Ethanol		per sample	\$18.08	\$0.00
K. Analyses-Drinking Water			·	·
14.2 BTEXNM+1,2 DCA (524.2)		per sample	\$151.52	\$0.00
15.2 7-OXYGENATES & ETHANOL (8260D)		per sample	\$112.07	\$0.00
16.2 EDB (504.1)		per sample	\$97.11	\$0.00
17.2 RCRA METALS (200.8)		per sample	\$122.15	\$0.00
K. Analyses-Soil			·	·
18.2 BTEX + Naphth.		per sample	\$78.18	\$0.00
19.2 PAH's		per sample	\$78.22	\$0.00
20.2 8 RCRA Metals		per sample	\$68.89	\$0.00
21.2 TPH-DRO (3550C/8015C)		per sample	\$48.86	\$0.00
22.2 TPH- GRO (5035B/8015C)		per sample	\$43.92	\$0.00
23.2 Grain size/hydrometer		per sample	\$127.04	\$0.00
24.2 Total Organic Carbon		per sample	\$37.38	\$0.00
P. Survey*				
1.1 Subsequent Survey	1	each	\$297.65	\$297.65
Q. Disposal (gallons or tons)*				
1.2 Wastewater	500	gallon	\$1.19	\$595.00
2.2 Free Product		gallon	\$1.63	\$0.00
3.2 Soil Treatment/Disposal	3	ton	\$156.25	\$468.75
4.2 Drilling fluids		gallon	\$1.25	\$0.00
R. Miscellaneous (attach receipts)				
1. Targeted Corrective Action	1	each	\$284,547.61	\$284,547.61
(see Attached Table)				

W. Aggressive Fluid & Vapor Recovery (AFVR)				
1.2 8-hour Event*		per event	\$1,787.40	\$0.00
2.1 24-hour Event*		per event	\$4,407.78	\$0.00
3.1 48-hour Event*		per event	\$7,242.29	\$0.00
4.1 96-hour Event*	9	per event	\$14,482.28	\$130,340.52
5.1 Off-gas Treatment 8 hour		per event	\$141.17	\$0.00
6.2 Off-gas Treatment 24 hour		per event	\$294.30	\$0.00
7.2 Off-gas Treatment 48 hour		per event	\$386.10	\$0.00
8.1 Off-gas Treatment 96 hour	9	per event	\$898.84	\$8,089.56
9.1 Off-gas Treatment 8 hour (w/chlorinated compo	unds)	per event	\$464.40	\$0.00
10.1 Off-gas Treatment 24 hour (w/chlorinated comp	oounds)	per event	\$540.00	\$0.00
11.1 Off-gas Treatment 48 hour (w/chlorinated comp	oounds)	per event	\$1,080.00	\$0.00
12.1 Off-gas Treatment 96 hour (w/chlorinated comp	oounds)	per event	\$2,160.00	\$0.00
13.2 AFVR Effluent Disposal(w/chlorinated compour	nds)	gallon	\$0.64	\$0.00
14.2 AFVR Site Reconnaissance		each	\$302.40	\$0.00
15.1 Additional Hook-ups		each	\$29.68	\$0.00
16.2 AFVR Effluent Disposal	72000	gallon	\$0.53	\$38,160.00
17.2 AFVR Mobilization/Demobilization	9	each	\$777.60	\$6,998.40
Z. High Resolution Site Characterization				
1.1 HRSC Screening Equipment Mobilization		each	\$1,468.80	\$0.00
2.1 HRSC Drilling Category 1		per foot	\$31.32	\$0.00
3.1 HRSC Drilling Category 2		per foot	\$36.18	\$0.00
4.1 HRSC Drilling Category 3		per foot	\$29.16	\$0.00
5.1 HRSC 3-D Model		each	\$4,363.20	\$0.00
S. Report Prep & Project Management	12%	percent	\$802,416.17	\$96,289.94
TOTAL				\$898,706.11

ITEM				
R. Miscellaneous (attach receipts)	QUANTITY	UNIT	UNIT PRICE	TOTAL
Corrective Action Plan	1	each	\$10,000.00	\$10,000.00
I. Injection				
Injectate		per event		\$0.00
Injection Services		per event		\$0.00
Secondary Parameter Analysis		each		\$0.00
II. Enhanced AFVR				\$0.00
Injectate - Event 1	1	each	\$47,683.54	\$47,683.54
Injectate - Event 2	'1	each	\$47,683.54	\$47,683.54
Injectate - Event 3	'1	each	\$47,683.54	\$47,683.54
Injection Services and Equipment - Event 1		each	\$40,000.00	\$40,000.00
Injection Services and Equipment - Event 2	'1	each	\$40,000.00	\$40,000.00
Injecton Services and Equipment - Event 3		each	\$40,000.00	\$40,000.00
Expendable Supplies and Tooling - Event 1		per event	\$3,832.33	\$3,832.33
Expendable Supplies and Tooling - Event 2	1	per event	\$3,832.33	\$3,832.33
Expendable Supplies and Tooling - Event 3	1	per event	\$3,832.33	\$3,832.33
III. Excavation		ton	70,00=100	\$0.00
Excavation Equipment and Operator		each		\$0.00
Backfill Material		ton		\$0.00
Backfill Additive		ton		\$0.00
Proctor/Compaction Testing		per event		\$0.00
Sheet Piling		per event		\$0.00
Dewatering Equipment		per event		\$0.00
Excavation Security/Fencing		per event		\$0.00
TOTAL				\$284,547.61