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west virginia department of environmental protection

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Division of Water and Waste Management  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: (304) 926-0495  
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Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

**CONSENT ORDER  
ISSUED UNDER THE  
WATER POLLUTION CONTROL ACT  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 11**

TO: XTO Energy Inc.  
Christopher W. Armstrong  
810 Houston Street  
Fort Worth, TX 76102-6298

DATE: October 22, 2012

ORDER NO.: 7588

**INTRODUCTION**

This Consent Order is issued by the Director of the Division of Water and Waste Management (hereinafter "Director"), under the authority of West Virginia Code, Chapter 22, Article 11, Section 1 et seq. to XTO Energy Inc. (hereinafter "XTO").

**FINDINGS OF FACT**

In support of this Order, the Director hereby finds the following:

1. XTO is an onshore oil and natural gas company operating within West Virginia and other States.
2. Mountain Gathering, LLC (hereinafter "Mountain Gathering") is a subsidiary of XTO and provided site development services for XTO in the Bingamon and Four States areas of Marion County, West Virginia by constructing and installing pipeline.
3. In the Autumn of 2010, XTO and/or Mountain Gathering operated a horizontal boring machine for directional drilling in the Bingamon area of Marion County, West Virginia to facilitate the placement and installation of pipeline without ground surface disturbance. Bentonite slurry (i.e. drilling mud) is pumped under pressure into the horizontal bore hole to stabilize the sides and provide lubrication for a string of pipe to be pulled through.
4. On October 5, 2010, West Virginia Department of Environmental Protection (WVDEP) personnel identified a site along County Route 11 in Marion County, West Virginia. During the investigation, the following violations were observed and documented:

Promoting a healthy environment.

- a. Drilling mud associated with a horizontal boring machine operated by XTO and/or Mountain Gathering entered into Little Bingamon Creek, a tributary of Bingamon Creek, which is in turn a tributary of the West Fork River. The release occurred on or about October 1, 2010, and the drilling mud continued to remain in place, settling onto the streambed and creating a thick grey to white sludge. Causing conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.
  - b. XTO and/or Mountain Gathering were diverting stream flow around the spill area with straw bales in an effort to minimize impact.
  - c. XTO and/or Mountain Gathering failed to provide immediate notification to the WVDEP Office of Water Resources' Emergency Notification Number, a violation of WV Legislative Rule 47CSR11 Section 2.2.a.  
As a result of the aforementioned violation, Notice of Violation (NOV) No. NW-BCS-100510-002 was issued to XTO.
  - d. XTO and/or Mountain Gathering failed to immediately take any and all measures necessary to mitigate the spill, a violation of WV Legislative Rule 47CSR11 Section 2.5.a.  
As a result of the aforementioned violation, NOV No. NW-BCS-100510-003 was issued to XTO.
  - e. XTO and/or Mountain Gathering created a vehicular crossing point across Little Bingamon Creek near the McClelland Compressor Station, causing a distinctly visible brown plume and sludge deposits. Specifically, the stream crossings were not adequately protected to prevent, discourage or minimize the contribution of soil, solids and other detritus into the receiving stream. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.  
As a result of the aforementioned violation, NOV No. NW-BCS-100510-001 was issued to XTO.
5. On October 29, 2010, by correspondence to WVDEP, XTO requested an extension for submittal of an action plan as required by NOV No. NW-BCS-100510-001. The extension was granted.
  6. On November 10, 2010, WVDEP personnel conducted a follow-up inspection of XTO construction and operation activities associated with gas development along and near Little Bingamon Creek, Marion County, West Virginia and documented the following violations:
    - a. Most of the bentonite drilling mud had been removed from Little Bingamon Creek. However, a small volume remained or had re-emerged and accumulated in the receiving stream. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.  
As a result of the aforementioned violation, NOV No. NW-BCS-111010-002 was issued to XTO.
    - b. The vehicular crossing point across Little Bingamon Creek continued to create a distinctly visible brown plume and sludge deposits in Little Bingamon Creek. Causing conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.

As a result of the aforementioned violation, NOV No. NW-BCS-111010-001 was issued to XTO.

- c. Erosion control structures, including straw bales and silt fence, placed in Little Bingamon Creek acted as a dam and prevented the natural, unimpeded flow of the stream channel, causing the stream to back-up. The resulting slack water encouraged the growth of algae, resulting in siltation and sedimentation in the receiving stream, and facilitating the accumulation of sludge on the bottom of the stream. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.
  - d. Construction activities continued without adequate erosion and control structures.
7. On March 31, 2011, WVDEP personnel responded to a complaint of muddy water, excessive blasting and dam construction caused by XTO construction activities near Four States community in Marion County, West Virginia. During the investigation, the following violations were observed and documented:
- a. XTO was constructing a freshwater impoundment and compressor station pad at the Coastal Compressor Station site.
  - b. Earth moving activities necessary to construct a freshwater impoundment exposed numerous seeps, which became muddy from construction activities, thereby introducing sediment and a distinctly visible brown plume into waters of the State, a violation of WV Legislative Rule 47CSR2 Section 3.  
As a result of the aforementioned violation, NOV No. NW-BCS-033111-001 was issued to XTO.
  - c. XTO conducted a hydrostatic test of newly constructed pipeline without a valid WV/NPDES permit, a violation of WV State Code 22-11-8.  
As a result of the aforementioned violation, NOV No. NW-BCS-033111-002 was issued to XTO.
8. On January 4, 2012, WVDEP personnel investigated pipeline construction activity near the Four States community in Marion County, West Virginia. During the investigation, the following violations were observed and documented:
- a. XTO was constructing a connecting pipeline for the Brennan pad.
  - b. Minimal erosion and sediment control Best Management Practices (BMPs) were in place to prevent flow of sediment into two privately owned ponds and East Run.
  - c. A large accumulation of sediment was observed in the privately-owned pond directly downstream from an XTO culvert stream crossing an unnamed tributary of East Run.
  - d. Erosion rills were observed on the southern hillside adjacent to the unnamed tributary crossing.
9. On January 12, 2012, WVDEP personnel investigated pipeline construction activity near the Four States community in Marion County, West Virginia and documented the following violations:

- a. A distinctly visible brown plume and an unknown petroleum-based product were being introduced into East Run from drainage associated with the pipeline construction activity. Causing conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.  
As a result of the aforementioned violation, NOV No. NW-JME-011212-002 was issued to XTO.
  - b. XTO personnel had not called the WVDEP Office of Water Resources' Emergency Notification Number to report the incident prior to WVDEP personnel arriving on-site, a violation of WV Legislative Rule 47CSR11 Section 2.2.a.  
As a result of the aforementioned violation, NOV No. NW-JME-011212-001 was issued to XTO.
10. On January 23, 2012, WVDEP investigated the proposed Coastal Compressor Station and Impoundment near the Four States community in Marion County, West Virginia and documented the following violations:
- a. Sediment and erosion control BMPs were incorrectly installed and/or maintained.
  - b. Significant erosion scouring had occurred in both of the major diversions around the sides of the proposed impoundment area.
  - c. A sediment trap receiving waters from the diversion around the left side of the proposed impoundment when facing upstream had not been maintained and was observed spilling turbid waters into a delineated wetland area surrounding an unnamed tributary of Tevebaugh Creek. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.
  - d. A stable outfall had not been maintained below a culvert pipe below the road leading up to the proposed impoundment, resulting in erosion gullies and sediment deposits in an unnamed tributary of Tevebaugh Creek. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.
11. On January 23, 2012, WVDEP also investigated pipeline construction activity near the Four States community in Marion County, West Virginia and documented the following violations:
- a. A distinctly visible brown plume of muddy water was observed being introduced into East Run due to construction activities on-site. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.  
As a result of the aforementioned violation, NOV No. W-NW-JGT-012312-001 was issued to XTO.
  - b. Booms and sorbent pads resulting from the remediation effort following the petroleum-based spill incident on January 12, 2012 were installed. Site housekeeping was unsatisfactory, as contaminated sorbent pads had not been removed and/or replaced.
  - c. Sediment and a distinctly visible brown plume were being introduced to an unnamed tributary of East Run from an XTO culvert stream crossing. Creating conditions not allowable in waters of the State is a violation of WV Legislative Rule 47CSR2 Section 3.

- d. Erosion and sediment control BMPs installed on the downstream side of the XTO culvert crossing were installed incorrectly and/or improperly maintained. No erosion and sediment control BMPs were observed on the upstream side of the XTO culvert crossing.
12. On May 29, 2012, WVDEP and XTO representatives met to discuss the terms of this Order.
13. On October 17, 2012, WVDEP personnel received correspondence from a representative of XTO which discussed the terms and conditions of this Order.

### **ORDER FOR COMPLIANCE**

Now, therefore, in accordance with Chapter 22, Article 11, Section 1 et seq. of the West Virginia Code, it is hereby agreed between the parties, and ORDERED by the Director:

1. XTO shall immediately take all measures to initiate compliance with all pertinent laws and rules.
2. Within thirty (30) days of the effective date of this Order, XTO shall submit two (2) copies of a detailed, accurate, and appropriately scaled diagram or map prepared and approved by a West Virginia Registered Professional Engineer with the following details:
  - a. Locations of all drill mud releases (frac outs) since the time that the pipeline installation project began, regardless of whether the releases entered into State waters.
  - b. Locations of all existing and reasonably anticipated future pipelines, including all known major political districts, highways, major topographical or geological features, streams and property boundaries.
  - c. Locations of all previous and current boring sites as well as reasonably anticipated future boring sites.
3. Within thirty (30) days of the effective date of this Order, XTO shall submit for approval a proposed plan of corrective action and schedule, outlining action items and completion dates for how and when XTO will achieve compliance with all pertinent laws and rules. The plan of corrective action shall include, but not be limited to, provisions XTO will make to prevent the release of drilling mud and sediment from current and future construction projects related to pipelines, compressor stations, natural gas treatment/processing plants, and crude oil pumping stations, in accordance with WV Legislative Rule 47CSR2 Section 3. The plan of corrective action shall be submitted to:

**Environmental Inspector Supervisor  
NW Environmental Regional Office  
2031 Pleasant Valley Road  
Fairmont, WV 26554**

A copy of this plan shall be submitted to:

**Chief Inspector  
Environmental Enforcement - Mail Code #031328  
WVDEP  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304**

Upon approval, the plan of corrective action and schedule shall be incorporated into and become part of this Order, as if fully set forth herein. Failure to submit an approvable plan of corrective action and schedule or failure to adhere to the approved schedule is a violation of this Order.

4. XTO agrees it will secure all appropriate permits from local, state and federal authorities prior to initiation of all future construction activities.
5. Upon availability, XTO shall obtain the General WV Water Pollution Control Permit for Stormwater associated with Oil and Gas Related Construction Activities (State permit) in the future prior to commencing land disturbance associated with construction activity related to pipelines, compressor stations, natural gas treatment/processing plants, and crude oil pumping stations which are not permitted by WVDEP's Office of Oil and Gas for erosion and sediment control. Prior to the availability of the State permit, XTO shall obtain a WV/NPDES permit for Stormwater associated with Construction Activities in the future prior to commencing land disturbance associated with construction activity related to pipelines, compressor stations, natural gas treatment/processing plants, and crude oil pumping stations which are not permitted by WVDEP's Office of Oil & Gas for erosion and sediment control.
6. Consistent with applicable legal requirements, the permit, or terms and conditions of this Order, construction activities, including grubbing operations, shall not begin until either the applicable WV/NPDES permit or the pending WV permit for construction associated with Oil and Gas related activity has been secured and recognized as valid under the terms and conditions of the WVDEP permitting authority.
7. Because of XTO's WV Legislative Rule and WV State Code violations, XTO shall be assessed a civil administrative penalty of fifty-four thousand one hundred thirty dollars (\$54,130) to be paid to the West Virginia Department of Environmental Protection for deposit in the Water Quality Management Fund within thirty (30) days of entry of this Order. Payments made pursuant to this paragraph are not tax-deductible for purposes of State or federal law. **Payment shall be mailed to:**

**Chief Inspector  
Environmental Enforcement - Mail Code #031328  
WV-DEP  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304**

### **OTHER PROVISIONS**

1. XTO hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 11, Section 21 of the Code of West Virginia. Under this Order, XTO agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, XTO does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding XTO other than proceedings, administrative or civil, to enforce this Order.
2. The Director reserves the right to take further action if compliance with the terms and conditions of this Order does not adequately address the violations noted herein and reserves all rights and defenses which he may have pursuant to any legal authority, as well as the right to raise, as a basis for supporting such legal authority or defenses, facts other than those contained in the Findings of Fact.
3. If any event occurs which causes delay in the achievement of the requirements of this Order, XTO shall have the burden of proving that the delay was caused by circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after XTO becomes aware of such a delay, notification shall be provided to the Director/Chief Inspector and shall, within ten (10) working days of initial notification, submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which XTO intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of XTO (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.
4. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving XTO of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject XTO to additional penalties and injunctive relief in accordance with the applicable law.
5. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
6. This Order is binding on XTO, its successors and assigns.

7. This Order shall terminate upon XTO's notification of full compliance with the "Order for Compliance" and verification of this notification by WVDEP.

KS Rose  
XTO Energy

11/9/12  
Date

Public Notice begin: \_\_\_\_\_  
Date

Public Notice end: \_\_\_\_\_  
Date

RECEIVED

NOV 13 2012

ENVIRONMENTAL  
ENFORCEMENT

\_\_\_\_\_  
Scott G. Mandirola, Director  
Division of Water and Waste Management

\_\_\_\_\_  
Date

# Base Penalty Calculation

(pursuant to 47CSR1-6.1)

Responsible Party:

XTO Energy

Receiving Stream:

Treatment System Design Maximum Flow:   MGD

Treatment System Actual Average Flow:   MGD (if known)

Enter FOF# and rate each finding as to Potential and Extent.

1)	Potential for Harm Factor	Factor Range	FOF#												
			4a	4c	4d	4e	6a	6b	6c	7b	7c	9a	9b	10c	10d
a)	Amount of Pollutant Released	1 to 3	2	1	1	2	2	2	2	2	1	2	1	2	2
b)	Toxicity of Pollutant	0 to 3	1	0	1	1	1	1	1	1	0	1	0	1	1
c)	Sensitivity of the Environment	0 to 3	1	0	1	1	1	1	1	1	0	1	0	1	1
d)	Length of Time	1 to 3	1	3	3	1	1	1	1	1	1	1	1	1	1
e)	Actual Exposure and Effects thereon	0 to 3	2	0	1	2	2	2	2	2	0	2	0	2	2
<b>Average Potential for Harm Factor</b>			1.4	0.8	1.4	1.4	1.4	1.4	1.4	1.4	0.4	1.4	0.4	1.4	1.4
2)	<b>Extent of Deviation Factor</b>	<b>Factor Range</b>													
	Degree of Non-Compliance	1 to 3	3	3	3	2	2	2	3	3	3	3	3	3	3

**Potential for Harm Factors:**

- 1)c - Sensitivity of the Environment Potentially Affected (0 for "dead" stream)
- 1)d - Length of Time of Violation
- 1)e - Actual Human/Environmental Exposure and Resulting Effects thereon

**Examples/Guidance:**

**Note:** Rate as 1 for Minor, 2 for Moderate and 3 for Major. Rate as 0 if it does not apply.

**Minor** = exceedance of permit limit by <=40% for Avg. Monthly or <=100% for Daily Max., exceed numeric WQ standard by <= 100%, or report doesn't contain some minor information.

**Moderate** = exceedance of permit limit by >= 41% and <= 300% for Avg. Monthly , >= 101% and <= 600% for Daily Max., exceed numeric WQ standard by >= 101% and <= of 600% or report doesn't fully address intended subject matter.

**Major** = exceedance of permit limit by >= 301% for Avg. Monthly, >= 601% for Daily Max., exceed numeric WQ standard by >= 601%, failure to submit a report, failure to obtain a permit, failure to report a spill, etc. Note that a facility in SNC should be rated as major for length of time and degree of non-compliance.

Narrative WQ standard violations - case-by-case.



		Extent of Deviation from Requirement		
		Major	Moderate	Minor
Potential for Harm to Human Health or the Environment	Major	\$8,000 to \$10,000	\$6,000 to \$8,000	\$5,000 to \$6,000
	Moderate	\$4,000 to \$5,000	\$3,000 to \$4,000	\$2,000 to \$3,000
	Minor	\$1,500 to \$2,000	\$1,000 to \$1,500	Up to \$1,000

FOF #	Potential for Harm	Extent of Deviation	Penalty	Multiple Factor	Base Penalty
4a	Moderate	Major	\$4,400	1	\$4,400
4c	Minor	Major	\$1,900	1	\$1,900
4d	Moderate	Major	\$4,400	1	\$4,400
4e	Moderate	Moderate	\$3,400	1	\$3,400
6a	Moderate	Moderate	\$3,400	1	\$3,400
6b	Moderate	Moderate	\$3,400	1	\$3,400
6c	Moderate	Major	\$4,400	1	\$4,400
7b	Moderate	Major	\$4,400	1	\$4,400
7c	Minor	Major	\$1,700	1	\$1,700
9a	Moderate	Major	\$4,400	1	\$4,400
9b	Minor	Major	\$1,700	1	\$1,700
10c	Moderate	Major	\$4,400	1	\$4,400
10d	Moderate	Major	\$4,400	1	\$4,400
11a	Moderate	Major	\$4,400	1	\$4,400
11c	Moderate	Moderate	\$3,400	1	\$3,400
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
<b>Total Base Penalty</b>					<b>\$54,100</b>

## Penalty Adjustment Factors

(pursuant to 47CSR1-6.2)

### Penalty Adjustment Factor

6.2.b.1 - Degree of or absence of willfulness and/or negligence - 0% to 30% increase

6.2.b.4 - Previous compliance/noncompliance history - 0% to 100% increase - based upon review of last three (3) years - Warning = maximum of 5% each, N.O.V. = maximum of 10% each, previous Order = maximum of 25% each - Consistent DMR violations for <1 year = 10% maximum, for >1 year but <2 years = 20% maximum, for >2 years but <3 years = 30% maximum, for >3 years = 40 % maximum

6.2.b.6 - Economic benefits derived by the responsible party (increase to be determined)

6.2.b.7 - Public Interest (increase to be determined)

6.2.b.8 - Loss of enjoyment of the environment (increase to be determined)

6.2.b.9 - Staff investigative costs (increase to be determined)

6.2.b.10 - Other factors

**Size of Violator: 0 - 50% decrease**

**NOTE:** This factor is not available to discharges that are causing a water quality violation. This factor does not apply to a commercial or industrial facility that employees or is part of a corporation that employees more than 100 individuals.

Avg. Daily WW Discharge Flow (gpd)	% Reduction Factor
< 5,000	50
5,000 to 9,999	40
10,000 to 19,999	30
20,000 to 29,999	20
30,000 to 39,999	10
40,000 to 99,999	5
> 100,000	0

**Additional Other factors to be determined for increases or decreases on a case-by-case basis.**

Public Notice Costs (cost for newspaper advertisement)

6.2.b.2 - Good Faith - 10% decrease to 10% increase

6.2.b.3 - Cooperation with the Secretary - 0% to 10% decrease

6.2.b.5 - Ability to pay a civil penalty - 0% to 100% decrease

## Base Penalty Adjustments

(pursuant to 47CSR1-6.2)

Penalty Adjustment Factor	% Increase	% Decrease	Base Penalty Adjustments
6.2.b.1 - Willfulness and/or negligence -	10		\$5,410
6.2.b.4 - Compliance/noncompliance history			\$0
6.2.b.6 - Economic benefits - (flat monetary increase)			\$0
6.2.b.7 - Public Interest - (flat monetary increase)			\$0
6.2.b.8 - Loss of enjoyment - (flat monetary increase)			\$0
6.2.b.9 - Investigative costs - (flat monetary increase)			\$0
6.2.b.10 - Other factors (size of violator)			\$0
6.2.b.10 - Additional Other Factors - Increase (flat monetary increase)			\$0
6.2.b.10 - Additional Other Factors - Decrease (flat monetary decrease)			\$0
Public Notice Costs (flat monetary increase)	\$30		\$30
6.2.b.2 - Good Faith - Increase			\$0
6.2.b.2 - Good Faith - Decrease			\$0
6.2.b.3 - Cooperation with the Secretary		10	(\$5,410)
6.2.b.5 - Ability to Pay			\$0
<b>Penalty Adjustments</b>			<b>\$30</b>
<b>Penalty =</b>			<b>\$54,130</b>

Estimated Economic Benefit Item	Estimated Benefit (\$)
Monitoring & Reporting	
Installation & Maintenance of Pollution Control Equipment	
O&M expenses and cost of equipment/materials needed for compliance	
Permit Application or Modification	
Competitive Advantage	
<b>Estimated Economic Benefit</b>	<b>\$0</b>
<b>Comments:</b>	



*Photo 1. Distinctly visible plume of unknown petroleum-based product introduced into State Waters from pipeline construction activity on East Run in the vicinity of Four States. Spill was not reported as of site visit on 1/12/12.*



*Photo 2. Large amount of sediment in private pond connected to East Run introduced from XTO culvert stream crossing on 1/12/12.*



*Photo 3. Poorly-maintained erosion and sediment control BMPs along access road associated with pipeline construction activity on East Run on 1/12/12.*



*Photo 4. Poorly-maintained and/or incorrectly-installed erosion and sediment control BMP with unknown petroleum-based product escaping containment on 1/12/12.*



*Photo 5. Distinctly visible brown plume and sediment from private pond introduced to East Run from pipeline construction activity on 1/23/12.*



*Photo 6. Erosion and sediment control BMPs were not observed on upstream side of culvert stream crossing associated with pipeline construction activity on East Run on 1/23/12.*



*Photo 7. Hay bales and wattles improperly used as an in-stream erosion and sediment control BMP in an unnamed tributary of Tevebaugh Creek on 1/23/12.*



*Photo 8. Distinctly visible brown plume and sediment leaving drainage pipe from proposed Coastal impoundment introduced into an unnamed tributary of Tevebaugh Creek on 1/23/12.*