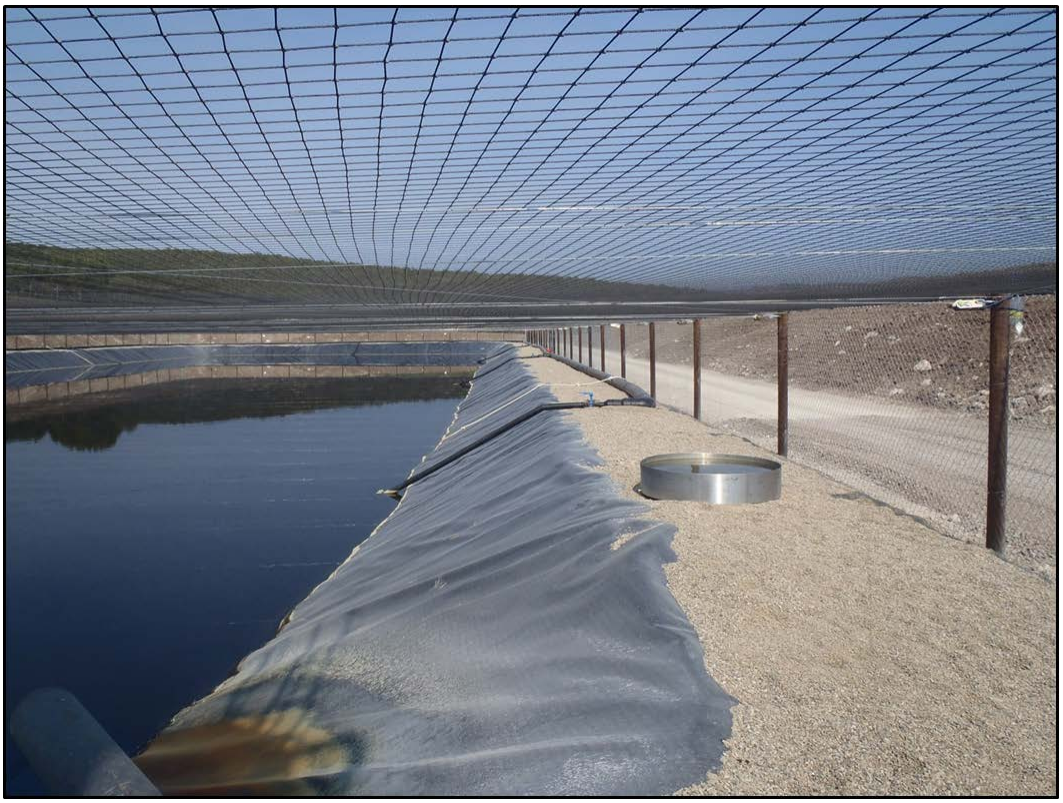
Pitchers Mound
Water Recycling Pit

Synthetic Lining Plans and Specifications



Prepared for:

WPX Energy Rocky Mountain LLC
1058 County Road 215
Parachute, Colorado 81635

Date: July 2014

Prepared By:

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Special Provisions

These plans and specifications have been compiled to comply with production, drilling and multi-well earthen pit regulations and policies of the Colorado Oil and Gas Conservation Commission (COGCC), Colorado Department of Natural Resources. Specifically included are the 900 Series Rules adopted in 2009; COGCC policy entitled "Notice to Operators Drilling Wells Within ¾ Mile of the Rim of the Roan Plateau in Garfield County, Pit Design, Construction and Monitoring Requirements", dated June 12, 2008; and COGCC email correspondence entitled "New Pit Requirements in the Piceance Basin", dated September 8, 2008. The specifications detail pit construction; and liner material, details and installation practices which are to be followed and employed by Williams Production RMT Company and their contractors. Additionally, COGCC may impose other limitations and conditions as outlined in their Conditions of Approval..

All earthen pits constructed on fill material and/or requiring the construction of embankments above pre-construction grades will require design and certification by a registered professional engineer. Documented inspections, construction observation, compaction testing and hydrostatic monitoring may be performed by the professional engineer or their designee as outlined in the specifications. Within the scope of the work, the contractor(s) shall provide a minimum of 48 hours notice to the engineers for critical construction observations, testing and inspections.

A specific earthen pit location map on a USGS base map, site survey plats, and cross sections are provided in the figures as part of the plans and specifications. Synthetic liner system specification details and drawings are also included in this plan set. A leak detection system shall be installed as specified per the drawings. Changes to the plan set may made by the professional engineer as warranted to ensure compliance with COGCC regulations and policies. Changes will be conveyed to the contractor in the form of a Notice of Change correspondence.

No work shall commence by the contractor until a Notice to Proceed has been issued by WPX Energy Rocky Mountain. LLC. The contractor shall be responsible for locating all underground utilities as prescribed by Colorado law. All work shall be conducted within the limits of disturbance, unless approved by the WPX Energy or professional engineer. Earthen pits shall be constructed within the boundary locations shown on the site survey plats and to the depths and side slopes noted, unless otherwise changed by the professional engineer. No changes to the plans and specifications will be permitted by the contractor without the approval of the professional engineer or their designee.

WPX Energy Rocky Mountain. LLC shall be responsible for providing as-built drawings, if any, including earthen pit plan and cross sections to the professional engineer. The as-built drawings and changes to the specifications shall be noted by the professional engineer as part of their certification and final construction report.

SECTION 1010 - SCOPE OF WORK

The primary work items to be performed under these plans and specifications involves the construction of earthen pits and installation of a synthetic lining systems regulated by the Colorado Oil and Gas Conservation Commission. Portions of well pad construction shall be included within this scope of work for pits influencing well pad cut and/or fill areas. Pits shall not be constructed on known intermittent or perennial springs, seeps, or other surface water features. If groundwater is encountered during pit construction activities, the contract shall immediately cease construction and notify the Owner and the professional engineer. The water source may be mitigated and/or pit relocated at the direction of the Owner and/or professional engineer.

SECTION 1300 - CONSTRUCTION SEQUENCE

The Contractor will follow the general pit construction sequence outlined. Changes to the sequences may be made by the professional engineer as warranted by field or other conditions.

1.) Stake pit boundaries and edge of disturbed area including bank above freeboard and anchor trench for liner. Ensure that the edge of all pits maintain a minimum 10 feet setback from the edge well pad boundaries or fill slopes.
2.) Excavate the pit bottom and pit slopes per the plan set. Scarify soil in bottom and sides.
3.) Excavate pit top perimeter and anchor trench per the plan set.
4.) Compact pit bottom and slopes as specified.
5.) Compact pit top perimeter and anchor trenches as specified.
6.) Install underlayment; leak detection system, if required; and liner system as specified.
7.) Backfill and compact anchor trenches as specified.

SECTION 1400 - CONSTRUCTION OBSERVATION NOTIFICATION

The project professional engineer shall provide the Owner with a list of construction observations for each pit that must be witnessed or observed by the professional engineer or their designee. These observations may include, but are not limited to;

1. Construction of fills/embankments.
2. Subgrade completion of pit excavation and liner anchor trench.
3. Placement of underlayment; leak detection system, if required; and liners.
4. Embankment/fill compaction testing by the professional engineer.

The Owner or contractor shall provide the professional engineer with a 48-hour advance notice of the construction events requiring their presence.

The Owner shall provide the professional engineer with a set of surveyed as-built pit plan view and cross sections indicating natural and post construction grades. A copy of the hydrostatic test, if applicable, shall also be provided.

SECTION 2200 - EXCAVATION / EMBANKMENT

PART I - GENERAL

DESCRIPTION OF WORK

The primary work defined by this Section will be all excavation, embankment, and earthwork associated with the project including but not limited to the production pits, reserve pits, and cuttings pits. Well pad construction shall be included in this Section for pits constructed on or in well pad cut/fill areas.

RELATED WORK SPECIFIED ELSEWHERE

Section 2260 –Synthetic Lining and Underlayment System

SITE INFORMATION

The Contractor will be held to have examined the site(s), and to have detected the conditions under which the work is to be done. The drawings show the physical dimensions and general topography of the site, but do not show the extent of all obstructions and subsurface conditions. The Contractor, at his option and without additional cost to the Owner, may take borings and other exploratory actions to determine conditions of the site and to provide for the construction specified herein.

MEASUREMENTS AND LEVELS

Verify all drawing measurements and levels in relation to existing elevations, grades and adjacent structures, and determine conditions and requirements for excavations, fill, and protection of the premises. Carefully and accurately lay out all lines and grades of the new construction as indicated on the plans before proceeding with any work.

PROTECTION

Shoring - If applicable, provide and maintain all sheeting, shoring and bracing required to retain earth banks properly, protect adjoining grades and structures from caving, sliding, erosion, or other damage, all according to applicable codes and current OSHA requirements. Remove shoring and related items as excavations are backfilled unless approval has been requested in writing and granted by the Owner to leave in place.

Drainage - Maintain excavations and construction site free from water throughout work. Drain surface water or seepage by gravity, sumps, or temporary pumps and discharge lines as necessary for this purpose, complying with the Owner's Storm Water Management Plan. Use drainage methods that will prevent softening of foundation bottoms, undercutting of footings, or other conditions detrimental to

proper construction procedures. Contractor shall keep an erosion control plan and best management practices consistent with the Owner's Storm Water Management Plan.

Utilities - Protect from damage existing utility lines and piping shown on drawings or locations of which are made known to the Contractor prior to work, and utility lines constructed during construction operations of the project. Before commencing work, the Contractor shall obtain necessary information concerning location, type, and extent of existing utilities on the site and adjacent properties. The Contractor shall contact the Utility Notification Center of Colorado at phone (800) 922-1987 and have all utilities located prior to commencing construction activities. Notify the Owner and utility company immediately in the event of damage to utility lines. The Contractor will repair damages to utilities at no additional cost to the Owner.

PART II - PRODUCTS

A. Embankment (Fill) - Embankment, shall consist of approved material acquired from excavations, hauled and placed in embankments in reasonably close conformity with the lines, grades, thicknesses and typical cross sections shown on the drawings or as established in the field by the Owner. All embankment material shall be approved by the geotechnical engineer prior to placement. When the source of the embankment material is not designated on the drawings, approval of the source will be contingent on the material having a resistance value necessary for the construction in which it is used. Only approved materials shall be used in the construction of embankments.

B. Suitable Materials for Structural Fill and Backfill - On-site soil material obtained from excavation and free of debris, roots, organic or frozen materials, and stones or rubble with a maximum dimension smaller than 12 inches and less than 25% courser than 3/4-inches are acceptable. Imported material will be nonexpansive soil, or may be pit-run or bank-run sand and gravel capable of being compacted as specified hereafter. All fill and backfill material must be approved by the geotechnical engineer before fill or backfill work is started.

C. Unsuitable Materials - Expansive materials or materials that contain debris, roots, organic or frozen materials, stone, or concrete having a maximum dimension larger than 12 inches, or materials determined by the geotechnical engineer as unsuitable for providing stable slopes, fill, backfill, foundation or subgrade material for structures or pavements. Material that is unsuitable due to excess moisture content will not be classified as unsuitable if it can be dried by manipulation, aeration, or blending with other materials satisfactorily as determined by the geotechnical engineer.

PART III - EXECUTION

A. Excavation: General - Excavation includes removal and disposition of all materials excavated, despite the nature of materials encountered. Excavations shall be finished to a smooth and uniform surface. Variation from the subgrade plane shall not be more than .25 ft. in soil nor more than .08 ft. above or .50 ft. below in rock. Excavation operations shall be conducted so that material outside the limits of construction shall not be disturbed. Prior to beginning grading operations in any area, all necessary clearing and grubbing in that area shall have been performed. Place suitable excavated materials in fill areas within the limits of work or stockpile as directed by the Owner. Report to the Owner any unsuitable materials or unforeseen obstructions encountered during excavation for proper disposition. Materials shall not be wasted without permission of the Owner.

Unless otherwise specified, rock shall be excavated to a minimum depth of 0.5 ft. below subgrade, within the limits of construction and the excavation backfilled with material designated on the drawings

or approved. When rock has been excavated greater than 0.5 ft. below subgrade, within the limits for construction, the excavation shall be backfilled within at least 0.5 ft. below subgrade with material shown on the drawings or as approved. Rock excavation shall not be considered or paid for as extra work.

B. Embankments/Fills - Construct all embankments to the lines and grades shown on the drawings. Immediately before placing fill material, scarify the entire area upon which fill is to be placed to a depth of 12-inches. Remove all frozen material, roots, debris, large stones, or other objectionable materials. Place approved excavated or imported fill material in successive horizontal layers of 8-inch loose depth for full width of cross section, bring to optimum moisture content for compaction, and compact each layer to the required density. If required compaction cannot be obtained with the existing material, the area will be over-excavated to a depth of 18 inches and filled and compacted with suitable material.

Where fills are placed on natural slopes, within the influence of water pits, as determined by the professional engineer, benches shall be cut into the native material of not less than 42 inches. Material shall be replaced in 10 inch lifts, brought to proper moisture content, (within 1 % below and 3% above) and compacted to not less than 95% of maximum dry density as determined by the professional engineer.

As determined by the professional engineer, a toe drain shall be installed along the toe of the pad slope. Toe key location shall be determined by the professional engineer at the time of construction. Drain shall be encased in free draining aggregate of at least 3 cubic feet per linear foot of drain. Aggregate and pipe shall be wrapped with pipe filter wrap. Drain pipe shall day light as directed by the professional engineer.

Constructed embankments shall be finished to a smooth and uniform surface. Variation from the subgrade plane shall not be more than 0.25 ft. Free running water shall be drained from embankment materials prior to placement. When embankments are to be constructed against existing embankment or hillsides, constructed slopes that are steeper than 4:1 shall be brought up in layers keyed and benched into the existing materials. Where embankments encroach on stream channels or lakes, the largest available rock produced by excavation operations shall be placed at the toes of slopes to protect the embankments against erosion. The professional engineer reserves the right to modify the angle of slope on embankments during the construction process.

C. Pit Bottom Soils – Pit bottom is to be entirely in cut slopes from native and undisturbed material. Pit shall be scarified to a depth of 12" below nominal bottom elevation, and shall be disked or bladed until it is free from large clasts, brought to the proper moisture content (within 1% below to 3% above optimum) and compacted to not less that 95% of maximum dry density as determined in accordance with ASTM D696 standard Proctor. If soft/yielding subgrade conditions are encountered, stabilization may be required as determined by the professional engineer.

Where pit bottoms or portions of pit bottom must be constructed on fill materials, the professional engineer shall examine and approve the fill material; provide over-excavation, benching, compaction and testing requirements; and provide construction observation as necessary.

D. Pit Slope and Bank Soils – Pit slopes and bank or perimeter areas may be constructed from approved fill materials. These materials include, but are not limited to, reworked cuttings, native cut and imported materials. Pit slopes and areas on the top of bank shall be disked or rolled with a sheep's foot or similar equipment until they are free from any protruding sharp clasts larger than 6 inches and with no clasts protruding more than 3 inches above the plane of the slope or bank. If soft/yielding subgrade conditions are encountered, stabilization may be required as determined by the professional engineer.

E. Anchor Trench Soils – An anchor trench shall be excavated as shown and the slopes of the trench shall be disked, raked and/or bladed until it is free from large clods and sharp clasts. Anchor trench

backfill material shall be disked, raked, and/or bladed until it is free from clods or clasts over 6 inches diameter, and stockpiled until needed.

F. Anchor Trench Backfill – After installation of synthetic liner system as specified in this plan set, the edge of the liner is to be anchored as shown and covered with anchor trench backfill material as noted. Backfill is to be brought to proper moisture content (within 2% above or below optimum), and compacted to not less than 95% of maximum dry density as determined in accordance with ASTM D698 – standard Proctor or as specified by the professional engineer.

G. Compaction - Perform all compaction with approved equipment well suited to location and material being compacted. Use heavy vibratory rollers for fill work and where heavy equipment is appropriate. In areas where a small amount of fill is necessary, a hand-operated compactor (whacker), will be required. Compact all site fills and embankments to 95% of standard Proctor density for all soil types unless directed otherwise by the professional engineer.

END OF SECTION

SECTION 2260 –SYNTHETIC LINING AND UNDERLAYMENT SYSTEM

PART I - GENERAL

Description of Work

This section covers the synthetic pit lining system and leak detection system, if required, and includes installation; liner and underlayment materials; anchor trench details, leak detection system; per manufacturer's installation guidelines, and warranty.

RELATED WORK SPECIFIED ELSEWHERE

Section 2200 – Excavation / Embankment

PART II - PRODUCTS

A. Polyethylene Liner – The liner material shall be a 40 and 60 mil minimum thick high density polyethylene liner, black in color, denoted as manufactured by GSE Lining Technology, Inc., or approved equal. The liner shall be manufactured from virgin resin specifically compounded for use as a hydraulic containment member.

B. Fabric Wrap – Fabric wrap shall be Mirafi NX 160 as manufactured by Tencate Geosynthetics, Inc. or approved equal.

C. Geonet – interstial water conveyance material shall be 200 mil HyperNet Geonet drain mat as manufactured by GSE Lining Technology, Inc. or approved equal.

D. Geosynthetic Clay Liner – shall be GSE Bentoliner NSL Geosynthetic Clay liner as manufactured by GSE Lining Technology, Inc., or approved equal.

E. Perforated Drain and Riser Pipe shall be 6 inch diameter PVC meeting ASTM D 3034 & D 2729, or approved equal.

F. Leak Detection Collection Rock – shall be washed rounded ¾" to 1.5 inch diameter rock.

PART III - EXECUTION

A. Layout - The lining system shall be fitted to the as-built constructed pit excavation as detailed in Section 2200 and per the manufacturer's installation guidelines referenced Appendix A of this plan set. Where practical, all liner seams shall be factory welded.

B. Geonet and Geosynthetic Clay Liner - The GCL underlayment shall be installed per the configuration shown in Figure 4. The area to be lined shall be graded evenly and be free of loose or sharp protruding material from the pit floor, slopes or top bank. The geonet or GCL underlayment shall be installed per the manufacturer's installation guidelines. The underlayment is to be laid

perpendicular to the slope of the pit with no parallel seams in the anchor trench, on top of the bank, or along the pit slope. GCL underlayment shall be overlapped at least 12 inches, heat bonded and stapled to the ground along the overlapped edges.

Underlayment seams are to have 12 inches of overlap with the sandwiched GeoNet attached with 50 lbs. plastic zip ties as per the manufacturer's guidelines referenced in Appendix A or as specified by the professional engineer. The top nonwoven layers are to be overlapped and heat bonded.

Woven fabric underlayment may be substituted with a layer of fine graded material such as drill cuttings on review and approval by the professional engineer.

C. Liners – The liners shall be installed per the manufacturer's guidelines referenced in Appendix A. The liners are to be laid perpendicular to the slope of the pit in contact with the underlayment and/or liner. If the liner is not entirely factory-seamed, field seams are to be staggered a minimum of 12 inches from underlayment or other liner seams. The contractor shall implement seaming or welding safeguards to ensure the no tears or burns affect the underlayment or adjacent liner materials. Field seams shall be observed by the professional engineer and tested per the manufacturer's guidelines.

D. Leak Detection System – install per the drawings as required by the COGCC or WPX Energy Rocky Mountain, LLC. Carefully place drain rock and pipe to prevent damage to liner system.

END OF SECTION

SECTION 2280 –HYDROSTATIC TESTING

PART I - GENERAL

Description of Work

This section covers the hydrostatic integrity testing of the pit lining system and test reporting for pits geographically delineated in the COGCC's policy entitled "Notice to Operators Drilling Wells Within ¾ Mile of the Rim of the Roan Plateau in Garfield County, Pit Design, Construction and Monitoring Requirements", dated June 12, 2008; and COGCC email correspondence entitled "New Pit Requirements in the Piceance Basin", dated September 8, 2008.

PART II - PRODUCTS

A. Fresh Water – Untreated fresh water obtained from a legal water source and approved by the professional engineer shall be utilized for the hydrostatic integrity test. Produced water may be used subject to written approval by the COGCC.

PART III - EXECUTION

A. Hydrotesting – After complete installation of the liner system and prior to starting pit operations, the pit shall be filled with at least 4 feet of fresh water, measured from the base of the pit and not to

encroach into the 2 ft. freeboard. The owner or contractor shall monitor the pit for leaks for a period of 72 hours prior to draining the pit and commencing operations. Hydrostatic testing results shall be maintained by the Owner for the life of the pit and provide to the Colorado Oil and Gas Conservation Commission upon request.

Figure 1

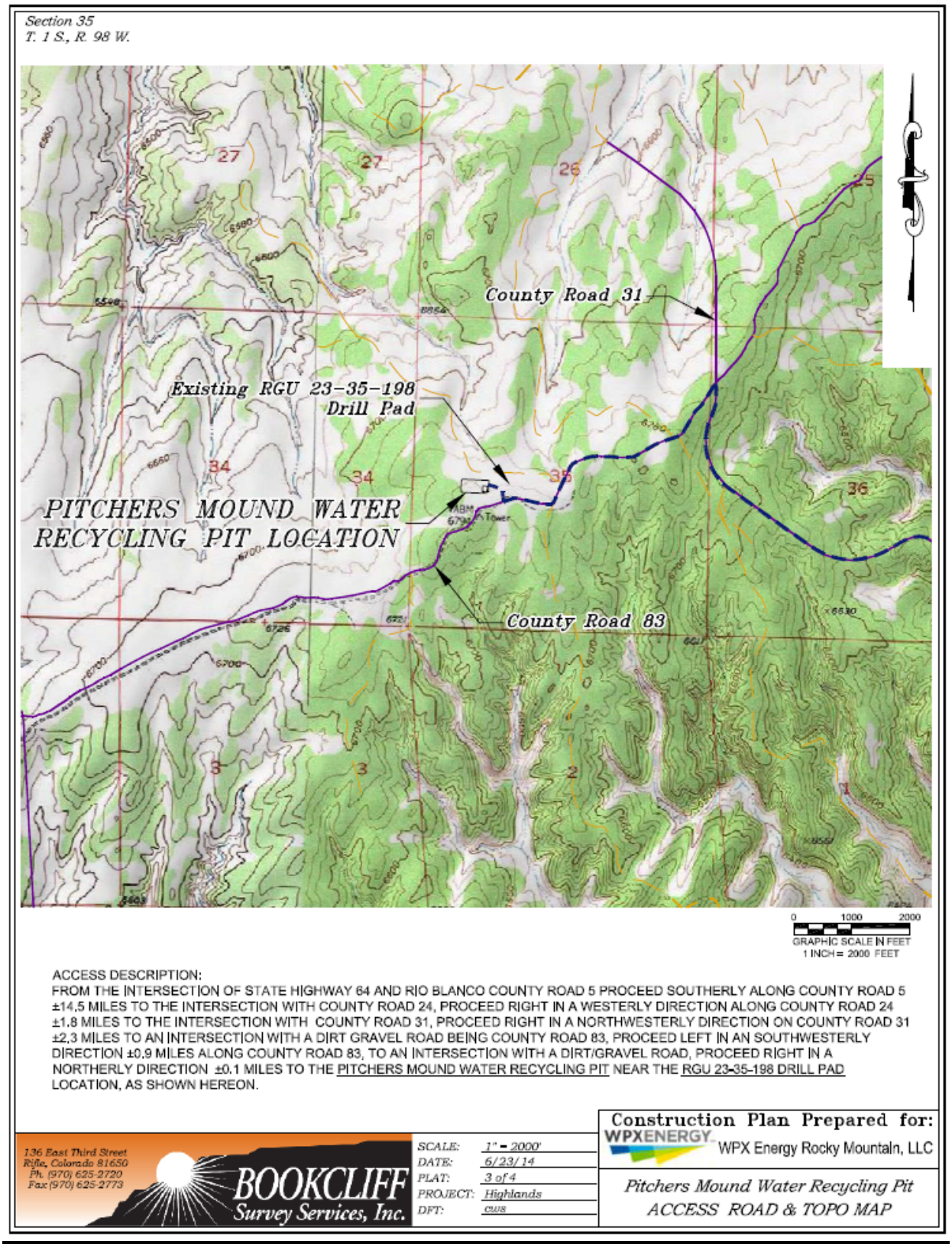
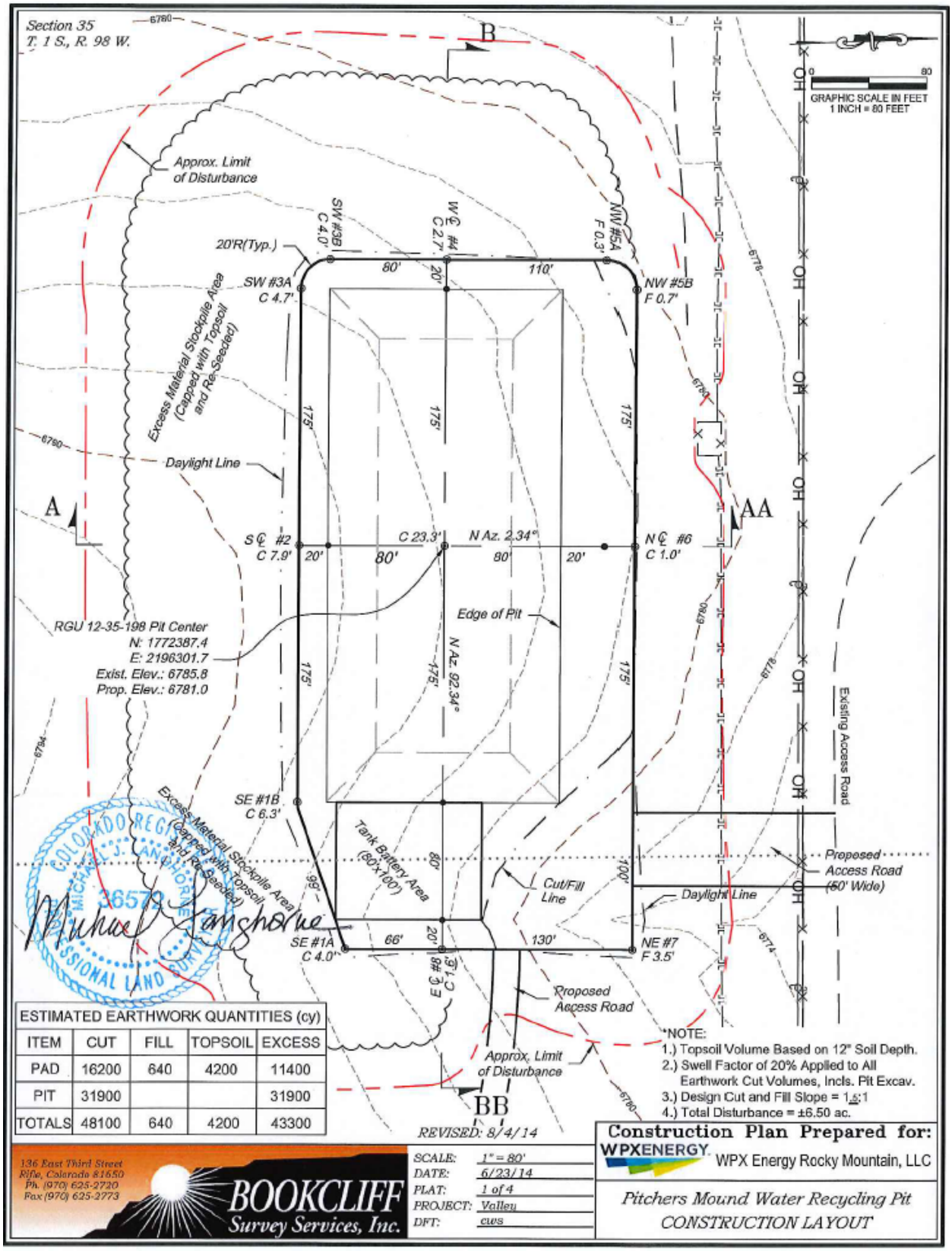

Section 35
T. 1 S., R. 98 W.
County Road 31
Existing RGU 23-35-198
Drill Pad
PITCHERS MOUND WATER
RECYCLING PIT LOCATION
County Road 83
0 1000 2000
GRAPHIC SCALE IN FEET
1 INCH = 2000 FEET
ACCESS DESCRIPTION:
FROM THE INTERSECTION OF STATE HIGHWAY 64 AND RIO BLANCO COUNTY ROAD 5 PROCEED SOUTHERLY ALONG COUNTY ROAD 5 ±14.5 MILES TO THE INTERSECTION WITH COUNTY ROAD 24, PROCEED RIGHT IN A WESTERLY DIRECTION ALONG COUNTY ROAD 24 ±1.8 MILES TO THE INTERSECTION WITH COUNTY ROAD 31, PROCEED RIGHT IN A NORTHWESTERLY DIRECTION ON COUNTY ROAD 31 ±2.3 MILES TO AN INTERSECTION WITH A DIRT GRAVEL ROAD BEING COUNTY ROAD 83, PROCEED LEFT IN AN SOUTHWESTERLY DIRECTION ±0.9 MILES ALONG COUNTY ROAD 83, TO AN INTERSECTION WITH A DIRT/GRAVEL ROAD, PROCEED RIGHT IN A NORTHERLY DIRECTION ±0.1 MILES TO THE PITCHERS MOUND WATER RECYCLING PIT NEAR THE RGU 23-35-198 DRILL PAD LOCATION, AS SHOWN HEREON.
136 East Third Street
Rifle, Colorado 81650
Ph. (970) 625-2720
Fax (970) 625-2773
BOOKCLIFF Survey Services, Inc.
SCALE: 1" = 2000'
DATE: 6/23/14
PLAT: 3 of 4
PROJECT: Highlands
DFT: cws
Construction Plan Prepared for:
WPXENERGY
WPX Energy Rocky Mountain, LLC
Pitchers Mound Water Recycling Pit
ACCESS ROAD & TOPO MAP

Figure 2



ESTIMATED EARTHWORK QUANTITIES (cy)				
ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	16200	640	4200	11400
PIT	31900			31900
TOTALS	48100	640	4200	43300

Figure 3

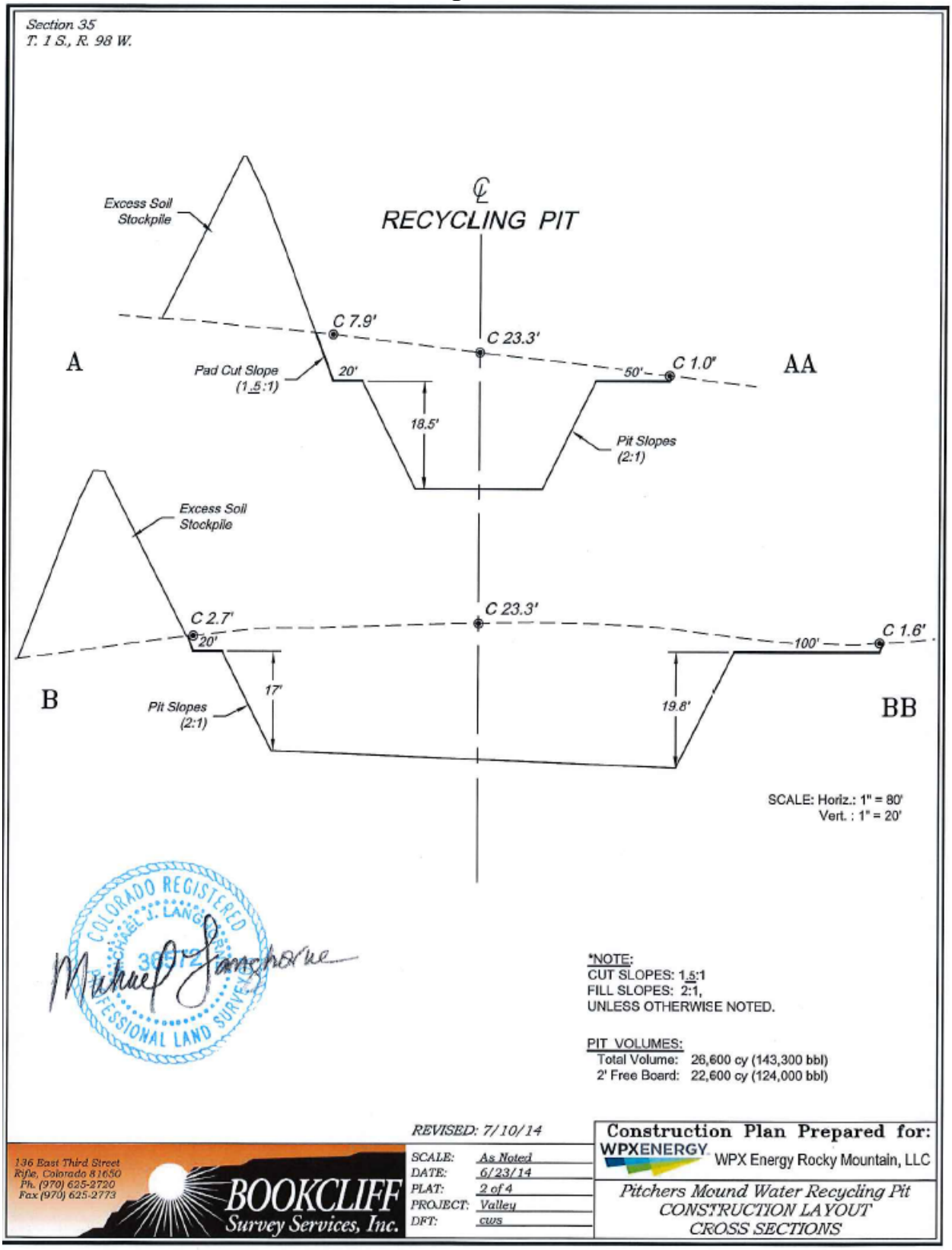

Section 35
T. 1 S., R. 98 W.
℄
RECYCLING PIT
Excess Soil Stockpile
C 7.9'
C 23.3'
C 1.0'
A
AA
Pad Cut Slope (1.5:1)
20'
50'
18.5'
Pit Slopes (2:1)
Excess Soil Stockpile
C 2.7'
C 23.3'
C 1.6'
20'
100'
B
BB
17'
19.8'
Pit Slopes (2:1)
SCALE: Horiz.: 1" = 80'
Vert. : 1" = 20'
COLORADO REGISTERED
MICHAEL J. LANGHORNE
38512
PROFESSIONAL LAND SURVEYOR
*NOTE:
CUT SLOPES: 1.5:1
FILL SLOPES: 2:1,
UNLESS OTHERWISE NOTED.
PIT VOLUMES:
Total Volume: 26,600 cy (143,300 bbl)
2' Free Board: 22,600 cy (124,000 bbl)
REVISED: 7/10/14
136 East Third Street
Rifle, Colorado 81650
Ph. (970) 625-2720
Fax (970) 625-2773
BOOKCLIFF
Survey Services, Inc.
SCALE: As Noted
DATE: 6/23/14
PLAT: 2 of 4
PROJECT: Valley
DFT: cws
Construction Plan Prepared for:
WPXENERGY
WPX Energy Rocky Mountain, LLC
Pitchers Mound Water Recycling Pit
CONSTRUCTION LAYOUT
CROSS SECTIONS

Figure 4

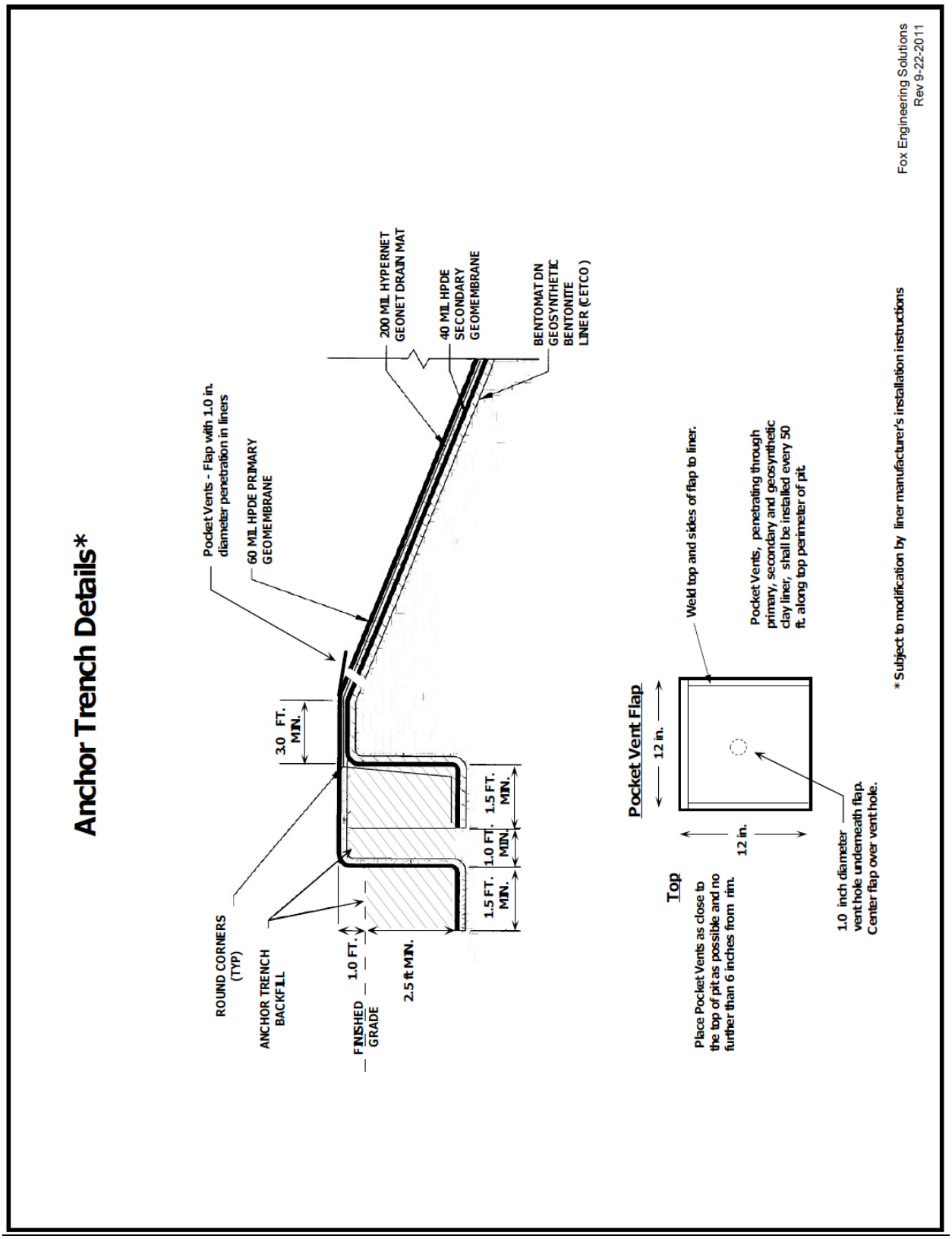

Anchor Trench Details*
Pocket Vents - Flap with 1.0 in. diameter penetration in liners
60 MIL HPDE PRIMARY GEOMEMBRANE
200 MIL HYPERNET GEONET DRAIN MAT
40 MIL HPDE SECONDARY GEOMEMBRANE
BENTOMAT DN GEOSYNTHETIC BENTONITE LINER (CETCO)
3.0 FT. MIN.
1.5 FT. MIN.
1.0 FT. MIN.
1.5 FT. MIN.
ROUND CORNERS (TYP)
ANCHOR TRENCH BACKFILL
1.0 FT.
FINISHED GRADE
2.5 ft MIN.
Pocket Vent Flap
12 in.
12 in.
Top
Weld top and sides of flap to liner.
Pocket Vents, penetrating through primary, secondary and geosynthetic clay liner, shall be installed every 50 ft. along top perimeter of pit.
Place Pocket Vents as close to the top of pit as possible and no further than 6 inches from rim.
1.0 inch diameter vent hole underneath flap. Center flap over vent hole.
* Subject to modification by liner manufacturer's installation instructions
Fox Engineering Solutions
Rev 9-22-2011

Figure 5

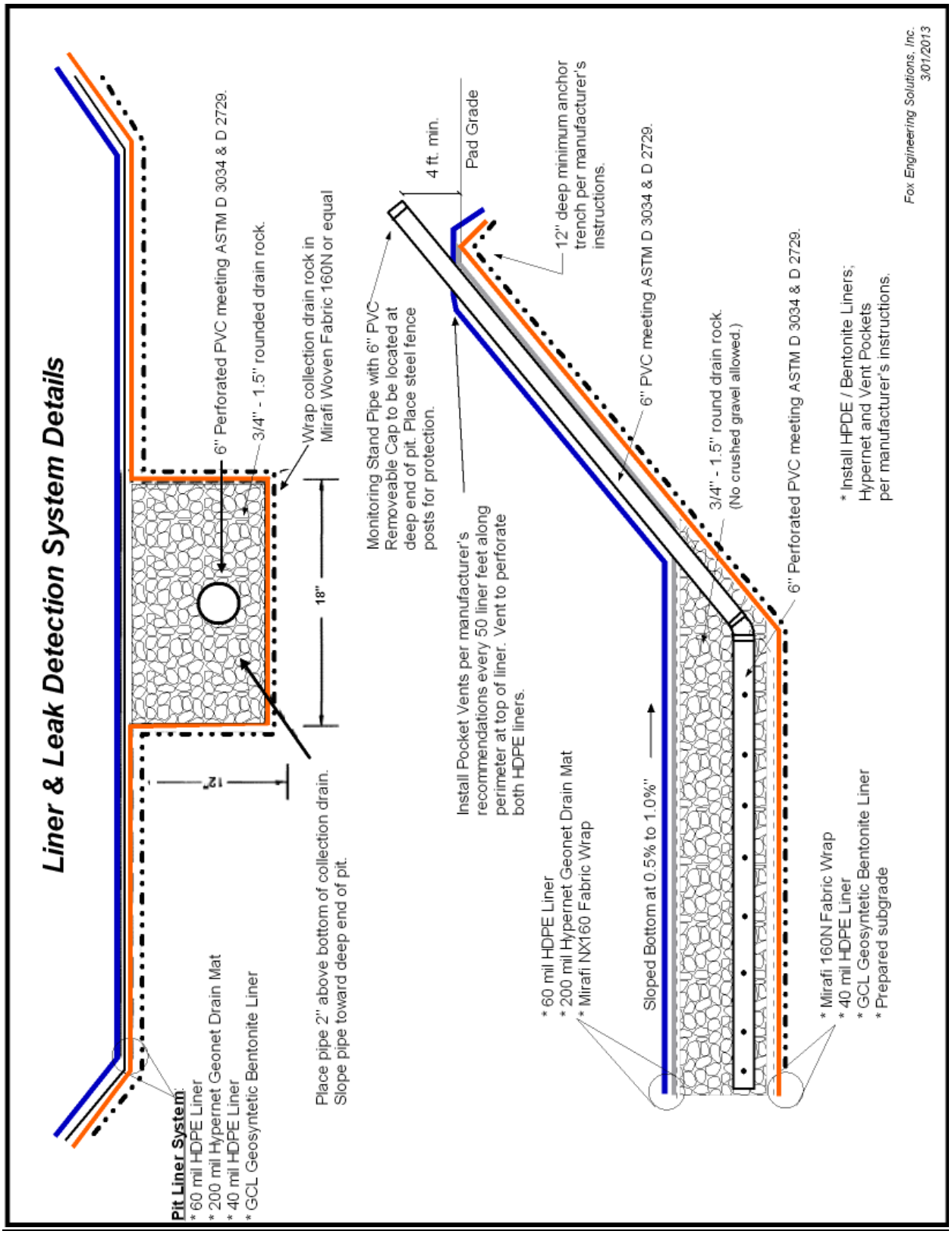

Liner & Leak Detection System Details
Pit Liner System:
* 60 mil HDPE Liner
* 200 mil Hypernet Geonet Drain Mat
* 40 mil HDPE Liner
* GCL Geosyntetic Bentonite Liner
6" Perforated PVC meeting ASTM D 3034 & D 2729.
3/4" - 1.5" rounded drain rock.
Wrap collection drain rock in Mirafi Woven Fabric 160N or equal
18"
Place pipe 2" above bottom of collection drain. Slope pipe toward deep end of pit.
Monitoring Stand Pipe with 6" PVC Removeable Cap to be located at deep end of pit. Place steel fence posts for protection.
4 ft. min.
Pad Grade
Install Pocket Vents per manufacturer's recommendations every 50 liner feet along perimeter at top of liner. Vent to perforate both HDPE liners.
12" deep minimum anchor trench per manufacturer's instructions.
6" PVC meeting ASTM D 3034 & D 2729.
3/4" - 1.5" round drain rock. (No crushed gravel allowed.)
6" Perforated PVC meeting ASTM D 3034 & D 2729.
* Install HPDE / Bentonite Liners; Hypernet and Vent Pockets per manufacturer's instructions.
* 60 mil HDPE Liner
* 200 mil Hypernet Geonet Drain Mat
* Mirafi NX160 Fabric Wrap
Sloped Bottom at 0.5% to 1.0%"
* Mirafi 160N Fabric Wrap
* 40 mil HDPE Liner
* GCL Geosyntetic Bentonite Liner
* Prepared subgrade
Fox Engineering Solutions, Inc.
3/01/2013

Exhibit A



Installation

GSE

Installation Quality Assurance Manual
Geomembrane Products

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GSE

Installation Quality Assurance Manual
GSE BentoLiner GCL Products

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GSE

Installation Quality Assurance Manual
Geonet & Geocomposite Products

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Appendix B: Certificate of Acceptance Form....4

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