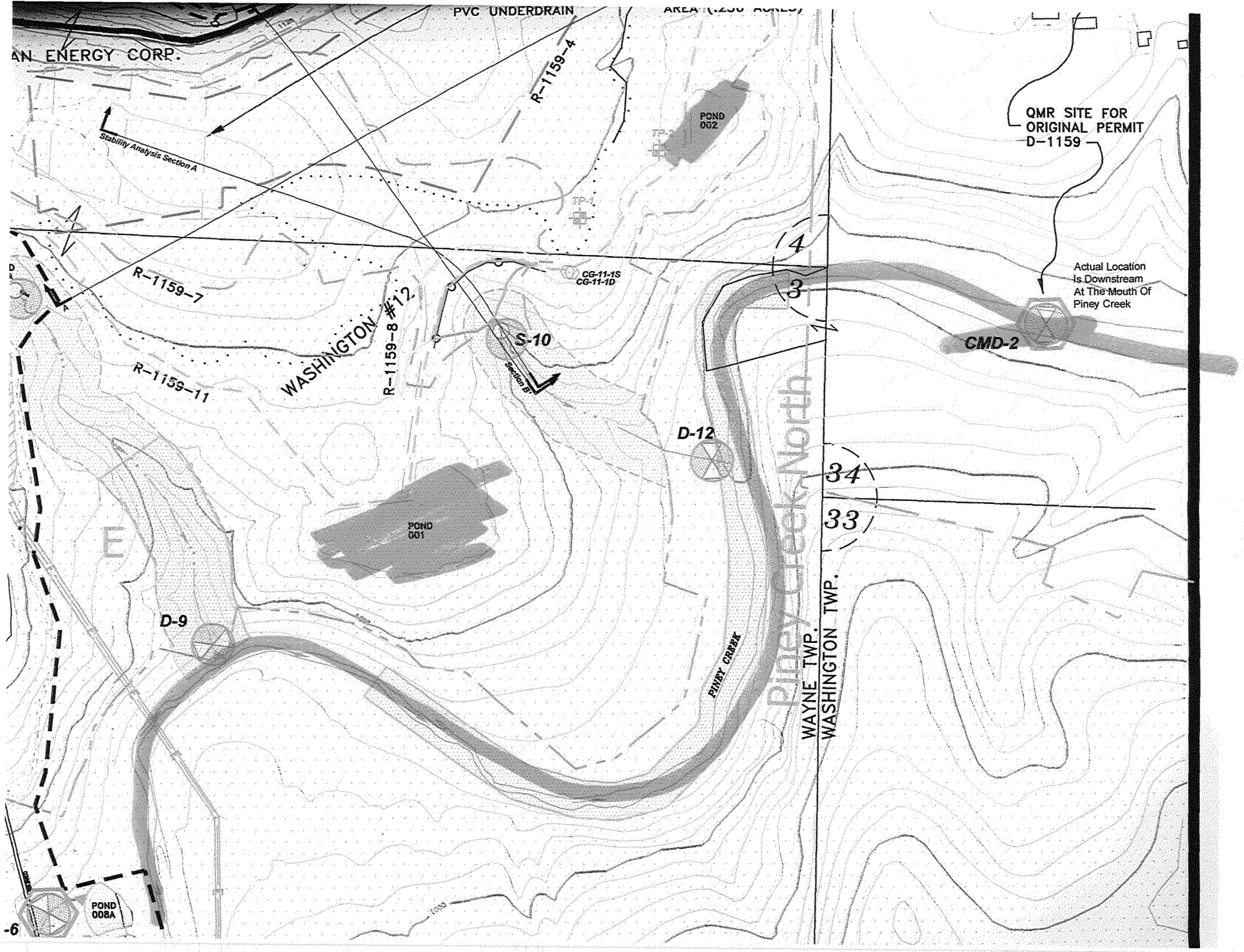
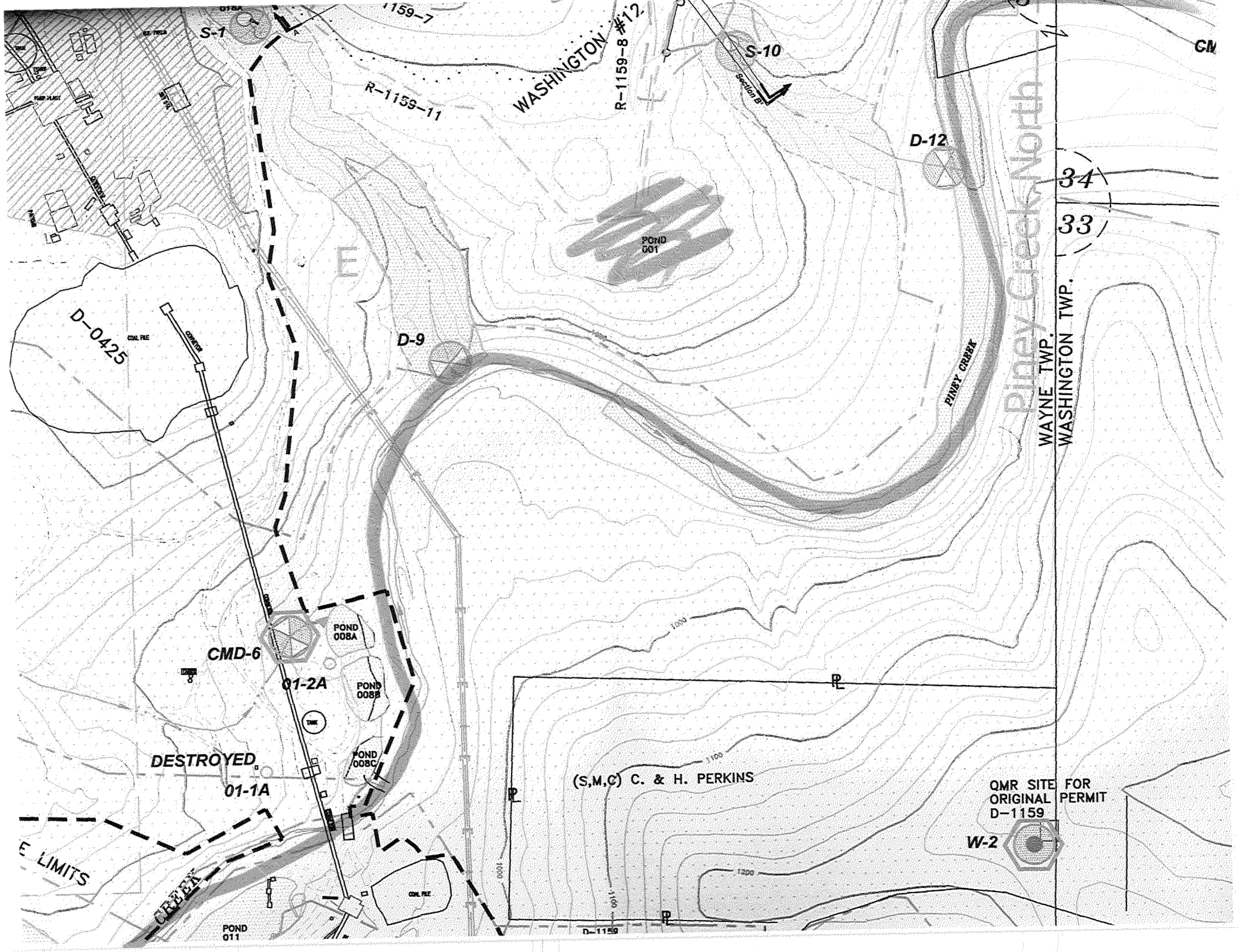
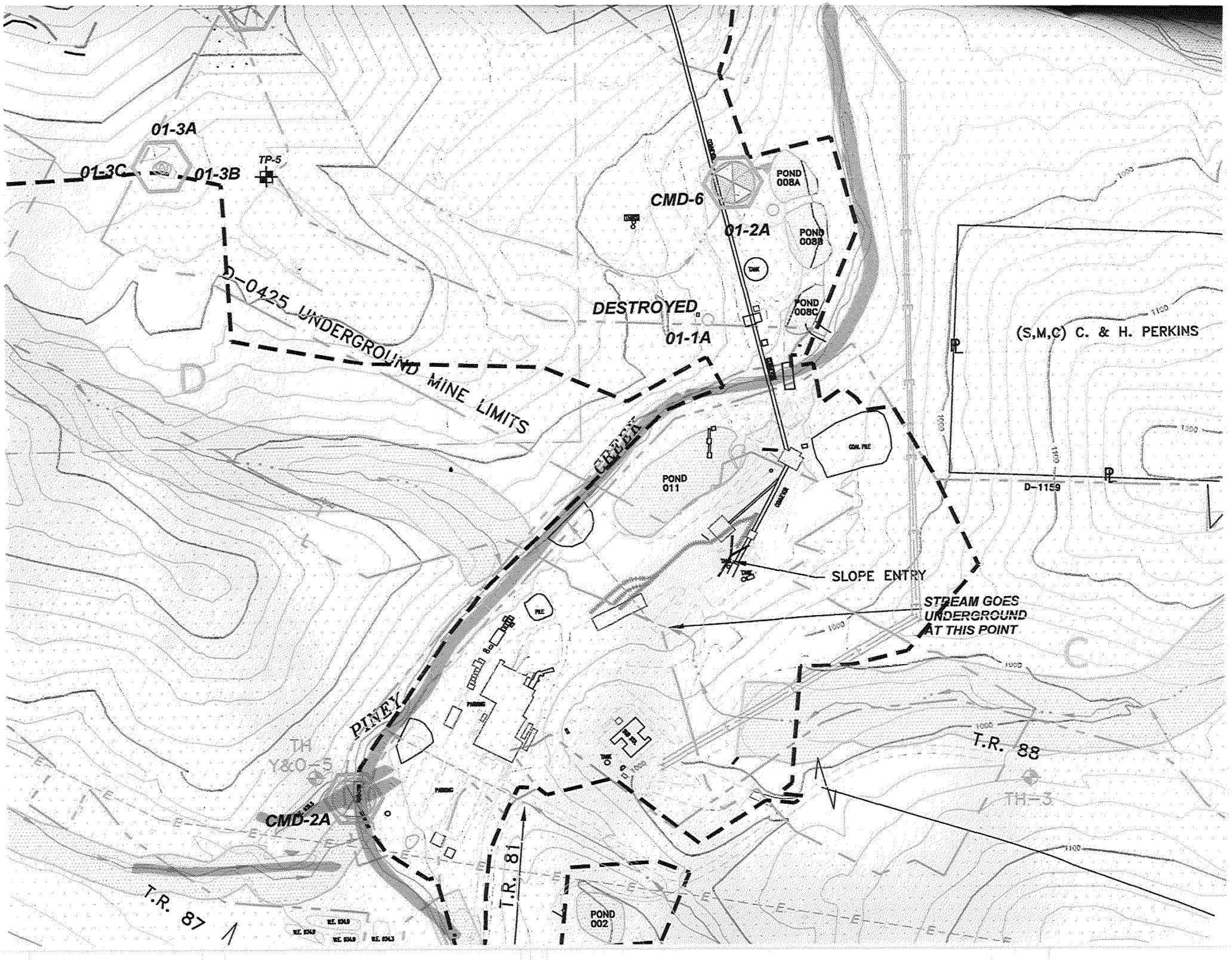


EPA-R5-2014-006572F0000392



EPA-R5-2014-006572F0000392



EPA-R5-2014-006572F0000392

EPA-R5-2014-006572F0000392

BUFFER ZONE (100')

DEDICATED CONSERVATION EASEMENT AREAS A,B,C

TP-# TEST PITS (18 January 2012)

TP-# TEST PITS

RECEIVED
JAN 22 2013
Division of Mineral Resources Management

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee: American Energy Corporation Permit Number: D-0425

____ 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., X 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMD-1	CMD-2	CMD-2A	CMD-6		
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----	----		
Static Water Level of Well Below Land Surface (feet)	----	----	----	----		
Stream or Spring Discharge (cfs or gpm)	2.86 cfs	12.9 cfs	0.53 cfs	0.041 cfs		
Date Measured	11/30/12	11/30/12	11/30/12	11/30/12		
pH (Standard Units)	8.35[H]	8.31[H]	8.30[H]	8.00[H]		
Total Acidity (mg/L $CaCO_3$)	ND	ND	ND	13.0		
Total Alkalinity (mg/L $CaCO_3$)	181	139	179	497		
Total Iron (mg/L)	0.046	0.057	0.083	0.170		
Total Manganese (mg/L)	0.004	0.014	0.199	0.505		
Total Suspended Solids (mg/L)	ND	ND	ND	35.0		
Total Hardness (mg/L $CaCO_3$)	226	203	142	963		
Total Sulfates (mg/L)	596	77.1	71.2	5120		
Specific Conductance (at 25°C in µmhos/cm)	1720	486	503	11,500		

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits
[ND] Not Detected at PQL or MDL

Permittee's Signature: Michael Kelley Date: 1-14-13

Laboratory Name: TraDet Laboratories, Inc.

Analyst's Signature: [illegible] Date: January 8, 2013

COLUMBUS

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

RECEIVED
JAN 16 2013
DIVISION OF MINERAL RESOURCES

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee: American Energy Corporation Permit Number: D-0425

____ 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., X 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMD-1	CMD-2	CMD-2A	CMD-6		
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----	----		
Static Water Level of Well Below Land Surface (feet)	----	----	----	----		
Stream or Spring Discharge (cfs or gpm)	2.86 cfs	12.9 cfs	0.53 cfs	0.041 cfs		
Date Measured	11/30/12	11/30/12	11/30/12	11/30/12		
pH (Standard Units)	8.35[H]	8.31[H]	8.30[H]	8.00[H]		
Total Acidity (mg/L $CaCO_3$)	ND	ND	ND	13.0		
Total Alkalinity (mg/L $CaCO_3$)	181	139	179	497		
Total Iron (mg/L)	0.046	0.057	0.083	0.170		
Total Manganese (mg/L)	0.004	0.014	0.199	0.505		
Total Suspended Solids (mg/L)	ND	ND	ND	35.0		
Total Hardness (mg/L $CaCO_3$)	226	203	142	963		
Total Sulfates (mg/L)	596	77.1	71.2	5120		
Specific Conductance (at 25°C in µmhos/cm)	1720	486	503	11,500		

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits
[ND] Not Detected at PQL or MDL

Permittee's Signature: Michael Kelley Date: 1-14-13

Laboratory Name: TraDet Laboratories, Inc.

Analyst's Signature: [illegible] Date: January 8, 2013

RECEIVED
MAY 01 2013
Division of Mineral Resources Management

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

RECEIVED
APR 17 2013
DIVISION OF MINERAL RESOURCES
CAMBRIDGE

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee: American Energy Corporation Permit Number: D-0425

X 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., ____ 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMD-1	CMD-2	CMD-2A	CMD-6		
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----	----		
Static Water Level of Well Below Land Surface (feet)	----	----	----	----		
Stream or Spring Discharge (cfs or gpm)	67.36 cfs	8.77 cfs	2.25 cfs	100 gpm		
Date Measured	03/20/13	03/15/13	03/15/13	03/15/13		
pH (Standard Units)	8.23[H]	8.07[H]	8.08[H]	8.15[H]		
Total Acidity (mg/L $CaCO_3$)	0.40[J]	1.19	1.30	6.11		
Total Alkalinity (mg/L $CaCO_3$)	98.8	89.4	101	417		
Total Iron (mg/L)	0.237	0.161	0.134	0.075		
Total Manganese (mg/L)	0.028	0.045	0.049	0.776		
Total Suspended Solids (mg/L)	4.0[J]	ND	ND	16.0		
Total Hardness (mg/L $CaCO_3$)	144	110	120	970		
Total Sulfates (mg/L)	430	43.7	41.2	3360		
Specific Conductance (at 25°C in µmhos/cm)	318	398	338	10,400		

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits
Minimum Detection Limit for Flow = 0.01 GPM
Minimum Detection Limit for Flow = 0.01 CFS

Permittee's Signature: Michael Kelley Date: 4-15-13

Laboratory Name: TraDet Laboratories

Analyst's Signature: [illegible] Date: April 15, 2013

COLUMBUS

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee: American Energy Corporation Permit Number: D-0425

X 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., ____ 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMU-1	CMU-2	CMU-2A			
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----			
Static Water Level of Well Below Land Surface (feet)	----	----	----			
Stream or Spring Discharge (cfs or gpm)	77.21 cfs	1.68 cfs	4.80 cfs			
Date Measured	03/20/13	03/15/13	03/15/13			
pH (Standard Units)	8.20[H]	8.00[H]	8.02[H]			
Total Acidity (mg/L $CaCO_3$)	0.48[J]	1.82	1.24			
Total Alkalinity (mg/L $CaCO_3$)	100	99.2	83.0			
Total Iron (mg/L)	0.210	0.140	0.175			
Total Manganese (mg/L)	0.029	0.015	0.039			
Total Suspended Solids (mg/L)	4.0[J]	ND	ND			
Total Hardness (mg/L $CaCO_3$)	143	115	103			
Total Sulfates (mg/L)	40.9	39.0	27.0			
Specific Conductance (at 25°C in µmhos/cm)	312	379	247			

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits
Minimum Detection Limit for Flow = 0.01 GPM
Minimum Detection Limit for Flow = 0.01 CFS

Permittee's Signature: Michael Kelley Date: 4-15-13

Laboratory Name: TraDet Laboratories

Analyst's Signature: RHW Date: April 15, 2013

RECEIVED
APR 18 2012
DIVISION OF MINERAL RESOURCES
CAMBRIDGE

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

Permittee: American Energy Corporation Permit Number: D-0425

X 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., ____ 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMD-1	CMD-2	CMD-2A	CMD-6		
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----	----		
Static Water Level of Well Below Land Surface (feet)	----	----	----	----		
Stream or Spring Discharge (cfs or gpm)	110 cfs	12.1 cfs	14.1 cfs	221,730 GPD		
Date Measured	03/06/12	03/08/12	03/08/12	03/10/12		
pH (Standard Units)	8.11[H]	8.14[H]	8.11[H]	8.04[H]		
Total Acidity (mg/L $CaCO_3$)	1.44	1.61	1.55	5.82		
Total Alkalinity (mg/L $CaCO_3$)	119	154	128	287		
Total Iron (mg/L)	0.068	0.068	0.066	0.178		
Total Manganese (mg/L)	0.022	0.027	0.067	0.596		
Total Suspended Solids (mg/L)	5.0[J]	ND	ND	ND		
Total Hardness (mg/L $CaCO_3$)	177	208	133	762		
Total Sulfates (mg/L)	65.2	562	61.0	3240		
Specific Conductance (at 25°C in µmhos/cm)	354	1300	341	5805		

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits

Permittee's Signature: Mike Kelley Date: 4-17-12

Laboratory Name: TraDet Laboratories

Analyst's Signature: William Thompson (SAP) Date: April 16, 2012

COLUMBUS

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINES AND RECLAMATION

Quarterly Monitoring Report Sheet
(Submit in Quadruplicate)

:mittee: American Energy Corporation Permit Number: D-0425

X 1st Qtr., ____ 2nd Qtr., ____ 3rd Qtr., ____ 4th Qtr., (X appropriate blank)

____ Premining X Mining ____ Postmining (X appropriate blank for mine status)

Monitoring Site ID No. (e.g. S-1, W-3)	CMU-1	CMU-2	CMU-2A			
Surface Elevation of Monitoring Site						
Depth of Well Below Land Surface (Feet)	----	----	----			
Static Water Level of Well Below Land Surface (feet)	----	----	----			
Stream or Spring Discharge (cfs or gpm)	105 cfs	11.6 cfs	13.6 cfs			
Date Measured	03/06/12	03/08/12	03/08/12			
pH (Standard Units)	8.11[H]	7.98[H]	7.42[H]			
Total Acidity (mg/L $CaCO_3$)	1.61	2.61	2.76			
Total Alkalinity (mg/L $CaCO_3$)	127	125	96.6			
Total Iron (mg/L)	0.038	0.057	0.097			
Total Manganese (mg/L)	0.039	0.029	0.060			
Total Suspended Solids (mg/L)	ND	ND	ND			
Total Hardness (mg/L $CaCO_3$)	160	121	107			
Total Sulfates (mg/L)	45.0	51.7	37.5			
Specific Conductance (at 25°C in µmhos/cm)	320	323	258			

[H] Holding times for preparation or analysis exceeded
[J] Analyte detected below quantitation limits

Permittee's Signature: Mik Kelley Date: 4-17-12

Laboratory Name: TraDet Laboratories

Analyst's Signature: William Thompson (SAP) Date: April 16, 2012