Geo-Solutions
Soil & Groundwater Problems Solved.

RCRA Interim Measures
Soil-Bentonite Slurry Wall Installation
Nitro, WV

Technical Submittal
Contingency Plan

Potesta Project No.: 0101-01-0081-700B
Geo-Solutions Project No.: P-1160

April 8, 2011 Revised June 3, 2011
Revision No.: 2

Submittal Status		Notes:
Submitted		
Reviewed		
Reviewed and Noted		
Resubmit	X	
Rejected		
Information Only		

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN 1
- 2.1 SPILL PREVENTION CONTROL PLAN 1
- 2.2 COUNTERMEASURES PLAN 1
- 2.2.1 CLEAN-UP PROCEDURES 1
- 2.2.2 REPORTING SPILLS 3

3.0 FLOOD CONTROL PLAN 3

4.0 EMERGENCY RESPONSE PLAN 4
- 4.1 PRE-EMERGENCY PLANNING 4
- 4.2 IDENTIFICATION OF RESPONSIBLE PERSONNEL 4
- 4.3 EMERGENCY EQUIPEMENT 5
- 4.4 EMERGENCY CONTACTS 5
- 4.5 GENERAL FIRST AID PRACTICES 6
- 4.5.1 GENERAL BURN CLASSIFICATIONS AND TREATMENT 7
- 4.6 GENERAL PROCEDURE FOR CONTACT WITH GAS AND ELECTRIC UTILITIES7
- 4.7 MEDICAL FACILITY DIRECTIONS 8
- 4.8 ACCIDENT, INJURY, AND ILLNESS REPORTING & INVESTIGATION 8
- 4.9 SITE EVACUATION 9

Appendices

A Map to Hospital with Directions
B Accident Report Form

1.0 INTRODUCTION

This document stands to fulfill the requirements of the Contingency Plan as defined in Section 2.3.1 and 3.6 of the RFP. Primary topics of this submittal include a Spill Prevention Control and Countermeasures Plan, Flood Control Plan, and an Emergency Response Plan.

2.0 SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN

2.1 SPILL PREVENTION CONTROL PLAN

All personnel must take every precaution to minimize the potential for spills during site operations. All on-site personnel shall immediately report any discharge, no matter how small, to the Site Superintendent (SS).

Spill control equipment and materials will be located on the Site at locations that present the potential for discharge. All sorbent materials used for the cleanup of spills will be containerized and labeled appropriately. In the event of a spill, the SS will follow the provisions in the following section, and the emergency response plan, to contain and control released materials and to prevent their spread to off-site areas.

2.2 COUNTERMEASURES PLAN

In the event of a spill or leak, Site personnel will:

- Inform the Site Superintendent immediately;
- Locate the source of the spillage and stop the flow, if it can be done safely;
- Surround the source with appropriate media;
- Begin containment and recovery of spilled materials;
- Report the incident to GSI management for further direction.

GSI will have an oil spill kit available at the Site for minor spills that occur. The priority for containment and cleanup will be the prevention of material from reaching water sources. The Site Superintendent will be responsible for any reporting procedures that are required as a result of the spill or leak.

2.2.1 CLEAN-UP PROCEDURES

The following general guidelines will be followed for evacuation, spill control, notification of proper authorities, and general emergency procedures in the event of a spill or leak that has a potential for a significant release of hazardous materials.

1. Evacuation
   Persons in the immediate vicinity of a spill should immediately evacuate the area unless they have been instructed in spill response and cleanup for the circumstances described below.

2. Spill Control Techniques
   Once a spill has occurred, the employee(s) need to decide whether the spill/leak is small enough to handle without outside assistance. Only those employees that have been trained in spill response should attempt to contain or clean a spill.

3. Spill Response and Cleanup
   Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures will vary, depending on the size of the spill.

   Small Spills – Any spill or leak where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal employees and usually do not require any emergency response personnel.

   - Quickly control the spill by stopping or securing the spill source. Wear gloves and protective clothing, if necessary.
   - Use floor-dry or absorbent pads to soak up the spilled material.
   - Place spilled material and absorbent pads into containers.
   - Use dry cleanup methods and never wash spills down a storm sewer drain.
   - Dispose the spilled material and absorbent pads in compliance with state and federal regulations.

   Medium Spills – Any spill or leak where the major dimension exceeds 18 inches, but is less than 6 feet. Typically, outside emergency response personnel (local fire department and police) are contacted, however, common sense will dictate when it is necessary to contact them.

   - Immediately try to contain the spill at its source by simple measures (e.g. up righting a container, shutting off the source, etc.).
   - Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off to eliminate sources of ignition.
   - If emergency responders are contacted, follow their instructions in leaving the area.
   - After the spill is contained (by employees or emergency responders), clean up the spill residue.

- Use equipment, absorbents and containers to clean up the spilled material.

- Dispose the spilled material and absorbents in compliance with state and federal regulations.

- File a report with the proper authorities, if necessary.

Large Spills – Any spill involving flammable liquids where the major dimension exceeds 6 feet in diameter, or any "running spill" where the source has not been contained or stopped. The response for large spills is similar to medium spills, except that the exposure danger is greater.

- Leave the area and notify emergency responders (911). Give the operator the spill location, chemical spilled, and the approximate amount.

- Obtain the MSDS information and any ignition sources that may need to be shut off.

- Allow emergency responders to handle the spill according to their established procedures.

- Do not enter the area until the responder(s) give clearance.

- Provide the necessary information to supervisors and responders.

2.2.2 REPORTING SPILLS

All chemical spills should be reported as soon as possible to the Site Superintendent, who will determine whether the spill has the potential to affect the environment outside of the Site. All spills that could affect the environment will be reported to the National Response Center at 800-424-8802. Examples of spills that could affect the outside environment include spills that are accompanied by fire or explosion, and spills that could reach nearby water bodies.

3.0 FLOOD CONTROL PLAN

In the event of high water and/or flood conditions of the Kanawha River during the work on this project, the following measures will be implemented.

- In order to monitor flood and potential flood conditions, GSI will utilize live water surface elevation information provided by the National Weather Service. In addition to the National Weather Service, water conditions will be referenced from the U.S. Geological Survey (NSGS) and National Oceanic and Atmospheric Administration (NOAA) websites.

- In the event of an actual or impending emergency, GSI will commence backfilling of the trench completely. Presuming there is sufficient time, GSI would use backfill

that meets the requirements set forth in Technical Specifications Section 1000, Subsection 2.2. However, if time does not allow for proper backfill mixing and placement, un-mixed trench spoils along with any other material is readily accessible will be used to backfill the trench.

- During the backfill operation, excess slurry will be generated. To the extent possible, this will be pumped or moved to a temporary storage area located at higher elevations than the expected flood water surface elevations. The above-grade slurry pond may be used for temporary storage.

- On the completion of the closure of the trench, all equipment will be moved to higher ground away from the river.

- Once the water surface elevations have decreased, GSI will identify any sections of the trench that require re-excavation.

- The trench will be restarted by excavating a new lead-in trench through the previously placed backfill, being sure to key back into approved backfill a minimum of three feet.

In the event of a large rainfall or once the water surface elevations have decreased, please refer to the guidelines set forth Submittal Item No. 5 - Stormwater Runoff and Water Management Plan.

4.0 EMERGENCY RESPONSE PLAN

This Emergency Response Plan (ERP) has been prepared to define the responsibilities, resources, and actions necessary to respond to site emergencies e.g. uncontrolled releases of hazardous materials, fires, explosions, illnesses and injuries.

4.1 PRE-EMERGENCY PLANNING

This ERP will be reviewed and revised on a regular basis (if necessary) by the Site Superintendent (SS) and Site Safety Officer (SSO). This will ensure that the plan is adequate and consistent with prevailing site conditions.

During safety meetings, all employees will be trained in and reminded of the provisions of the ERP, communication systems, and evacuation routes.

4.2 IDENTIFICATION OF RESPONSIBLE PERSONNEL

The SSO has the primary responsibility for responding to and correcting emergency situations. The SS will be the alternate responsible person for responding to and correcting emergency situations. This includes taking appropriate measures to ensure the safety of the site personnel and the public, make certain corrective measures have been implemented, appropriate authorities notified, and follow-up reports completed.

The SSO will be the primary responsible person who will receive all incoming calls and dispatch GSI's personnel and equipment in the event of an emergency situation. Contact

information for this primary responsible person will be provided no less than 7 days prior to commencement of work.

4.3 EMERGENCY EQUIPEMENT

Safety equipment will be available for use by site personnel. The safety equipment will include, but is not limited to, the following: a first aid kit, emergency eyewash, potable water, anti-bacterial soap, and cellular telephone located on-site or in the job trailer. Fire extinguishers will be on each piece of heavy equipment and in the job trailer.

4.4 EMERGENCY CONTACTS

Primary Emergency Contacts

Emergency Services	Contact Personnel	Telephone Number
Nitro Fire Department	Emergency Administrative Office	911 (304) 755-1437
Ambulance Kanawha County EMS	Emergency	911
Nitro Police Department	Emergency Administrative Office	911 (304) 755-0777
West Virginia State Police	South Charleston Detachment	(304) 558-7777
Thomas Memorial Hospital	Emergency Department	(304) 766-3601

Additional Emergency Contacts

Services	Contact Personnel	Telephone Number
Solutia, Inc.	Mike House (Office)	(314) 674-6717
Geo-Solutions, Inc. Project Manager (PM) Site Safety Officer (SSO) Site Supervisor (SS) Field Engineer	 Ken Andromalos (Cell) Ken Andromalos (Office) Ken Andromalos (Home) TBD Pete Lewis (Cell) Jesse Snyder (Cell)	 (412) 965-8604 (724) 353-7273 (724) 325-1626 TBD (412) 973-9417 (724) 822-7620
Chemical-Oil Spills (National Response Center)	No Specific Contact	(800) 424-8802

Centers of Disease Control	**No Specific Contact**	**(404) 639-2888**
US EPA Region 3	**William Wentworth (Office)**	**(215) 814-3184** **(800) 438-2474**
Alcohol Tobacco & Firearms **(Explosives Information)**	**Charleston, WV Field Office**	**(304) 340 7800**
Poison Control Center	**West Virginia Poison Center**	**(304) 347-2412**
West Virginia Department of Environmental Protection	**Tom Bass (Office)** **Tom Bass (Cell)** **Office (Main Phone)**	**(304) 926-0499 ext. 1274** **(304) 389-7596** **(304) 926-0499**

4.5 GENERAL FIRST AID PRACTICES

First aid will be administered to injured personnel, as required. If an ambulance is not required, escort the victim to Thomas Memorial Hospital (directions provided in section 4.7 and a map provided in Appendix A). Whenever possible, personnel should be decontaminated in the contamination reduction zone before administering first aid, without causing further harm to the patient. In life threatening situations, however, the injured personnel may be wrapped in a sheet or similar barrier material and the treatment facility/staff will be notified of the potentially contaminated personnel.

The procedure outlined below will be administered to injured/ill personnel. Typical responses may include the following:

Call for an ambulance, if in doubt.

Skin Contact: Remove contaminated clothing. Wash area(s) immediately with water, and use soap, if available. Then provide appropriate medical attention. Identify the nearest emergency water source prior to beginning work.

Eye Contact: Remove contaminated goggles and/or face shield. Administer emergency eyewash to flush eyes and then provide the appropriate medical attention. Identify the nearest emergency eyewash prior to beginning work or provide portable eyewash.

Inhalation: Remove victim from contaminated atmosphere and into fresh air. Remove any respiratory protection equipment. Initiate artificial respiration, if necessary. Transport to the hospital.

Ingestion: Remove victim from contaminated atmosphere. Attempt to identify the item swallowed. Do not induce vomiting if victim is unconscious. Also never induce vomiting when acids, alkalis, or petroleum products are suspected. Transport to the hospital, if necessary.

Any person transporting an injured/exposed person to a clinic or hospital for treatment should take with them, directions to the hospital and a listing of the contaminants of concern to which they may have been exposed.

4.5.1 GENERAL BURN CLASSIFICATIONS AND TREATMENT

First-degree Are superficial but can be painful because these burns usually do not damage the nerves. These types of burns will cause outer layers of skin to redden or discolor and to swell slightly.

Second-degree Penetrate skin more deeply and are more severe than first-degree burns. In addition, second-degree burns affect skin by creating a red or mottled appearance, blisters, and swelling. These burns are also very painful because the nerve endings are still intact.

Third-degree Are the most severe burns and have the deepest penetration of the types of burns. Third-degree burns may appear white or charred. They may even look like second-degree burns but they extend through all skin layers. In addition, third-degree burns destroy nerve endings, so third-degree burns can be less painful than second-degree burns.

Burns must be treated by medical personnel. However, you may need to provide first aid until professional help arrives. Listed below are several actions that you can take if someone is burned:

- Cool minor burns with water.
- Refrain from applying ice to any but the most minor first-degree burns.
- Refrain from breaking open blisters.
- Refrain from touching a burned area because touching the burned area increases the risk of infection.
- Refrain from applying ointment to a severe burn.
- Refrain from removing anything stuck to a burned area.

4.6 GENERAL PROCEDURE FOR CONTACT WITH GAS AND ELECTRIC UTILITIES

In the case where the operator who makes accidental contact with power lines will follow these procedures:

1. While in contact with the power line, do not get off the machine. Only in the case of fire is it advisable to get of the machine. In this instance you must jump off the machine as far as you can. DO NOT make contact with the ground and machine at the same time.
2. Warn others to avoid contact with the machine.
3. Slowly move the machine away from the power line. If the power line moves with the machine, stop and get help from the local utility. If the machine breaks contact with the line, move it to a safe distance and report the incident to your supervisor.

In the case of a broken gas line, the following procedures will be implemented:

1. Move people and equipment away from the leak if it is detected immediately and you are reasonably certain of the break's location. Notify your supervisor immediately. If the break's location is unknown, do not risk providing an ignition source by starting machines and shut down those that are running.
2. Notify residents of the danger and the need to move to a safe area.
3. Contact the gas utility company.

4.7 MEDICAL FACILITY DIRECTIONS

Directions to Thomas Memorial Hospital from the site:

- Take Route 25 West approximately 0.5 mile to Interstate-64;
- Merge onto Interstate-64 East and continue approximately 9 miles to Exit 54 (MacCorkle Avenue/US 60 towards Jefferson Road/WV 601).
- Turn left at MacCorkle Avenue and continue approximately 0.5 mile.
- Thomas Memorial Hospital is on the left.

A map depicting the aforementioned directions is depicted in Appendix A.

4.8 ACCIDENT, INJURY, AND ILLNESS REPORTING & INVESTIGATION

Any work related incident, accident, injury, illness, exposure, or property loss must be reported to the SS or SSO and the client (by GSI PM or SS only). Motor vehicle accidents must also be reported. An Accident Report Form, located in Appendix B, must also be filled out and provided to the SS. The report must be filed for the following circumstances:

- accident, injury, illness, or exposure of an employee;
- injury of a subcontractor;
- damage, loss, or theft of property; and/or
- any motor vehicle accident, regardless of fault, which involves a company vehicle, rental vehicle, or personal vehicle while the employee is acting in the course of employment.

Occupational accidents resulting in employee injury or illness will be investigated by the SSO. This investigation will focus on determining the cause of the accident and modifying future work activities to eliminate the hazard.

All employees have the obligation and right to report unsafe work conditions, previously unrecognized safety hazards, or safety violations of others. If you wish to make such a report, it may be made orally to your supervisor or other member of management, or you may submit your concern in writing, either signed or anonymously.

4.9 SITE EVACUATION

In the event of an emergency situation such as fire, explosion, significant release of toxic gases, etc., emergencies will be communicated by means of radio or telephone communications. Personnel in the field will be notified through established communications to evacuate the area. In the event of an emergency, GSI and subcontractor personnel will gather at primary mustering points for a head count. The local mustering point location will be determined and communicated by the SS or SSO to the work crew(s) during site-specific training prior to commencement of work activities.

Geo-Solutions

Appendix A

Map of Hospital with Directions

Map to Thomas Memorial Hospital

Directions:

- Take Route 25 West approximately 0.5 mile to Interstate-64;
- Merge onto Interstate-64 East and continue approximately 9 miles to Exit 54 (MacCorkle Avenue/US 60 towards Jefferson Road/WV 601).
- Turn left at MacCorkle Avenue and continue approximately 0.5 mile.
- Thomas Memorial Hospital is on the left.

Geo-Solutions

Appendix B

Accident Report Form

GSI ACCIDENT REPORTING FORM

Instructions: For Personal Injuries, Occupational Illnesses, and Property Damage, complete Sections 1 and 2.
For Vehicle Accidents, Complete Sections 1, 2, and 4.

SECTION 1

A. Employee Identification	**( ) GSI Employee**	**( ) Temporary Employee**	**( ) Subcontractor**	
Employee No.	Last Name	First Name	Middle Name/Initial	M or F
Area Code ( )	Telephone Number	Address (Street, City, State, Province, Zip Code)		
Date of Hire / /	Position/Title	Supervisor	Employee's Company/Office Location	

B. General Information						
Where did the accident occur? ( ) Office ( ) Project Site		Type of Occurrence ( ) Employee Injury/Illness ( ) Vehicle Accident ( ) Property Damage Only				
Date and Hour of Accident		Date and Hour Reported to Employer		Date and Hour Last Worked		Time Employee Began Work
Month Day Year	( ) a.m. ( ) p.m.	Month Day Year	( ) a.m. ( ) p.m.	Month Day Year	( ) a.m. ( ) p.m.	( ) a.m ( ) p.m.
Normal Work Hours on Last Day Worked		Witnesses?		Witness Name and Telephone Number		
From: To:	( ) a.m. ( ) p.m.	( ) Yes ( ) No				

C. Project Information (Project Related Accidents Only)				
Project #	Project Name	Project Manager	Site Telephone Number ( )	Employee Cell Number ( )
Was the Client Advised of the Accident? ( ) Yes ( ) No Name:		Project Address (Street, City, State, Province, Zip Code)		
		Specific Location of Accident		

SECTION 2

A. Details of the Accident
1. What job/task was being performed when the accident occurred? (Example: collecting groundwater samples).
2. Provide a detailed description of the employee's specific activities at the time of the accident. Include details of equipment/materials being used, including the size and weights of objects being handled. If necessary, attach additional pages to the report.
3. For injuries, identify the specific part of body injured, and specify left or right side. For illnesses, identify and describe the affected area/body part.
4. Identify the object or substance that directly injured employee and how. Include size and weight of object, quantity of substance, etc.
5. Identify property damaged and how it was damaged (include owner of property, nature and source of damage, model and serial number, if appropriate).

B. Health Care/Medical Treatment	
Employee received health care? ( ) Yes ( ) No	Identify the type of health care provided and where it was performed. (Check all that apply). ( ) First Aid ( ) Medical treatment other than first aid (sutures, etc.) ( ) Hospitalized ( ) Clinic ( ) Hospital emergency room ( ) On site by EMT
Name of Health Care Provider, Physician's Name, Address (Street, City, Province/State, and Postal/Zip Code)	

Section 2 (Continued)

C. Accident Investigation		
H&S plan prepared and on site? ( ) Yes ( ) Not applicable	Did the safety plan identify and provide safety procedures for the specific tasks the employee was conducting when injured? ( ) Yes ( ) No If no, why not? (Explain)	
Did the employee have the proper safety training to conduct these tasks or use the equipment? ( ) Yes ( ) No If not, why not?		
Identify all of the potential contributing factors and how they led to the occurrence of the accident. (Lack of attention, wrong use of equipment, lack of training, hurrying/rushing, sort-cutting, environmental conditions, time of day, etc.)		
What contributing factor(s) above was the underlying root cause of the accident.		
Is any training or retraining recommended? If yes, describe.		
What actions have been or will be taken to correct this accident from reoccurring? Verify that these actions will be taken with the PM and/or employee supervisor.		
Additional information: Attach photos, witness statement(s), affected employee statement, accident diagrams, as applicable, to the end of this document.		
Report Date Month Day Year	Report Prepared by: (please print)	Report Prepared by: (signature)

Fax Completed Form to GSI Headquarters Fax: (724) 335-7271

VEHICLE ACCIDENT SECTION

(Complete this Section for all Vehicle Accidents)

SECTION 4

A. GSI Vehicle

License Plate No.	State/Province	Police Department City State/Province	
Vehicle Year/Make/Model	Odometer Reading at Time of Accident	Police Report Number	Weather Conditions

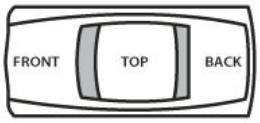
Name of Person Operating Vehicle

Address

City State/Province Zip Code

Telephone: Area Code ( )

"X" IN AREA OF VEHICLE DAMAGE



CIRCLE
0 No Damage
1 Light
2 Moderate
3 Heavy
4 Rolled
5 Burned

Vehicle Type: ( ) Personal ( ) Rental ( ) GSI-Own

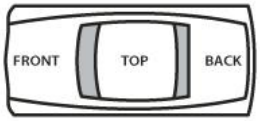
Description of Vehicle Damage:

B. Other Vehicles Involved

Name of Owner	Address	City/State/Prov./Zip	Area Code and Telephone Number ( )
Operator's Name (if different from above)	Address	City/State/Prov./Zip	Area Code and Telephone Number ( )

Year/Make/Model	Description of Property Damage:
Insurance Co. Name & Telephone	
License Plate No./State/Province	

"x" IN AREA OF VEHICLE DAMAGE



CIRCLE
0 No Damage
1 Light
2 Moderate
3 Heavy
4 Rolled
5 Burned

C. Injured Persons

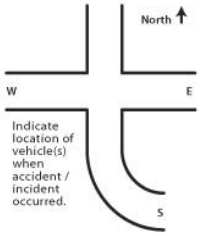
Name	Address Street, City, State/Prov./Zip Code	Phone Number	Nature of Injury	Indicate if Injured was a Vehicle Driver/ Passenger, Employee, Other, or Pedestrian
1.				
2.				
3.				

D. Witnesses

Name	Address Street, City, State/Prov./Zip Code	Area Code and Telephone Number
1.		( )
2.		( )

E. Description of Accident

PLEASE COMPLETE OR ATTACH SEPARATE DIAGRAM



Was Ticket Issued:
Other Operator ☐
GSI Operator ☐

Reason: _____

Report Date Month Day Year	Report Prepared by: (please print)	Report Prepared by: (signature)

Note: If Additional Space is Required to Complete this Report, Use Separate Sheet of Paper and Attach.

Fax Completed form to GSI Headquarters Fax: (724) 335-7271