



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Solicitation

NUMBER
DEP16419

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 DIVISION OF LAND RESTORATION
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED
05/29/2014

BID OPENING DATE: 06/12/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 1						
ADDENDUM ISSUED;						
1. TO PROVIDE RESPONSES TO VENDORS' QUESTIONS REGARDING THE ABOVE SOLICITATION.						
2. TO PROVIDE VENDORS A COPY OF THE MANDATORY PRE-BID MEETING SIGN-IN SHEETS.						
3. TO MOVE THE BID OPENING; FROM: JUNE 5, 2014 @ 1:30 P.M. TO: JUNE 12, 2014 @ 1:30 P.M.						
4. TO PROVIDE ADDENDUM ACKNOWLEDGMENT. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN THE DISQUALIFICATION OF YOUR BID.						
END OF ADDENDUM NO. 1						

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Solicitation

NUMBER
DEP16419

PAGE
2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 DIVISION OF LAND RESTORATION
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED
05/29/2014

BID OPENING DATE: 06/12/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		670-81		
				TANK MONITORING SYSTEM CAPON SPRINGS LF.		
0002	1	EA		670-81		
				TANK MONITORING SYSTEM FOR CENTRAL WV REFUSE LF.		
0003	1	EA		670-81		
				TANK MONITORING SYSTEM FOR JACKSON COUNTY LANDFILL		
0004	1	EA		670-81		
				TANK MONITORING SYSTEM FOR MCDOWELL COUNTY LANDFILL		
0005	1	EA		670-81		
				TANK MONITORING SYSTEM FOR MIDWEST LANDFILL		

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Solicitation

NUMBER
DEP16419

PAGE
3

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 DIVISION OF LAND RESTORATION
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED
05/29/2014

BID OPENING DATE: 06/12/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0006	1	EA		670-81 TANK MONITORING SYSTEM FOR MINGO COUNTY LANDFILL		
0007	1	EA		670-81 TANK MONITORING SYSTEM FOR MORGAN COUNTY LANDFILL		
0008	1	EA		670-81 TANK MONITORING SYSTEM FOR PINE CREEK-OMAR LANDFILL		
0009	1	EA		670-81 TANK MONITORING SYSTEM FOR WYOMING COUNTY LANDFILL		
0010	1	EA		670-81 INTERNET BASED HOSTING SETUP & MAINTENANCE		

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Solicitation

NUMBER
DEP16419

PAGE
4

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

ENVIRONMENTAL PROTECTION
 DEPARTMENT OF
 DIVISION OF LAND RESTORATION
 601 57TH STREET SE
 CHARLESTON, WV
 25304 304-926-0499

DATE PRINTED
05/29/2014

BID OPENING DATE: 06/12/2014

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ DEP16419 ***** TOTAL:						_____

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

SOLICITATION NUMBER: DEP16419

Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as (“Solicitation”) to reflect the change(s) identified and described below.

Applicable Addendum Category:

- | Modify bid opening date and time
- | Modify specifications of product or service being sought
- | Attachment of vendor questions and responses
- | Attachment of pre-bid sign-in sheet
- | Correction of error
- | Other

Description of Modification to Solicitation:

1. To provide responses to questions received.
2. To provide Vendors a copy of the mandatory pre-bid sign-in sheets.
3. To move the bid opening;
 from: June 5, 2014 @ 1:30 P.M.
 to: June 12, 2014 @ 1:30 P.M.
4. To provide Addendum Acknowledgment.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A

SIGN IN SHEET

Request for Proposal No. DEP16419

PLEASE PRINT

Date: May 14, 2014

* PLEASE BE SURE TO PRINT LEGIBLY - IF POSSIBLE, LEAVE A BUSINESS CARD

FIRM & REPRESENTATIVE NAME	MAILING ADDRESS	TELEPHONE & FAX NUMBERS
Company: <u>WV-DEP</u>	<u>717A Main St.</u>	PHONE <u>304-545-0793</u>
Rep: <u>Mark Church</u>	<u>Summersville WV 26651</u>	TOLL FREE
Email Address: <u>mark.a.church@wv.gov</u>		FAX <u>304-872-3800</u>
Company: <u>Bail Contracting Inc.</u>	<u>2733 Canvas Nettie Road</u>	PHONE <u>304 872-6963</u>
Rep: <u>Abigail Bail</u>	<u>Canvas, WV 26662</u>	TOLL FREE
Email Address: <u>bailcon86@hotmail.com</u>		FAX <u>304 872-0107</u>
Company: <u>Hughes Supply Co</u>	<u>300 Rural Acres Drive</u>	PHONE <u>304-252-1718</u>
Rep: <u>Brian Meredith</u>	<u>Beckley WV 25801</u>	TOLL FREE
Email Address: <u>brianm@hscindustrial.com</u>		FAX <u>304-252-6411</u>
Company: <u>Extreme Endeavors</u>	<u>1063 Hickory Corner Rd</u>	PHONE <u>304-457-2500</u>
Rep: <u>Mike Masterson</u>	<u>Phillips WV 26416</u>	TOLL FREE
Email Address: <u>mfm@extreme-endeavors.com</u>		FAX
Company: <u>Pillar Innovations</u>	<u>3310 W. Main St</u>	PHONE <u>304-983-8900</u>
Rep: <u>Jeffrey Nutt</u>	<u>Summersville WV 26651</u>	TOLL FREE
Email Address: <u>JeffNutt@Pillarinnovations.com</u>		FAX <u>304-983-8905</u>

RECEIVED WDEP

SIGN IN SHEET

Request for Proposal No. DEP 16419

PLEASE PRINT

Date: May 14, 2014

* PLEASE BE SURE TO PRINT LEGIBLY - IF POSSIBLE, LEAVE A BUSINESS CARD

FIRM & REPRESENTATIVE NAME	MAILING ADDRESS	TELEPHONE & FAX NUMBERS
Company: <u>TEPCO / H'S CONTROLS</u>	<u>310 CLAY AVE MARS PA 16046</u>	PHONE <u>724-625-4260</u>
Rep: <u>ROB TROMBOLD</u>	<u>RT 5 Box 716 GRAFTON WV 26354</u>	TOLL FREE <u>1-800-356-9228</u>
Email Address: <u>RTROMBOLD@TEPCO-TROMBOLD.COM</u>		FAX <u>724-625-4227</u>
Company: <u>TEPCO / H'S CONTROLS</u>	<u>RT 76 East Bridgeport, WV 26330</u>	PHONE <u>304-842-8611</u>
Rep: <u>Bob Starkey</u>	<u>RT 5 Box 716 GRAFTON WV 26354</u>	TOLL FREE <u>800-367-1756</u>
Email Address: <u>BSTARKEY@TEPCO-TROMBOLD.COM</u>		FAX <u>304-842-8614</u>
Company: <u>SCS Field Services / Engineers</u>	<u>296 Victory Road</u>	PHONE <u>540-662-7097</u>
Rep: <u>Darren Shelhamer</u>	<u>Winchester, VA 22602</u>	TOLL FREE <u>540-323-1989</u>
Email Address: <u>dshelhamer@scsengineers.com</u>		FAX _____
Company: _____	_____	PHONE _____
Rep: _____	_____	TOLL FREE _____
Email Address: _____	_____	FAX _____
Company: _____	_____	PHONE _____
Rep: _____	_____	TOLL FREE _____
Email Address: _____	_____	FAX _____

DEP16419
Leachate Tank Monitoring System
Additional Questions

1. Question: What type of contract does the DEP wish to maintain with the results from this solicitation? For example, firm fixed price, cost plus, etc.?

Answer: The contract will be a firm fixed price.
2. Question: Is the access security key for logging into the controller or recording when someone is physically on site? Would a card swipe device work for this?

Answer: This is for recording when someone is on site. A swipe card is fine to use.
3. Question: Why does the controller need “terminal blocks removable system accepting #14-18 Awg wire?” Extreme Endeavors equipment uses military style bayonet connectors because they are more dependable in harsh environments. Would this be an acceptable replacement?

Answer: Yes, this would be an acceptable replacement.
4. Question: The Controller is specified to run off 12 volt power. The solar/battery system is specified to run at 24 volts. If the solar/battery system is used to power the controller, shouldn't these match?

Answer: An approved 12-volt solar/battery system may be substituted with the same capacity.
5. Question: Does the controller need to update the web interface? Can the web interface extract data from the controller?

Answer: Either is acceptable.
6. Question: Web interface updated every 15 minutes was specified. Are more frequent updates more desirable?

Answer: Yes, desirable, but not required.
7. Question: 3.1.5.2 specifies LCD, 6 digit flow rate. Does DEP want a display on site that shows the flow rate?

Answer: This is not required.

DEP16419
Leachate Tank Monitoring System
Additional Questions

8. Question: Would it be acceptable if the flow rate was displayed on a TFT display on the controller?

Answer: This is not required.

9. Question: A maximum 40 foot cable length is specified. Does the mounting to the tipping bucket pose an issue with cable length? Is there a reason you would like to limit to 40 foot if controller and tipping bucket can operate effectively at longer lengths?

Answer: No, as long as it meets the manufacturer's recommendation.

10. Question: Would DEP consider using a cable other than 4-conductor 26 gauge? Our Teflon based cable is extremely durable and has a lower cost at 22 AWG is more readily available. Would this be acceptable?

Answer: Yes.

11. Question: Our Ethernet based radios do not use coaxial cable. The Ethernet is carried right up to the radio and then the RF signal is passed directly to the antenna. This principle was designed based on research performed at the National Radio Astronomy Observatory and would eliminate the LMR 400 cable. Is this an acceptable solution?

Answer: Yes.

12. Question: Where do the lightning arrestors go? Since we are not going inside a building, should they be mounted on a pole outside?

Answer: The lightning arrestors go on the existing tank structure.

13. Question: The solar panel does not "maintain power". The batteries maintain the power. Shouldn't we change the battery sizes to meet the 5-day specification? Would DEP prefer that the system remain powered continually off of solar/battery system? Shouldn't the solar panels be sized to charge the batteries while maintaining power to the rest of the system?

Answer: The batteries in the specifications are the minimum. If your system draws more power, 5-day power must be maintained.

14. Question: Is the solar panel and battery power system intended to provide main power or backup power in case of a power grid failure?

Answer: The battery system is to provide main power.

DEP16419
Leachate Tank Monitoring System
Additional Questions

15. Question: The DEP has specified the use of BP solar panels. BP is headquartered in Spain and manufactured in India and China. Could we select a solar panel manufactured in the United States of America?

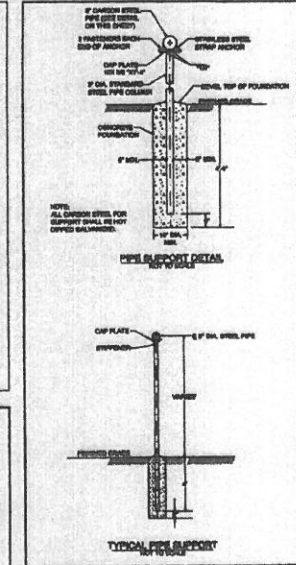
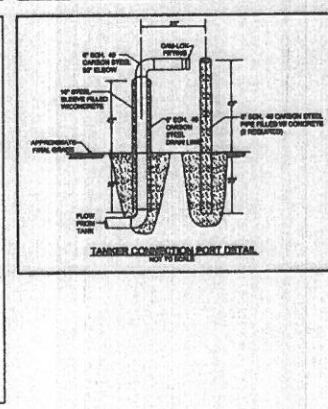
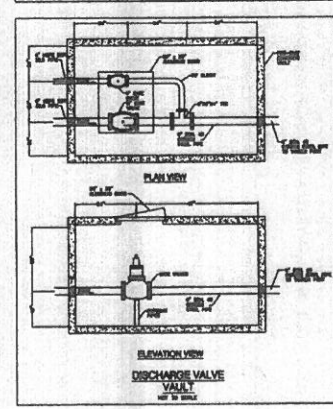
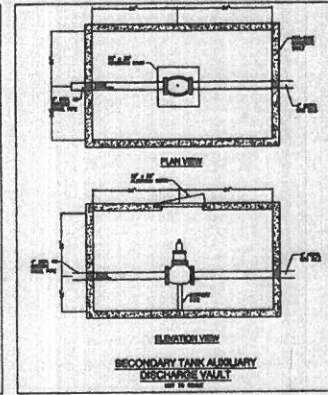
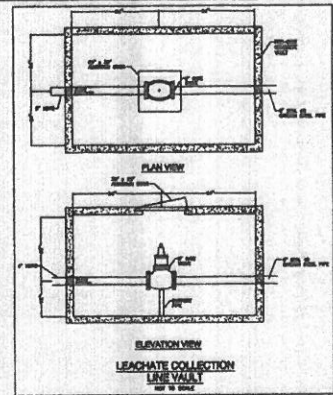
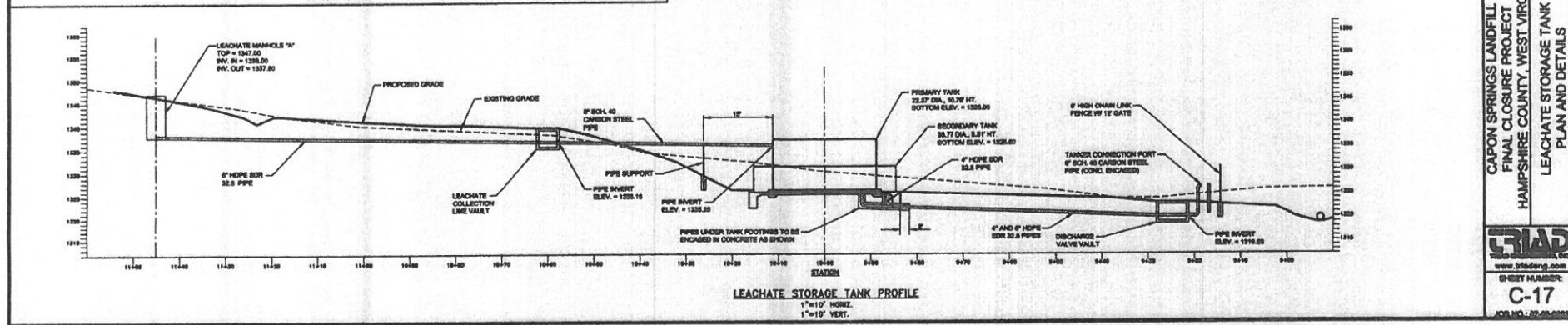
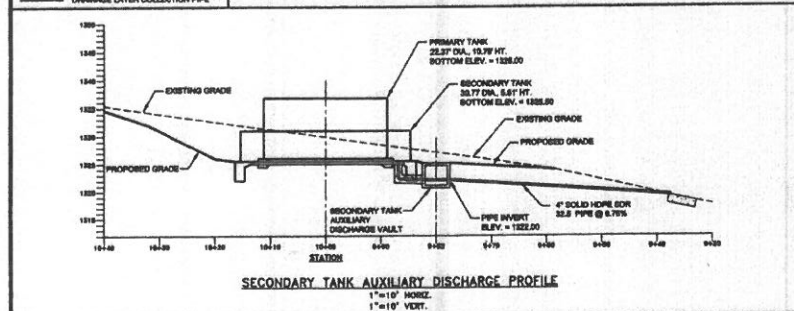
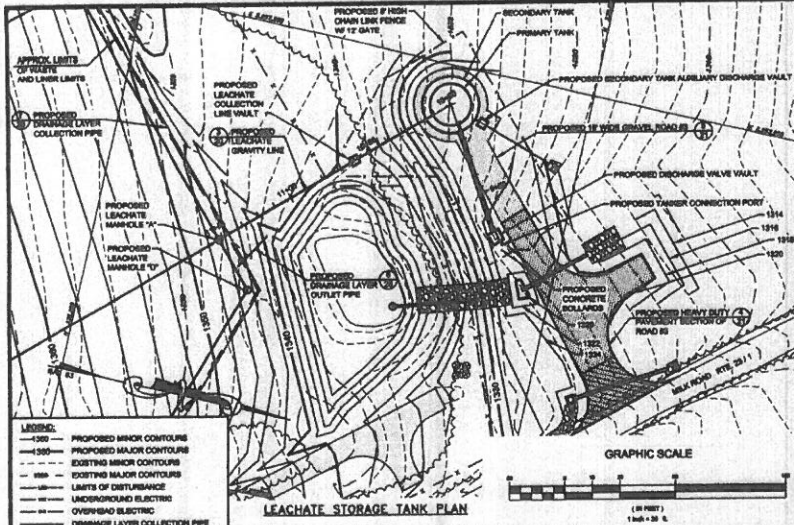
Answer: Yes.

16. Question: Does “making requested changes” mean once a day, once a week, or once a month? If a firm fixed price is requested, how do we approximate the magnitude of changes to be requested?

Answer: If changes are required, they will only be made during the initial setup.

17. Question: Can you provide drawings of the tanks at the landfills?

Answer: Yes, please see attached drawings.



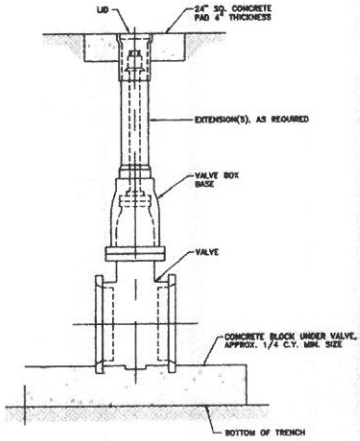
TRIAD ENGINEERING, INC.
 208 AVANTAGE DRIVE
 WACHSATER, VA 22602
 PH: 540.887.8888 FAX: 540.887.2288
 E-MAIL: EOFFICE@TRIADENG.COM

PROJECT NO.	108
DATE	08/11/2009
SCALE	AS SHOWN
DRAWN BY	AS SHOWN
CHECKED BY	AS SHOWN
DATE	08/24/2009
JOB	WACHSATER
JOB NO.	108
DATE	08/24/2009

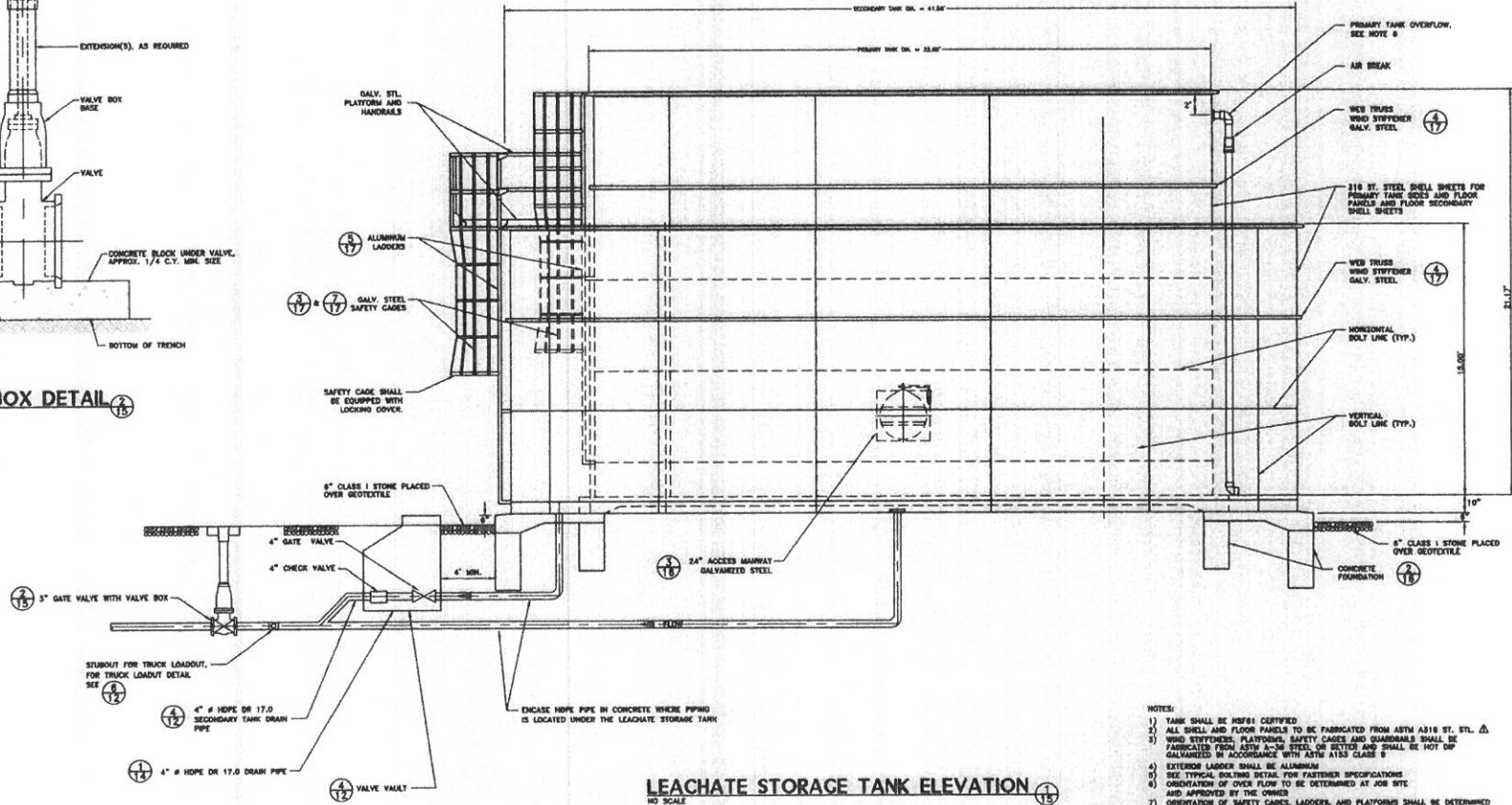
SEAL:
 PROFESSIONAL ENGINEER
 STATE OF VIRGINIA
 No. 14000
 EXPIRES 12/31/2011

**CAPON SPRINGS LANDFILL
 FINAL CLOSURE PROJECT
 HAMPSHIRE COUNTY, WEST VIRGINIA
 LEACHATE STORAGE TANK
 PLAN AND DETAILS**

TRIAD
 www.triadeng.com
 SHEET NUMBER:
C-17
 OF 10



VALVE BOX DETAIL
NO SCALE

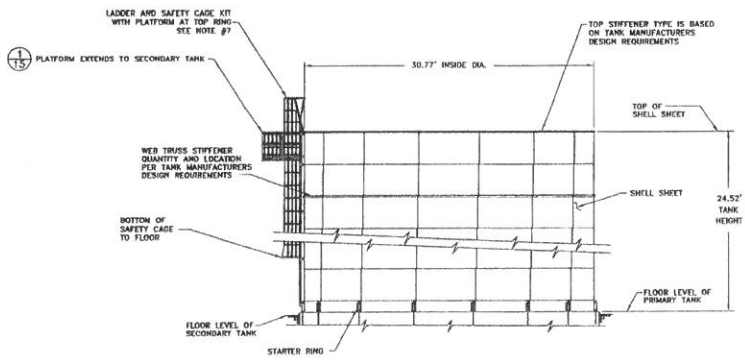


LEACHATE STORAGE TANK ELEVATION
NO SCALE

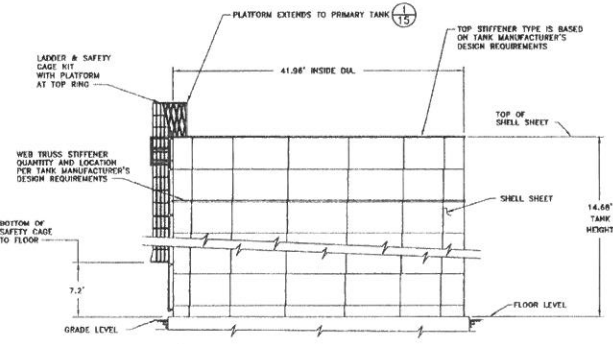
NOTES:

- 1) TANK SHALL BE MSF1 CERTIFIED
- 2) ALL SHELL AND FLOOR PANELS TO BE FABRICATED FROM ASTM A316 ST. STL. Δ
- 3) WIND STIFFENERS, PLATFORMS, SAFETY CAGES AND GUARDRAILS SHALL BE FABRICATED FROM ASTM A306 STEEL OR BETTER AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS B
- 4) EXTERIOR LADDER SHALL BE ALUMINUM
- 5) SEE TYPICAL BOLTING DETAIL FOR FURTHER SPECIFICATIONS
- 6) ORIENTATION OF OVER FLOW TO BE DETERMINED AT JOB SITE AND APPROVED BY THE OWNER
- 7) ORIENTATION OF SAFETY CAGES, LADDERS, AND PLATFORMS SHALL BE DETERMINED AT JOB SITE AND APPROVED BY THE OWNER
- 8) LEAKAGE TEST TO BE CARRIED OUT ONLY AFTER JOINT SEALANT IS FULLY CURED
- 9) ALL SHEET JOINTS TO BE SEALED WITH Sika 1A JOINT SEALANT
- 10) FILET JOINT SEALER AT ALL VERTICAL AND HORIZONTAL SEAMS TO PROVIDE A NEAT AND PLEASING APPEARANCE
- 11) APPLY Sika 1A TO ALL WELDING SURFACES BETWEEN STAINLESS AND GALVANIZED STEEL
- 12) PRIMARY TANK SHALL BE EQUIPPED WITH A WATER LEVEL INDICATOR. LEVEL INDICATOR SHALL BE ORIENTED IN A MANNER APPROVED BY THE OWNER
- 13) 3 INCH HOPE OR 17.0 POUND MAN EXTENDING PRIMARY TANK NOT SHOWN FOR CLARITY MAINTAIN A MINIMUM COVER OVER DRAIN LINES OF 48 INCHES
- 14) SIGNAGE FREEBOARD FOR PRIMARY TANK SHALL BE 2 FEET
- 15) THE AREA WITHIN THE LEACHATE STORAGE TANK FENCE SHALL BE SURFACED WITH 6 INCHES OF CLASS 1 STONE PLACED OVER GEOTEXTILE
- 16) DESIGN OF THE LEACHATE TANK FOUNDATION AND CONCRETE SLAB SHALL BE THE RESPONSIBILITY OF THE TANK MANUFACTURER SUBJECT TO THE APPROVAL OF THE ENGINEER. THE TANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE ALLOWABLE BEARING CAPACITY OF THE FOUNDATION SOILS AND FOR DESIGN OF THE TANK INCLUDING FOUNDATIONS.

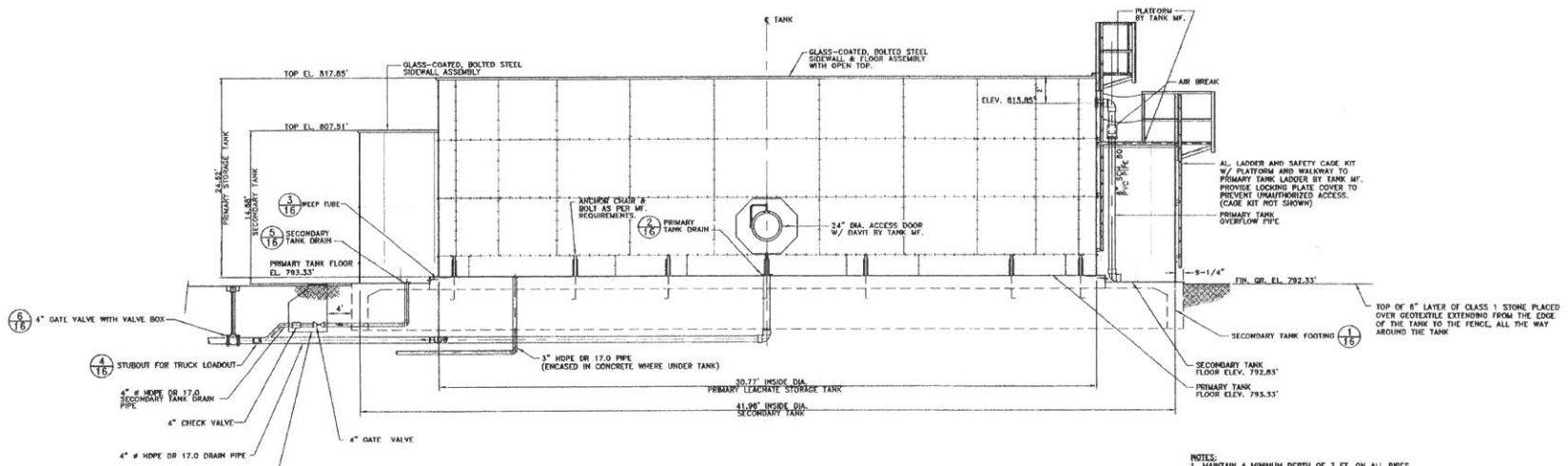
Revision									
Date	Drawn	Checked	Approved	Date	Scale				
1	JAC	JAC	JAC	JAC	1/8" = 1'-0"				
						Potesta & Associates, Inc. ENGINEERS AND ARCHITECTS 1000 W. 10th Street, Suite 100 Jackson, Mississippi 39201 Phone: (601) 933-1111 Fax: (601) 933-1112 www.potesta.com			
						JACKSON COUNTY SANITARY LANDFILL WELL WORKS REPAIRMENT OF LEACHATE STORAGE TANK PROJECT NO. 15			
						LEACHATE STORAGE TANK DETAILS			
						15 Drawing No.			



PRIMARY TANK
SCALE: NONE



SECONDARY TANK
SCALE: NONE



LEACHATE STORAGE TANK
NO SCALE

- NOTES:
1. MAINTAIN A MINIMUM DEPTH OF 3 FT. ON ALL PIPES.
 2. PRIMARY TANK LEACHATE LEVEL INDICATOR NOT SHOWN. LEACHATE LEVEL INDICATOR SHALL BE ORIENTATED IN A MANNER APPROVED BY ENGINEER.
 3. ALL PIPING SHALL BE ENCASED IN CONCRETE WHERE UNDER PRIMARY AND SECONDARY TANKS.
 4. MINIMUM FACEBOARD FOR PRIMARY TANK SHALL BE 2 FEET.
 5. THE AREA WITHIN THE LEACHATE STORAGE TANK FENCE SHALL BE SURFACED WITH 8" OF CLASS 1 STONE PLACED OVER GEOTEXTILE.
 6. DESIGN OF THE LEACHATE TANK FOUNDATION AND CONCRETE SLAB SHALL BE THE RESPONSIBILITY OF THE TANK MANUFACTURER SUBJECT TO THE APPROVAL OF THE ENGINEER. THE TANK MANUFACTURER SHALL BE RESPONSIBLE FOR DETERMINING THE ALLOWABLE BEARING CAPACITY OF THE FOUNDATION SOILS AND FOR DESIGN OF THE TANK INCLUDING FOUNDATIONS, LADDERS, PLATFORMS, SAFETY CAGES AND RAILINGS.
 7. INSIDE TANK LADDER WITH SAFETY CAGE SHALL BE INSTALLED ON THE INSIDE OF THE PRIMARY TANK AND SHALL BE FABRICATED OF TYPE 316 STAINLESS STEEL AND MEET OSHA REQUIREMENTS, NOT SHOWN.

Revision
 Date
 Drawn
 Checked
 Approved
 NOTED
 Spec'd
 AUGUST 2005
 Issue
 87211-006-006
 Project No.

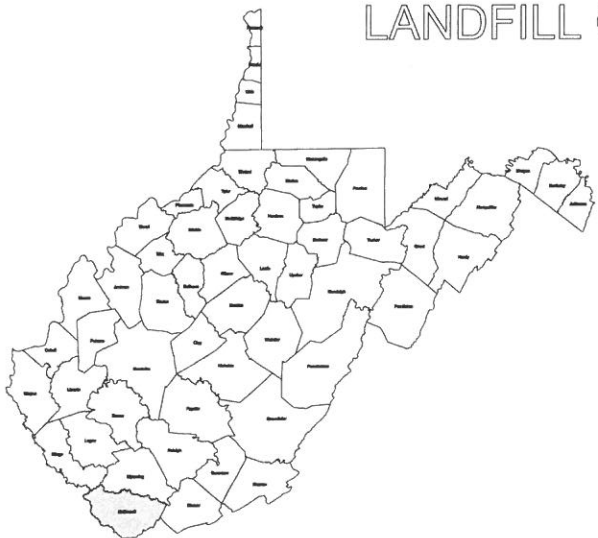
Potesta & Associates, Inc.
 ENGINEERING AND ARCHITECTURAL
 1300 N. 11th St., Suite 200, Norfolk, VA 23502
 Phone: (757) 644-4444 Fax: (757) 644-4444
 E-mail: info@potesta.com www.potesta.com

WEST VIRGINIA DEPARTMENT OF
 JACKSON COUNTY SANITARY LANDFILL
 LANDFILL CLOSURE
 ASSISTANCE PROGRAM

LEACHATE STORAGE TANK DETAILS

15
 Drawing No.

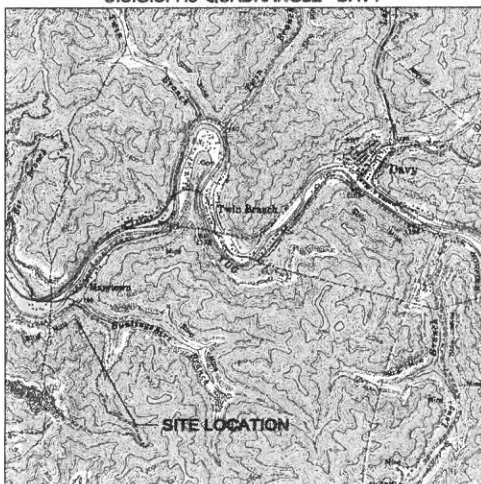
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION LANDFILL CLOSURE ASSISTANCE PROGRAM



MCDOWELL COUNTY LANDFILL LEACHATE STORAGE FACILITY UPGRADE

MARYTOWN, WEST VIRGINIA

U.S.G.S. 7.5' QUADRANGLE - DAVY

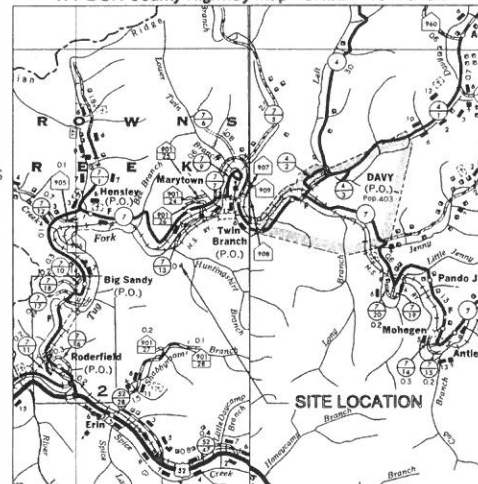


SCALE: 1" = 500'

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1.	Title Sheet
2.	Quantities, General Notes and Controls
3.	Existing Conditions
4.	Grading/Stormwater Management Plan
5.	Leachate Piping Plan
6.	Sediment Control Details
7.	Leachate Storage Details
8.	Leachate Storage/Loadout Details
9.	Miscellaneous Details
10.	Cross Sections I
11.	Cross Sections II
12.	Leachate Pipe Profile

WV DOH County Highway Map - SHEET NO.1 and 2



SCALE: 1" = 300'

I hereby certify that this document was prepared by me or under my direct personal supervision and is correct to the best of my knowledge and belief and that I am a duly Licensed Professional Engineer under the laws of the State of West Virginia.

Date: 9/28/2011

REVISION	DATE	DESCRIPTION	P.M.

Prepared By: **Marshall Miller and Associates**
Geology, Environmental Sciences & Engineering, Geophysics

MARSHALL MILLER & ASSOCIATES

Bluefield, VA
 Charleston, KY
 Raleigh, NC
 Richmond, VA
 Charleston, WV
 Harrisburg, PA
 Newport, TN
 Kansas City, KS
 Beaver City, IA
 Beckley, WV

LEAD: 12/10
 LEAD: 12/10
 Sheet No. 1 of 11

Title Sheet

McDowell County Landfill
Leachate Storage Facility Upgrade

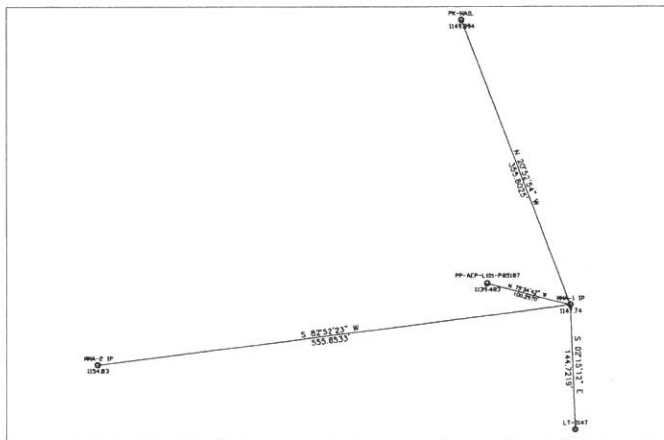
Prepared For:
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
601 57th STREET, CHARLESTON, WV 25304

CAD BY:	RH	12/10
CHECKED BY:	CB	12/10
APPROVED BY:	CB	12/10

Scale as Shown

GENERAL NOTES

- BASE MAPPING WAS DEVELOPED BY MARSHALL MILLER & ASSOCIATES FROM THE FOLLOWING SOURCES:
 - A STATE ADDRESS AND MAPPING BOARD (2003) - CONTOURS
 - SARNO AERIAL TECHNOLOGIES (1985) - PLANNING
 - GOODE EARTH CORP. - EXISTING TRAIL LOCATION
- VERTICAL CONTROL IS BASED ON LEVELS DETERMINED NEAR SEA LEVEL SURVEY BENCHMARK ESTABLISHED BY MARSHALL MILLER & ASSOCIATES ON MARCH 6, 2010.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- EXISTING FEATURES SHOWN ON ALL PLANS REPRESENT THE APPROPRIATE FIELD CONDITIONS THAT EXIST AT THE DATE PRIOR TO THE INITIATION OF SURVEY OPERATIONS. HOWEVER, THESE FIELD CONDITIONS MAY REFLECT CHANGES THAT MAY HAVE OCCURRED SINCE THE DATE OF THE AERIAL PHOTOGRAPHY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LAYOUT AND INSTALLATION OF POWER LINES, TELEPHONE LINES AND ASSOCIATED FACILITIES TO PROVIDE UTILITY SERVICE TO THE OFFICE TRAILER.
- PROJECT SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COMPLY WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) PROJECT HEALTH AND SAFETY PLAN AND OTHER LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS REGARDING SAFETY AS THEY RELATE TO CONSTRUCTION ACTIVITIES AS PROVIDED ON THESE CONSTRUCTION DRAWINGS.
- THE TOP OF MANHOLE OR JUNCTION BOX COVERS SHALL BE EXTENDED TO 8" ABOVE GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- MANHOLE PIPE COVER FOR PIPE CULVERTS SHALL BE 1'-0" UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC ROUTING AND CONTROL, SO THAT THE EXISTING ACCESS ROAD REMAINS OPERATIONAL DURING AND AFTER CONSTRUCTION.
- THE EXTENT AND LOCATION OF UNDISCOVERED UTILITIES HAVE BEEN INDICATED FROM MAPS AND SOURCES BELIEVED TO BE CORRECT. THEIR LOCATION IS NOT GUARANTEED AND SHALL BE PREPARED AND FIELD VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. ANY DAMAGE DONE TO EXISTING UTILITIES AND FACILITIES SHALL BE REPAIRED WITH THE UTILITIES AND FACILITIES RESTORED TO AT LEAST THEIR ORIGINAL CONDITION AND/OR FUNCTION.
- THIS PROJECT SHALL BE CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF ALL BEST PRACTICES AND BEST MANAGEMENT PRACTICES (BMP) AND PROPOSED STANDARD SPECIFICATIONS, AS APPLICABLE.
- EROSION AND SEDIMENT CONTROL SHALL BE IMPLEMENTED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND WITH THE LATEST EDITION OF THE "BEST PRACTICES" EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE MANUAL, 2008.
- ALL DISTURBED AREAS SHALL BE REVEGETATED UNLESS SURFACED WITH STONE.
- SAFETY FENCES AND RETAINMENT STRUCTURES SHALL BE CONSTRUCTED AND IN-PLACE PRIOR TO INITIATION OF ANY CLEARING AND GRUBBING ACTIVITIES.
- USE OF DOCUMENTS - THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED BY MARSHALL MILLER AND ASSOCIATES AS CONSULTANT TO THE BEST PRACTICES DIVISION OF ENVIRONMENTAL PROTECTION AS AN ASSISTANT OF PROFESSIONAL SERVICES. THE DESIGN INCORPORATED HEREIN ARE INTENDED FOR USE AT THIS SITE SPECIFICALLY AND SHOULD NOT BE USED FOR ANY OTHER PROJECT.



SURVEY CONTROL INFORMATION

POINT NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	MMA-1 IRON PIN	171,528.79	1,802,380.48	1,147.740
2	MMA-2 IRON PIN	171,248.85	1,802,534.12	1,108.830
3	LI-2047	170,999.58	1,802,591.17	N/A
4	PP-AZP-LI01-PP0187	171,134.18	1,802,288.38	1,138.483
5	PK-NAL	171,441.62	1,802,858.68	1,148.894

SCHEDULE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	REMARKS
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	1	LIMITED TO A MAXIMUM OF 1% OF TOTAL CONTRACT BID
2	CONSTRUCTION LAYOUT AND DOCUMENTATION	LUMP SUM	1	LIMITED TO A MAXIMUM OF 1% OF TOTAL CONTRACT BID
3	SETBACK AND EROSION CONTROL	LUMP SUM	1	LIMITED TO A MAXIMUM OF 1% OF TOTAL CONTRACT BID
4	CLEARING AND GRUBBING	ACRE	1	
5	REVEGETATION	ACRE	4	
6	EXCAVATION	CU. YD.	11,290	
7	CHANNEL: A	LINEAR FOOT	72	
8	CHANNEL: B	LINEAR FOOT	110	
9	12" CMP CULVERT	LINEAR FOOT	85	
10	LEACHATE PIPE	LINEAR FOOT	881	
11	TANK VALVE PIT	LUMP SUM	1	
12	TRUCK LOADOUT HELIX PIT	LUMP SUM	1	
13	LEACHATE STORAGE TANK	LUMP SUM	1	
14	ACCESS ROAD SURFACING	TON	2,700	
15	FENCE	LINEAR FOOT	370	

REVISION	DATE	DESCRIPTION	P.M.

Prepared By: **Marshall Miller and Associates**
 Geology, Environmental Sciences & Engineering, Geophysics

Bluefield, VA
 Lexington, KY
 Raleigh, NC
 Richmond, VA
 Charleston, WV
 Harrisburg, PA
 Knoxville, TN
 Kansas City, KS
 Boston, MA
 Blacksburg, VA

LEADPIR: bldg
 LEADPIR: bldg

Sheet No. 2 of 12

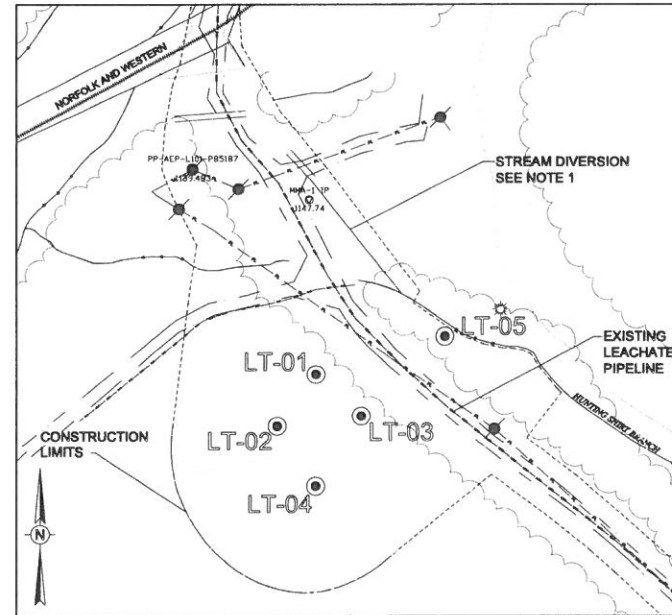
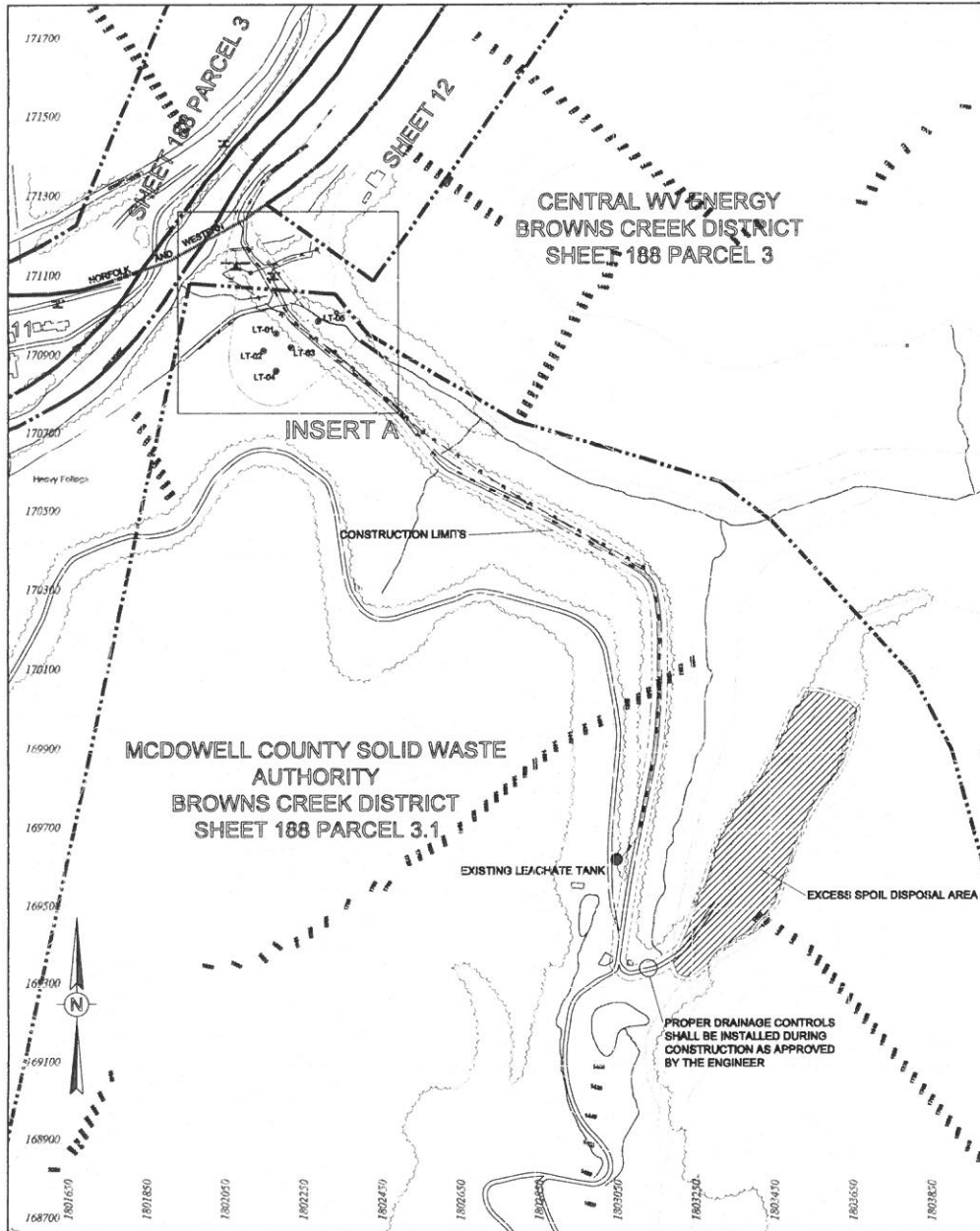
Quantities, General Notes and Controls

McDowell County Landfill
 Leachate Storage Facility Upgrade

Prepared For:
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 601 57th STREET, CHARLESTON, WV 25304

CAD BY: RH 12/10
 CHECKED BY: CB 12/10
 APPROVED BY: CB 12/10

Scale as Shown



**INSERT A
SCALE = 1' = 50'**

LEGEND

- EXISTING CONTOUR
- - - - - PROPERTY LINE
- - - - - CONSTRUCTION LIMITS
- ⊙ GAS WELL
- ⊙ TEST BORING
- POWER POLE
- == EXISTING ROAD
- ==== EXISTING CULVERTS
- - - - - ELECTRIC LINE (AERIAL)
- - - - - NATURAL GAS LINE
- - - - - LEACHATE TRANSMISSION PIPE
- ⊕ SURVEY BENCHMARK
- ⊕ B
⊕ B
DETAIL B
SHEET B

- NOTES:**
- HUNTING SHIRT BRANCH HAS BEEN REDIRECTED AFTER THE DATE OF THE AERIAL PHOTOGRAPHY. STREAM DIVERSION SHOWN IS APPROXIMATE.
 - ACCESS TO THE FINAL CLOSURE SITE IS VIA MCDOWELL COUNTY ROUTES 7 AND 7/13. THE BRIDGE OVER TUG FORK IS POISED FOR 15 TONS WITH VERTICAL CLEARANCE OF 15'11" AND HORIZONTAL CLEARANCE OF 13'6". A HAULING PERMIT SHALL BE OBTAINED FROM THE WEST VIRGINIA DIVISION OF HIGHWAYS (304)487-5239. PERMISSION TO USE OTHER ACCESS ROUTES INCLUDING THE FORD OF THE TUG FORK SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PROPERTY BOUNDARY AS LOCATED BY MARSHALL MILLER & ASSOCIATES ON JULY 8, 2010.
 - SURVEY BENCHMARK ESTABLISHED BY MARSHALL MILLER & ASSOCIATES ON MARCH 9, 2010.
 - BASE MAPPING WAS DEVELOPED BY MARSHALL MILLER & ASSOCIATES FROM THE FOLLOWING SOURCES:
A. STATE ADDRESSING AND MAPPING BOARD (2003) - CONTOURS
B. BARTON AERIAL TECHNOLOGIES (1993) - PLANIMETRICS
C. GOOGLE EARTH (2009) - EXISTING TANK LOCATION
CERTAIN EXISTING CONDITIONS WERE LOCATED BY MARSHALL MILLER & ASSOCIATES ON JULY 8, 2010. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL EXISTING CONDITIONS BY SURVEY AS PART OF SITE SURVEYING.

REVISION	DATE	DESCRIPTION	P.M.

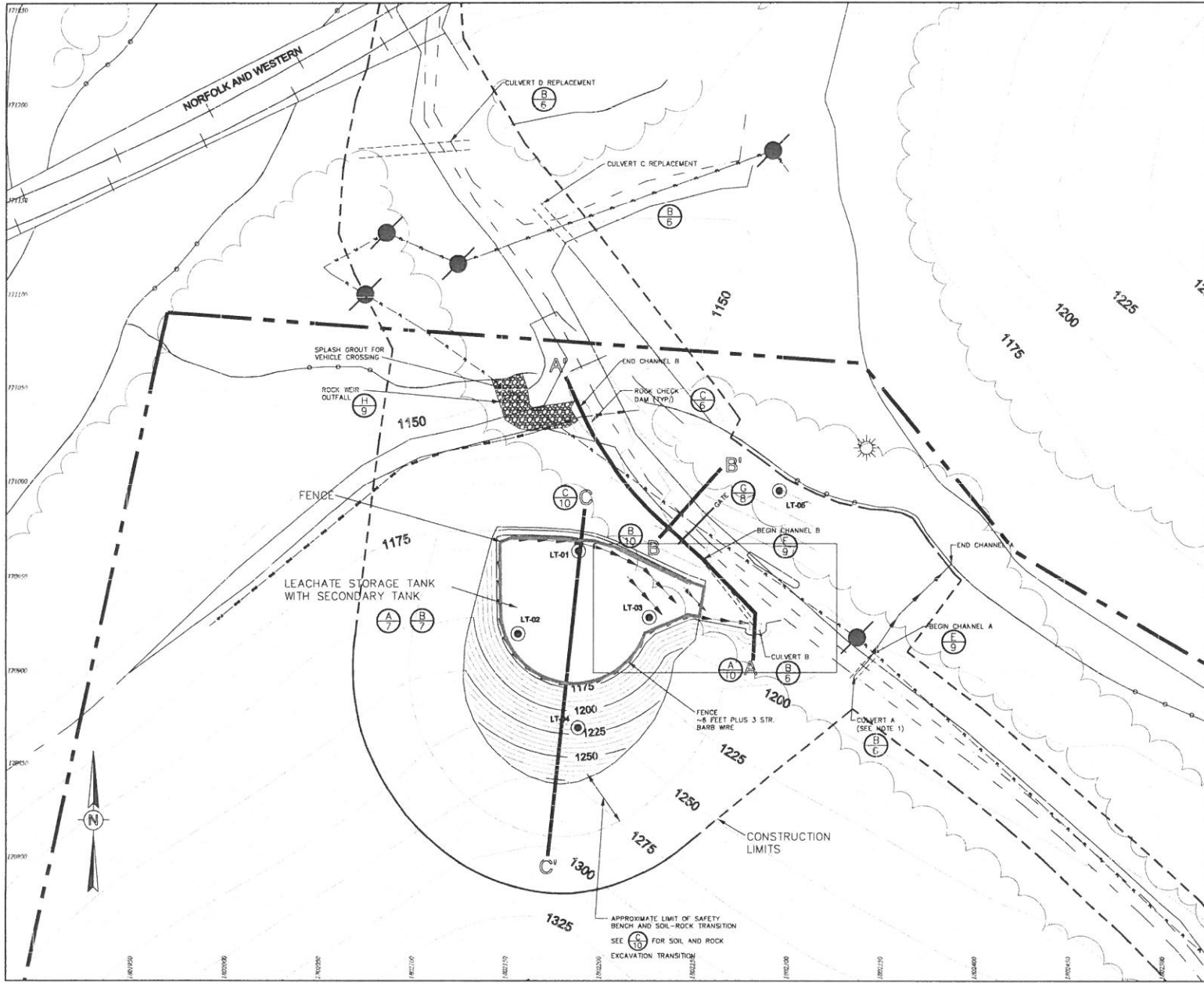
Prepared By: **Marshall Miller and Associates**
 Geology, Environmental Sciences & Engineering, Geophysics
 Bluefield, VA Lexington, KY Raleigh, NC
 Richmond, VA Charleston, WV Harrisburg, PA
 Knoxville, TN Kansas City, KS Beasler City, LA
 Beckley, WV

LEAFLOT: 12/10 RH
 LEAFLOT: 3 - to.dwg
 Sheet No. 3 of 12

Existing Conditions
 McDowell County Landfill
 Leachate Storage Facility Upgrade
 Prepared For:
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 601 57th STREET, CHARLESTON, WV 25304

CAD BY: RH 12/10
 CHECKED BY: CB 12/10
 APPROVED BY: CB 12/10

Scale In Feet
 0 100 200 300
 NAD 27, WEST VIRGINIA SOUTH STATE PLANE



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE
- CONSTRUCTION LIMITS
- GAS WELL
- TEST BORING
- EXISTING ROADS
- EXISTING CULVERTS
- ELECTRIC LINE (AERIAL)
- NATURAL GAS LINE
- SURVEY BENCHMARK
- A-A' CROSS SECTION
- B-B' DETAIL B SHEET B
- SLOPE TO DRAIN DIRECTION

NOTES:
 1. CONTRACTOR SHALL EXCAVATE SUMPS AT INLET OF CULVERT A AS DIRECTED BY THE ENGINEER, IN THE FIELD. EXCAVATION MAY REQUIRE REMOVAL OF SOIL AND ROCK.

REVISION	DATE	DESCRIPTION	P.M.

Prepared By: **Marshall Miller and Associates**
 Geology, Environmental Sciences & Engineering, Design/Construct

MARSHALL MILLER & ASSOCIATES

Bluefield, VA Lexington, KY Raleigh, NC
 Richmond, VA Charleston, WV Harrisburg, PA
 Knoxville, TN Kansas City, KS Bossier City, LA
 Blainey, WV

LEACHATE STORAGE FACILITY UPGRADE
 LEACHATE STORAGE FACILITY UPGRADE
 SHEET NO. 4 OF 12

Grading/Stormwater Management Plan

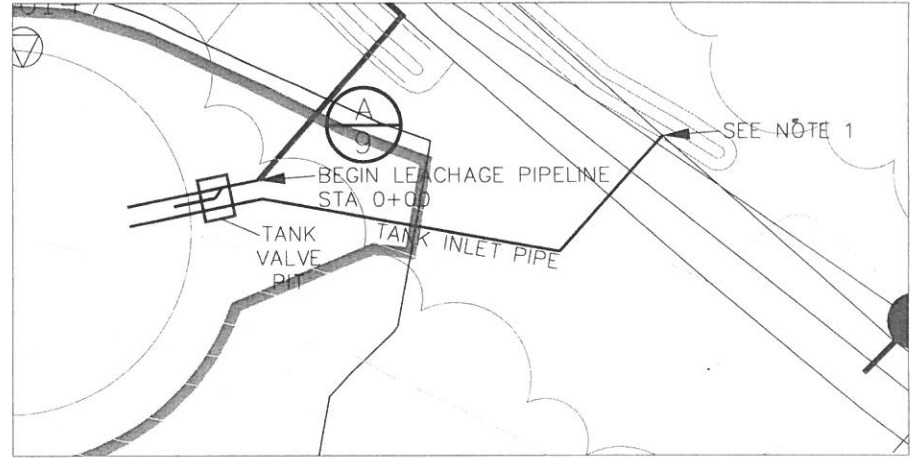
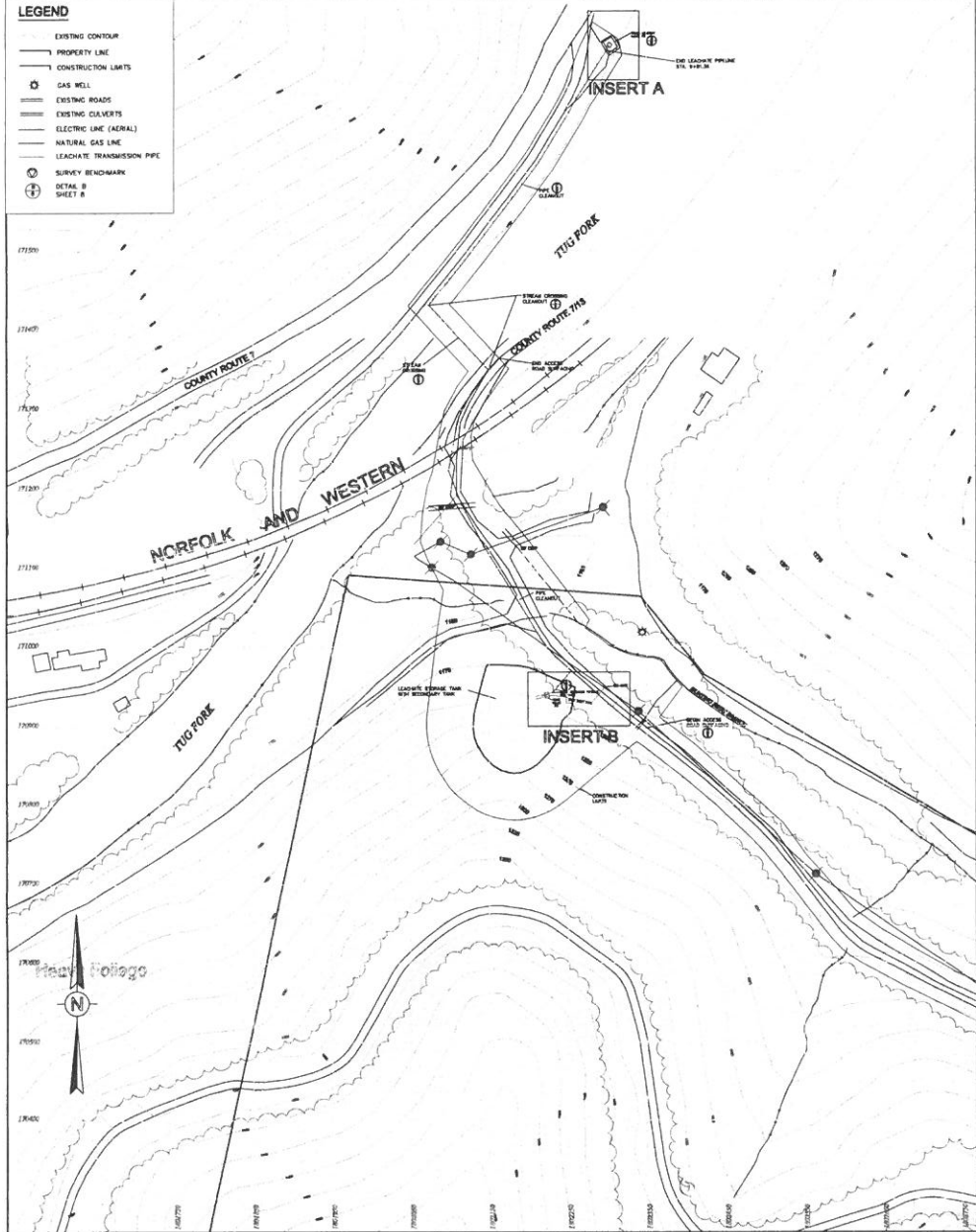
McDowell County Landfill
 Leachate Storage Facility Upgrade
 Prepared For:
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 601 57th STREET, CHARLESTON, WV 25304

CAD BY: RH 12/10
 CHECKED BY: CB 12/10
 APPROVED BY: CB 12/10

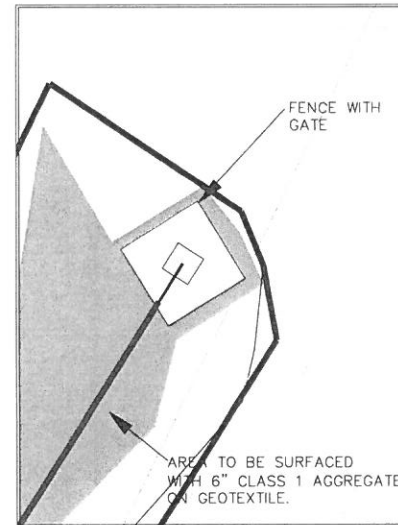
Scale In Feet
 0 20 40 60
 MAP 27, WEST VIRGINIA SOUTH STATE PLANS

LEGEND

- EXISTING CONTOUR
- PROPERTY LINE
- - - CONSTRUCTION LIMITS
- ⊙ GAS WELL
- EXISTING ROADS
- EXISTING CULVERTS
- ELECTRIC LINE (AERIAL)
- NATURAL GAS LINE
- LEACHATE TRANSMISSION PIPE
- ⊕ SURVEY BENCHMARK
- ⊕ DETAIL B SHEET #



INSERT B
SCALE = 1' = 10'

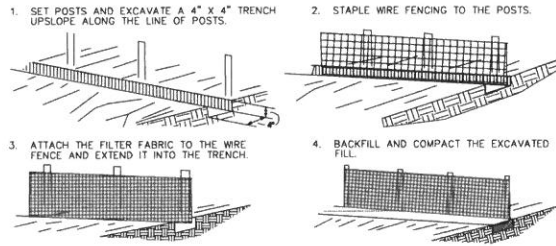


INSERT A
SCALE = 1' = 10'

- NOTES:
1. CONTRACTOR SHALL TIE IN LEACHATE TANK INLET PIPING TO EXISTING LEACHATE PIPE. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING LEACHATE PIPE TO ALLOW TIE-IN.
 2. CONTRACTOR SHALL REMOVE AND ABANDON EXISTING LEACHATE PIPE AT LOCATIONS AS DIRECTED BY THE ENGINEER.

REVISION	DATE	DESCRIPTION	P.M.
Prepared By: Marshall Miller and Associates Geology, Environmental Sciences & Engineering, Geophysics			
<input type="checkbox"/> Bluefield, VA <input type="checkbox"/> Lexington, KY <input type="checkbox"/> Raleigh, NC <input type="checkbox"/> Richmond, VA <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Harrisburg, PA <input type="checkbox"/> Knoxville, TN <input type="checkbox"/> Kansas City, KS <input type="checkbox"/> Boston City, LA <input type="checkbox"/> Blacksburg, WV			
LEACHATE PLAN 02 - b.w.dwg 12/10 RH			
Sheet No. 5 of 12			
Leachate Piping Plan			
McDowell County Landfill Leachate Storage Facility Upgrade			
Prepared For: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 601 57th STREET, CHARLESTON, WV 25304			
CAD BY:	RH	12/10	Scale In Feet 0 25 50 75 100 150 NAD 27, WEST VIRGINIA SOUTH STATE PLANE
CHECKED BY:	CB	12/10	
APPROVED BY:	CB	12/10	

SILT FENCE DETAIL (A)



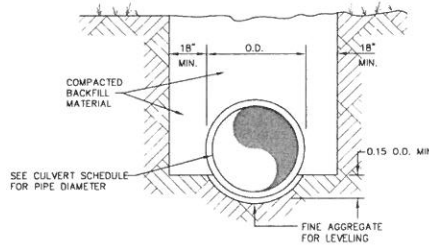
SILT FENCE: THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.

CONSTRUCTION SPECIFICATIONS:

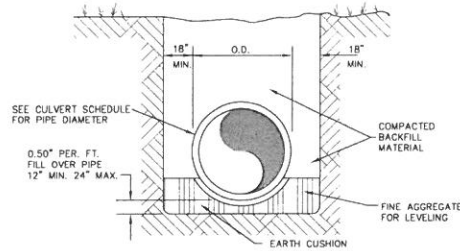
1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND SECURELY SEALED.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA POSTS ARE USED WITHOUT WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST ONE INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF TWO INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
7. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ITEM #6 APPLYING.
8. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
9. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

MAINTENANCE:

1. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE DONE IMMEDIATELY.
2. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE, AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER FABRIC BARRIER IS NO LONGER REQUIRED, SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.



CLASS B BEDDING
ON EARTH FOUNDATION



CLASS B BEDDING
ON ROCK FOUNDATION

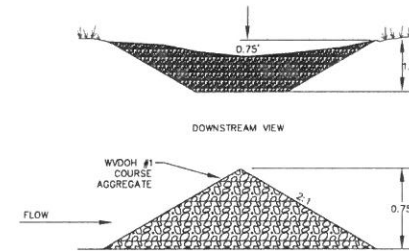
NOTE: MINIMUM PIPE COVER FOR PIPE CULVERTS SHALL BE 1' UNLESS OTHERWISE INDICATED.

CULVERT BEDDING REQUIREMENTS (B)

NOT TO SCALE

CULVERT SCHEDULE

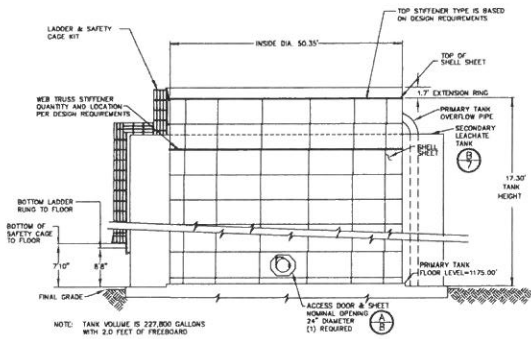
CULVERT	PIPE DIAMETER	LENGTH
A	1 FT	20 FT
B	1 FT	45 FT



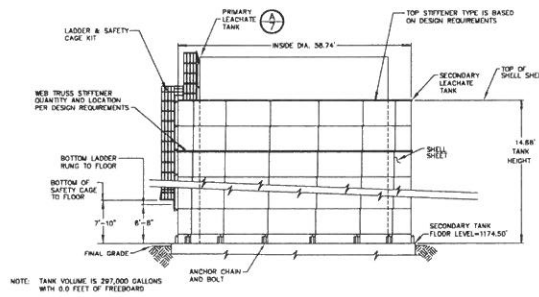
ROCK CHECK DAM (C)

NOT TO SCALE

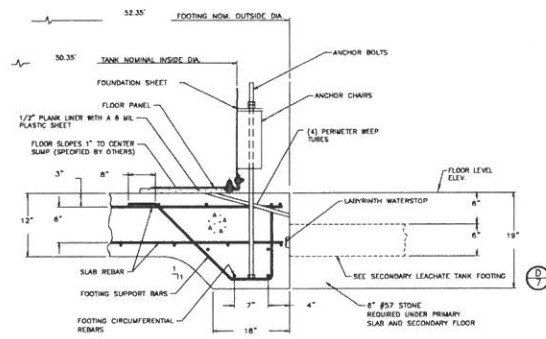
REVISION	DATE	DESCRIPTION	P.W.
Prepared By: Marshall Miller and Associates Geology, Environmental Sciences & Engineering, Geophysics			
<input type="checkbox"/> Bluefield, VA <input type="checkbox"/> Lexington, KY <input type="checkbox"/> Raleigh, NC <input type="checkbox"/> Richmond, VA <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Harrisburg, PA <input type="checkbox"/> Knoxville, TN <input type="checkbox"/> Kansas City, KS <input type="checkbox"/> Boston, MA <input type="checkbox"/> Berkeley, WV			
Marshall Miller and Associates LEAP#11 12/10 RH LEAP#11.2 - b.w.d.g. Sheet No. 6 of 12			
Sediment Control Details			
McDowell County Landfill Leachate Storage Tank Addition Prepared For: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 601 57th STREET, CHARLESTON, WV 25304			
CAD BY	RH	12/10	
CHECKED BY	CB	12/10	
APPROVED BY	CB	12/10	
			Scale as Noted



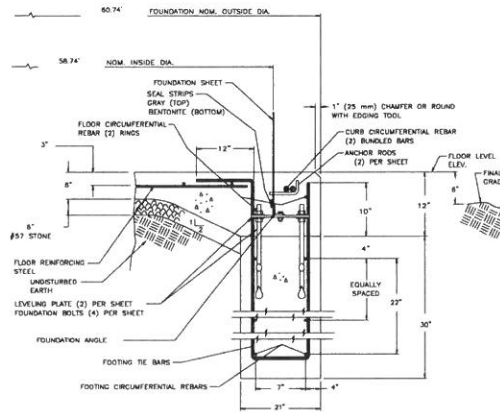
PRIMARY LEACHATE TANK WITH GLASS FLOOR (A)
NOT TO SCALE



SECONDARY LEACHATE TANK WITH CONCRETE FLOOR (B)
NOT TO SCALE



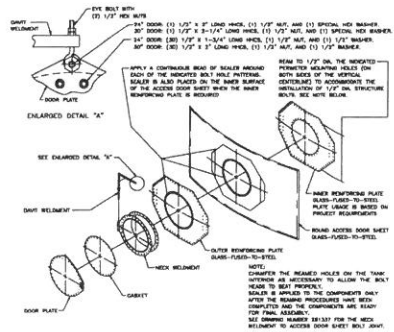
PRIMARY LEACHATE FOOTING (C)
NOT TO SCALE



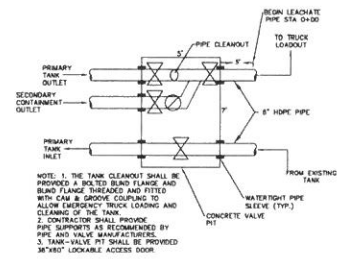
SECONDARY LEACHATE TANK FOOTING (D)
NOT TO SCALE

NOTES:
1. SEE DETAILS (C) AND (D) FOR FLOOR SUMP AND PIPE CONNECTOR.

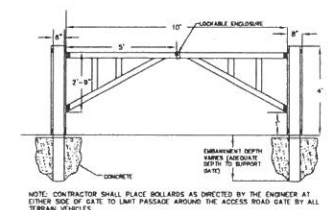
REVISION	DATE	DESCRIPTION	P.M.
Prepared By: Marshall Miller and Associates Geology, Environmental Sciences & Engineering, Geophysics			
<input type="checkbox"/> Bluefield, VA <input type="checkbox"/> Lexington, KY <input type="checkbox"/> Raleigh, NC <input type="checkbox"/> Richmond, VA <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Harrisburg, PA <input type="checkbox"/> Knoxville, TN <input type="checkbox"/> Kansas City, KS <input type="checkbox"/> Bossier City, LA <input type="checkbox"/> Blackey, WV			
LCAPI01 12/10 RH LCAPI02 2 - Swing Sheet No. 7 of 12			
Leachate Storage Details			
McDowell County Landfill Leachate Storage Facility Upgrade Prepared For: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 601 57th STREET, CHARLESTON, WV 25304			
CAD BY:	RH	12/10	Scale as Shown
CHECKED BY:	CB	12/10	
APPROVED BY:	CB	12/10	



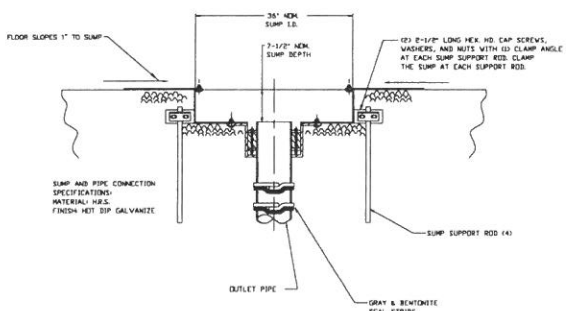
CONSTRUCTION DETAIL 24" ROUND ACCESS DOOR (WITH DAVIT) INSTALLATION (A)
NOT TO SCALE



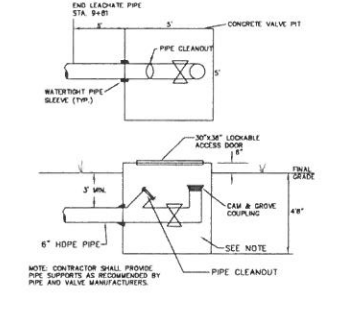
TANK OUTLET-VALVE PIT (B)
NOT TO SCALE



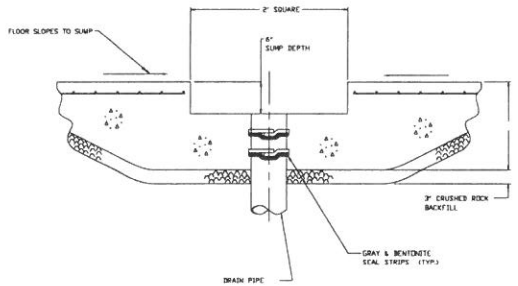
ACCESS ROAD GATE (C)
NOT TO SCALE



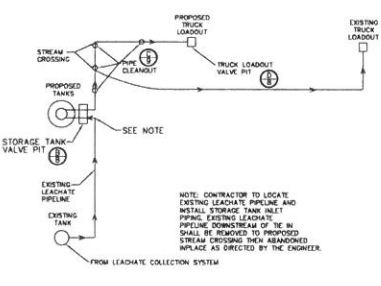
GLASS FLOOR SUMP & PIPE CONNECTOR (D)
NOT TO SCALE



TRUCK LOADOUT-VALVE PIT (E)
NOT TO SCALE

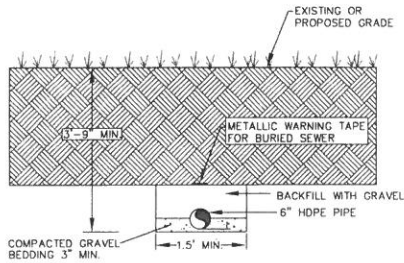


CONCRETE FLOOR SUMP & PIPE CONNECTOR (F)
NOT TO SCALE



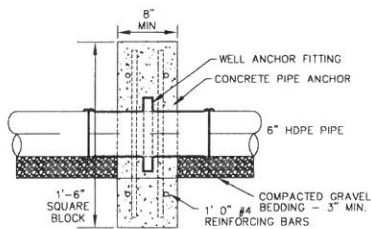
LEACHATE PIPING SCHEMATIC (G)
NOT TO SCALE

REVISION	DATE	DESCRIPTION	P.M.
Prepared By:			
Marshall Miller and Associates Geology, Environmental Science & Engineering, Geospatial			
<input type="checkbox"/> Bluefield, VA	<input type="checkbox"/> Lexington, KY	<input type="checkbox"/> Chesapeake, VA	<input type="checkbox"/> Charleston, WV
<input type="checkbox"/> Richmond, VA	<input type="checkbox"/> Charleston, WV	<input type="checkbox"/> Harrisburg, PA	<input type="checkbox"/> Knoxville, TN
<input type="checkbox"/> Kingsport, TN	<input type="checkbox"/> Kansas City, MO	<input type="checkbox"/> Roanoke City, VA	<input type="checkbox"/> Roanoke, VA
CAD BY: RH	12/10		
CHECKED BY: CB	12/10		
APPROVED BY: CB	12/10		
Sheet No. 8 of 12			
Leachate Storage & Loadout Details			
McDowell County Landfill Leachate Storage Facility Upgrade Prepared For: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 601 57th STREET, CHARLESTON, WV 25304			
Scale as Shown			



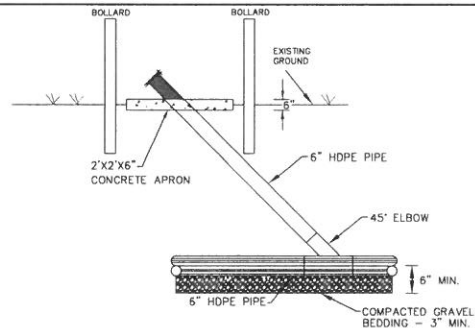
LEACHATE PIPE (A)

NOT TO SCALE



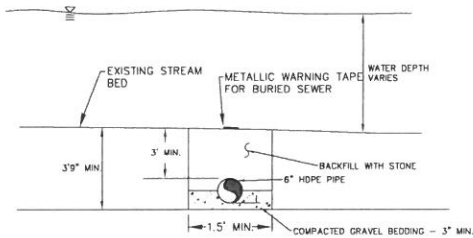
HDPE PIPE ANCHOR (B)

NOT TO SCALE



PIPE CLEANOUT (C)

NOT TO SCALE



NOTE: PIPE SHALL BE PROVIDED PIPE ANCHORS
EVER 15 FEET AS DIRECTED BY ENGINEER.

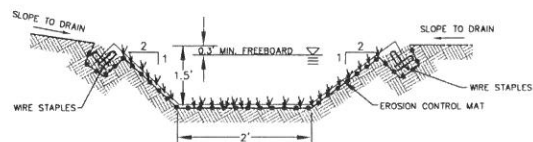
STREAM CROSSING (D)

NOT TO SCALE



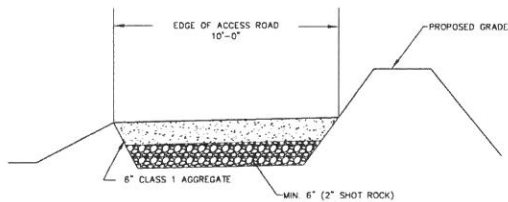
CHANNEL A (E)

NOT TO SCALE



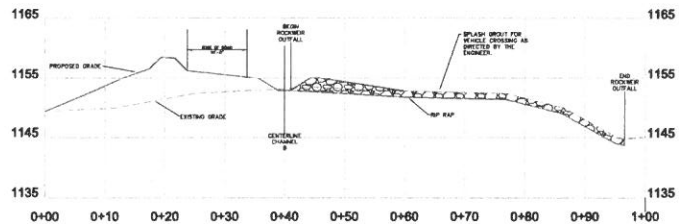
CHANNEL B (F)

NOT TO SCALE



ACCESS ROAD SURFACING (G)

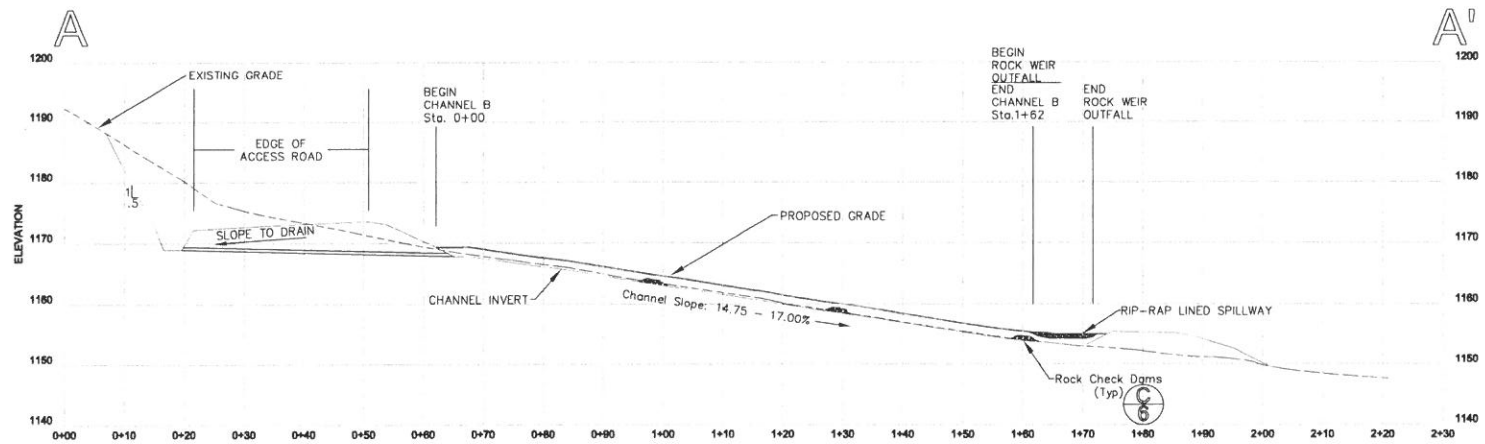
NOT TO SCALE



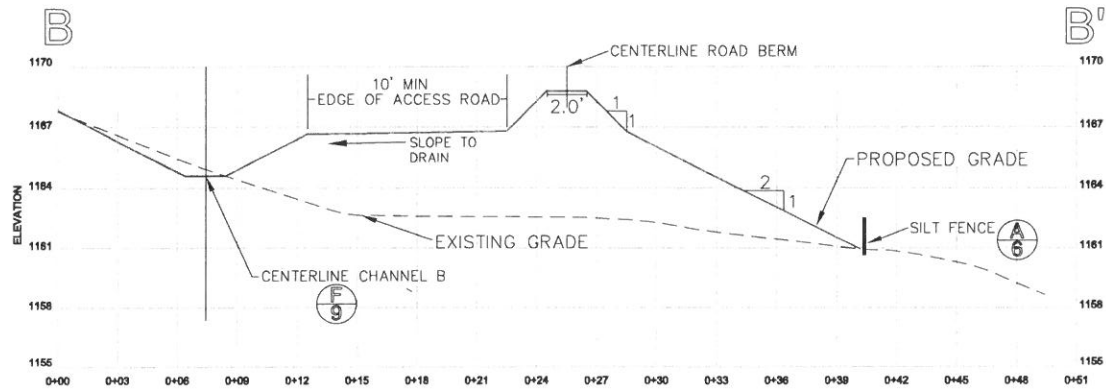
ROCK WEIR OUTFALL CROSS SECTION (H)

SCALE: 1" = 10'

REVISION	DATE	DESCRIPTION	P.M.
Prepared By: Marshall Miller and Associates Geology, Environmental Sciences & Engineering, Geophysics			
<input type="checkbox"/> Bluefield, VA <input type="checkbox"/> Lexington, KY <input type="checkbox"/> Raleigh, NC <input type="checkbox"/> Richmond, VA <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Harrisburg, PA <input type="checkbox"/> Kingsport, TN <input type="checkbox"/> Knoxville, TN <input type="checkbox"/> Roanoke, VA <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Charleston, WV <input type="checkbox"/> Charleston, WV			
LEAP(1) - 12/10 Rm			
Sheet No. 9 of 12			
Miscellaneous Details			
McDowell County Landfill Leachate Storage Facility Upgrade			
Prepared For: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION 601 57th STREET, CHARLESTON, WV 25304			
CAD BY	RH	12/10	
CHECKED BY	CB	12/10	
APPROVED BY	CB	12/10	
Scale as Noted			



Cross Section A-A'
 Scale: 1" = 10' (A)



Cross Section B-B'
 Scale: 1" = 3' (B)

REVISION	DATE	DESCRIPTION	P.M.

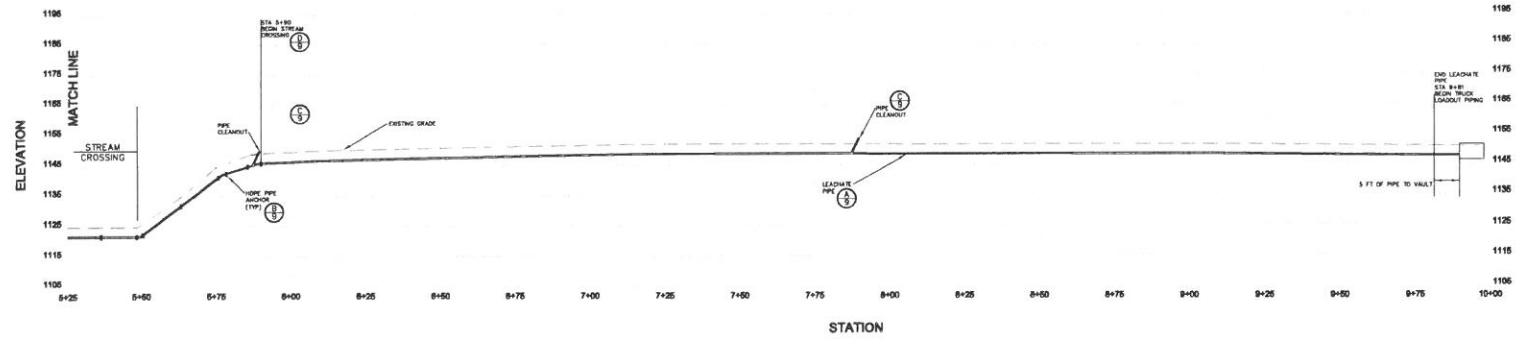
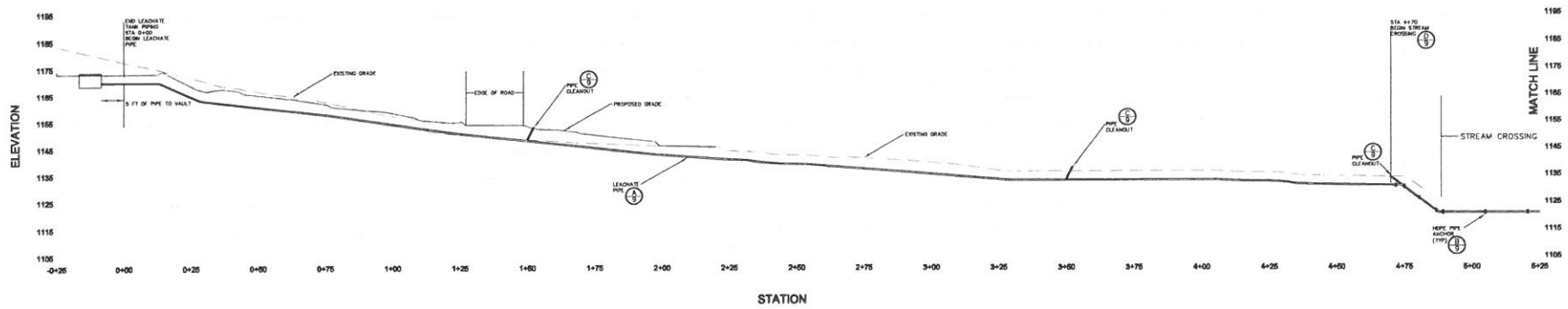
Prepared By: **Marshall Miller and Associates**
 Geology, Environmental Sciences & Engineering, San Francisco
 Bluefield, VA Lexington, KY Raleigh, NC
 Richmond, VA Charleston, WV Harrisburg, PA
 Kingsport, TN Kansas City, KS Bossier City, LA
 Beckley, WV

LEAP/MS - 12/10 RH
 LEAP/MS - br.dwg
 Sheet No. 10 of 12

Cross Sections I
 McDowell County Landfill
 Leachate Storage Facility Upgrade
 Prepared For:
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 601 57th STREET, CHARLESTON, WV 25304

CAD BY:	RH	12/10
CHECKED BY:	CB	12/10
APPROVED BY:	CB	12/10

Scale as Noted



REVISION	DATE	DESCRIPTION	P.M.

Prepared By: **Marshall Miller and Associates**
 Geology, Environmental Sciences & Engineering, Geophysics

MARSHALL MILLER & ASSOCIATES

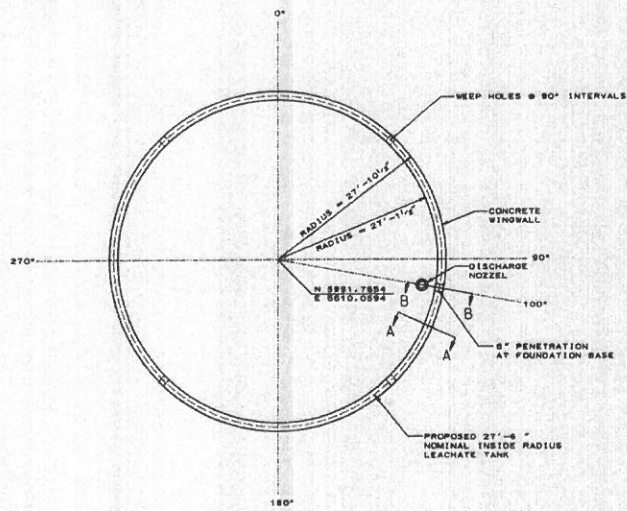
LEADPIST 12/10 RH
 LEADPIST 2 - 8x8x8

Sheet No. 12 of 12

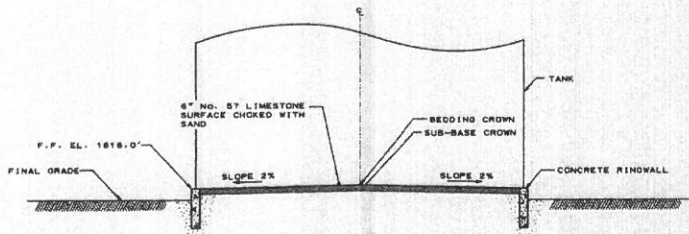
Leachate Pipe Profile
 McDowell County Landfill
 Leachate Storage Facility Upgrade
 Prepared For:
 WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 601 57th STREET, CHARLESTON, WV 25304

CAD BY: RH 12/10
 CHECKED BY: CB 12/10
 APPROVED BY: CB 12/10

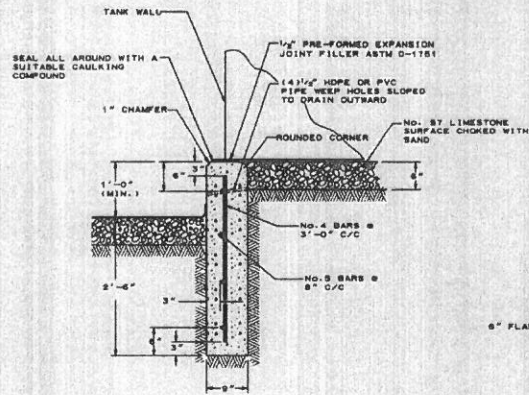
Scale in Feet
 20 0 20 40



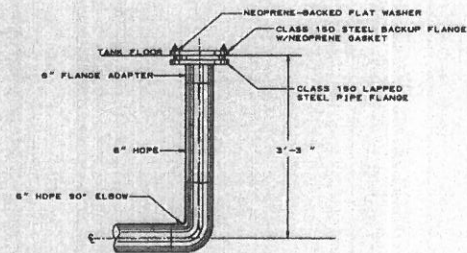
TANK FOUNDATION PLAN
SCALE: NONE



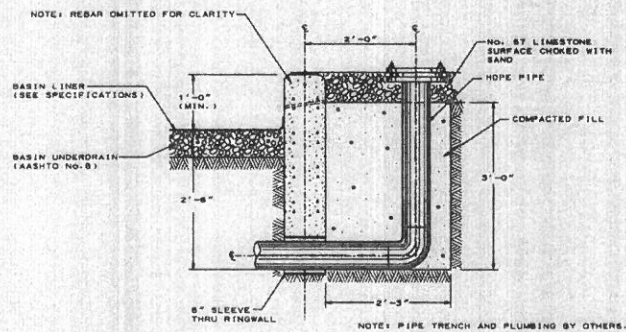
TANK FOUNDATION ELEVATION SECTION
SCALE: NONE



SECTION A-A
SCALE: NONE



DISCHARGE NOZZLE DETAIL
SCALE: 1" = 1'-0"



SECTION B-B
SCALE: NONE

GENERAL NOTES

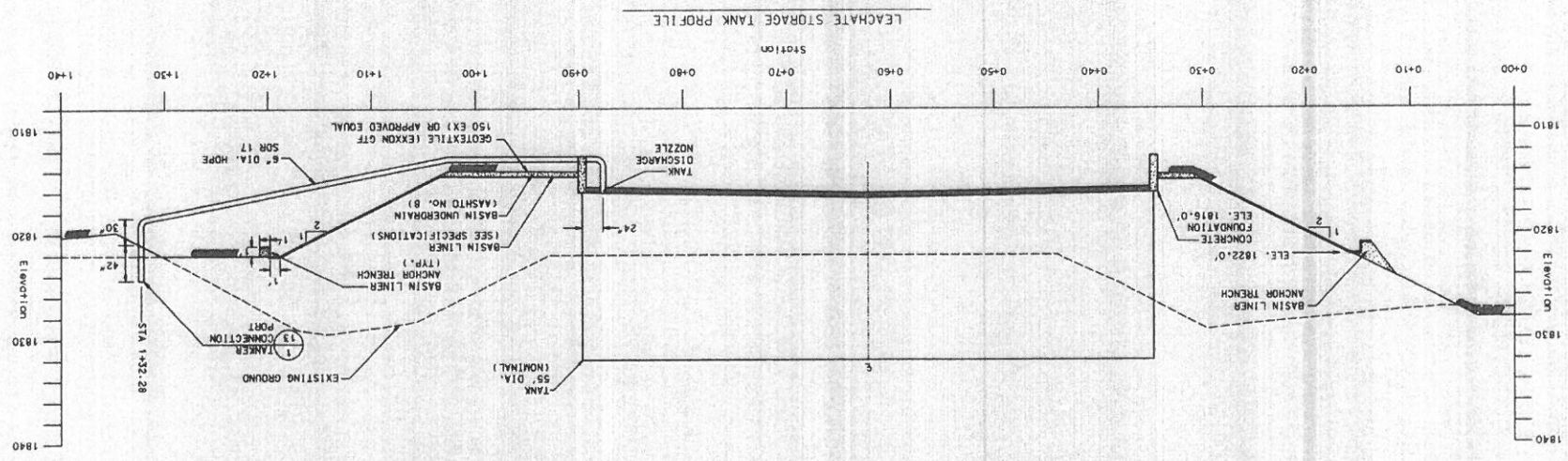
1. TOP OF FOUNDATION SHALL BE LEVEL WITHIN (+ OR -) 1/4" IN ANY 30 FT. CIRCUMFERENCE, AND NOT VARY MORE THAN (+ OR -) 1/4" FROM ESTABLISHED PLANE.
2. EXPOSED SURFACES SHALL HAVE AS-CAST FINISH WITH FINS ON THE SURFACE REMOVED AND TIE HOLES AND DEFECTS PATCHED. TOP SURFACE SHALL BE FLAT FINISHED.
3. CONCRETE SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

REV.	DATE	ITEM
CADFILE: 888/8-14.DWG		
LEACHATE TANK FOUNDATION & FOUNDATION DETAILS		
MINGO COUNTY LANDFILL MINGO COUNTY, WY		
Drawing No.	DRAWN	OLD SCALE NOTED
888/8-14	CHECKED JAN	DATE 3-1-98
TRIAD TRIAD ENGINEERING, INC. ENGINEERING & ARCHITECTURE		

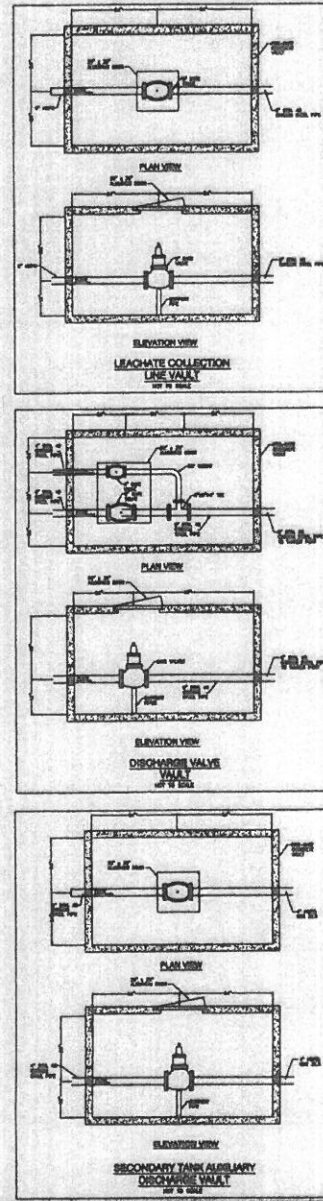
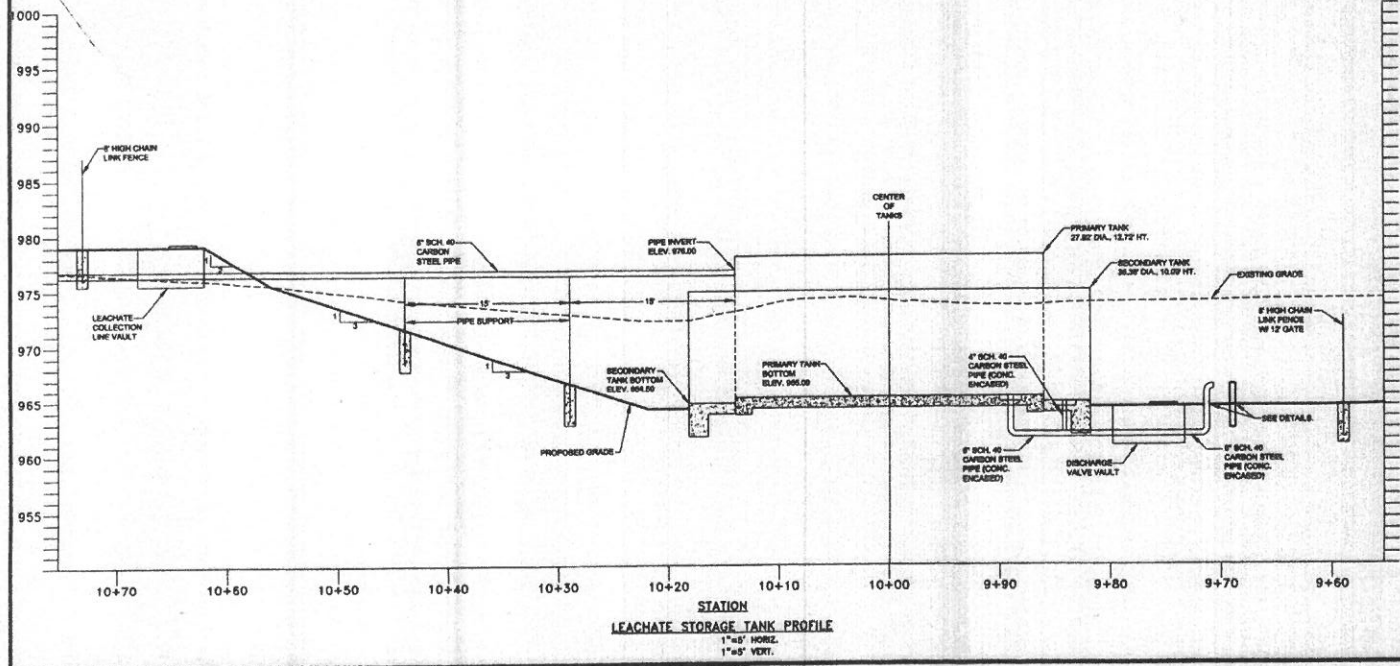
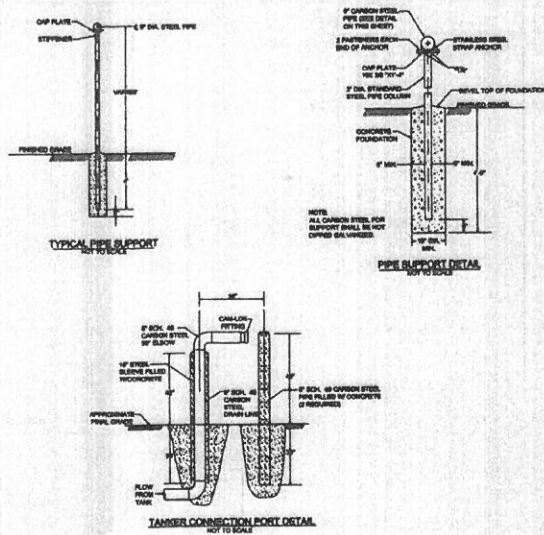
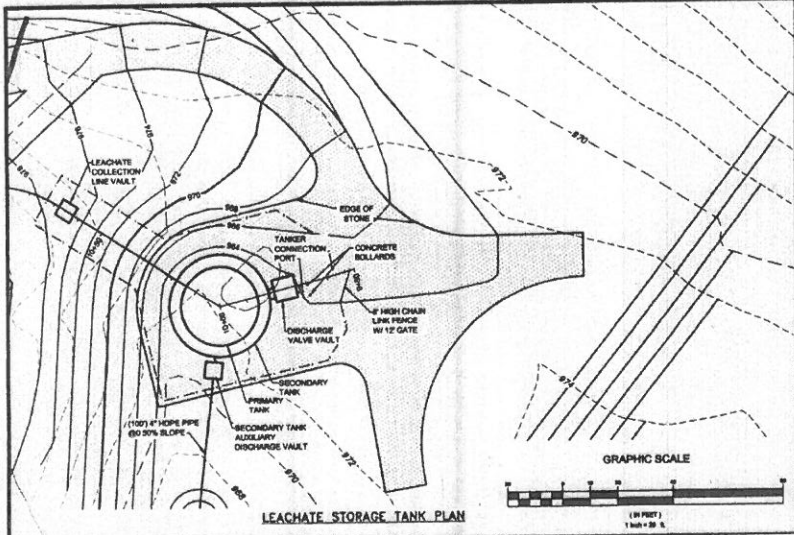
REV.	DATE	ITEM
CAD FILE: 1848-10-10		
LEACHATE STORAGE TANK PROFILE		
MINGO COUNTY LANDFILL		
DRAWING NO. 1848-10-10		
DRAWN BY	DATE	SCALE
CHECKED BY	DATE	SCALE
TRIAID ENGINEERING, INC.		

LINE	SURFACE	OFFSET
---	EXISTING	0.00
---	BASIN	0.00

SHEET 1 OF 1		
SCALE 1" = 10' HORIZ.		



LEACHATE STORAGE TANK PROFILE



TRAD ENGINEERING, INC.
 200 AVIATION DRIVE
 WINCHESTER, VA 22602
 PH: 540.887.8888 FAX: 540.887.2200
 WWW.TRADENGINEERING.COM

**MORGAN COUNTY LANDFILL
 FINAL CLOSURE PROJECT
 MORGAN COUNTY, WEST VIRGINIA
 LEACHATE STORAGE TANK
 PLAN AND DETAILS**

FRAD
 FUGRO CONSULTANTS
 www.fugro.com

SHEET NUMBER:
C-26

DATE: 08-19-2008
 SCALE: AS SHOWN
 DRAWN BY: JLM
 CHECKED BY: JLM
 DATE: 08-19-2008

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEP16419

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Company

Authorized Signature

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
 Revised 6/8/2012