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REP TO T E TTENT ON O

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Paul Novak Manager
Surface Water Division
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus Ohio 43216 1049

Re: Proposed NPDES Permit American Energy Corporation Century Mine (Bennoc Refuse Disposal Area) Alledonia Ohio Permit No O 00159 AD Application No OH0144576

Dear Mr Novak:

After the federal government shutdown from October 1 October 16 2013 the S. Environmental Protection Agency received OEPA s Proposed National Pollutant Discharge Elimination System Permit (Permit) cover letter dated October 8 2013 and associated permit documentation for the American Energy Corporation s Bennoc Refuse Disposal Area OH 144576 EPA has under separate letter to Scott Nally Director of OEPA submitted its general ob ection to the proposed permit This letter is EPA s response to several statements made within OEPA s October 8 2013 cover letter which referenced some of the associated documentation that accompanied the proposed permit OEPA s cover letter was replying to EPA s September 24 2013 letter that in part requested OEPA to provide a written explanation as to why it believes that the permit is consistent with the water quality based requirements of the CWA and EPA s implementing regulations

Nature of dischar e
EPA understands the discharges proposed to be covered by the permit would be characteri ed as runoff from a coarse refuse disposal area that is currently a reclaimed surface coal mine. The outfalls are located at the outlets of ponds situated to collect runoff from the (current) reclaimed area and the (future) coarse refuse disposal area The company does not propose any modi cations or upgrades to the two ponds and has only a requirement in the permit to upgrade the flow monitoring abilities at the two outfalls

OEPA stated that the proposed permit is consistent with water quality based requirements of the Clean Water Act (CWA) and EPA s implementing regulations for several reasons

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1 OEPA asserts that the site discharges are primarily ***precipitation induced***
   - That there would be ***dilution*** in the receiving waters when the outfalls discharge
   - There would ***not be a discharge during critical low flow conditions***
2 Implementation of ***best management practices*** would minimize the discharge of pollutants
3 ***OEPA s understanding that SEPA Region has been approving permits for precipitation induced discharges in West irginia without requiring numeric water quality based effluent limits for T S related parameters***
4 OEPA states that the permit required biological and chemical monitoring are sufficient to demonstrate compliance with W S

With this letter we would like to respond to your assertions point by point

Precipitation induced discharges

OEPA s permit documentation lacked any existing flow discharge data for these ponds et contrary to OEPA s assertion the permit application did include the company s verification that the discharge would not be intermittent see EPA Form 2D NPDES page 2 III Flows Sources of Pollution and Treatment Technologies Section C The company checked no to the question of whether the discharges would be intermittent The company also marked on the application average daily and maximum daily flow rates that it expects to discharge from these outfalls These flows are significantly higher than what was reported in DMR data for the existing outfalls Data show that the existing discharges occur frequently and in the absence of a precipitation event The company proposes no improvements to the ponds Therefore it is reasonable to conclude that not only would the ponds discharge at least as frequently as they do now but they are likely to discharge more frequently than they do now

Additionally based on AEC s data submitted in response to EPA s February 14 2011 information request issued pursuant to Section 308 of the CWA it appears that Pond 001 proposed Pond 023 for this permit discharges over 90% of the time The DMR data also indicate that 81% of days when a discharge was reported were during dry weather when there was no precipitation Therefore the data do not support OEPA s assertion that these are precipitation induced discharges which will not occur during low flow conditions The DMR data submitted were from November 2009 through December 2010 See Enclosure A for a table showing the data that was submitted in response to EPA s information request The ma ority of AEC DMRs for Pond 002 proposed Pond 024 during the same timeframe are blank except for a signature so it is difficult to assess the nature of discharge without discharge data

redicted flow rates Outfall 023 0 040 and 1 3 million gallons per day, Outfall 024 0 025 and 1 01 million gallons per day, average and max daily, respectively and existing flows ased on data are Outfall 001 0 003 and 0 010 million gallons per day, and at Outfall 002 t a company only managed to report one result at 0 0015 million gallons per day

In addition, there should have been more information available for outfall 001/023 but many of those DMRs were also submitted to OEPA blank other than the signature line. We note that a blank DMR does not mean that the ponds were not discharging, as OEPA requires a code ("ac") be entered into the DMR forms if the company observes a no discharge condition. We further note that the company used that code on a few occasions when it observed a no discharge condition.

Ohio D R has a policy/procedure directive on the subject of Sediment Pond Design (Engineering 1). This document indicates that a properly designed pond would have a dewatering device and that such device would work to allow water to exit the pond so that capacity is available for the next storm event. The document indicates that OD R expects that ponds would be dewatered 2 to days following a storm event. We note that based on the DMR data, discharges occurred even when precipitation was reported as 0 inches for seven consecutive days prior to the date of the measurement, including the day the measurement was taken. In addition, we note that for almost half of the attempted flow measurement events (45) there had been less than 0 1 inch of total precipitation in the previous 4 days leading up to the date of measurement (including the date of measurement).

OEPA states it "believes that there is not a reasonable potential to violate water quality standards (W S) from precipitation induced discharges if the ***best mana ement ractices*** included in the permit are complied with."

Before we speci cally address the DMP issues, EPA would like to clarify, regarding OEPA s above statement, that even if the discharges were intermittent, that does not release the permitting agency from conducting a reasonable potential analysis (RPA). Intermittent discharges have the potential to cause acute and chronic impacts to aquatic life, depending on flow volume, duration, concentration of pollutants and other factors.

2 mplementation of best management practices would minimi e the discharge of pollutants

AEC submitted projected ef luent quality data based on data from an existing pond (Pond 013) which is used to receive coarse coal waste pile runoff, which is the type of runoff proposed for this permit. AEC predicted that the effluent concentration of TDS would be 313 mg/L.[2] The OEPA s numeric water standard for TDS is 1500mg/L. Data submitted by AEC in response to EPA s ebruary 14 2011 information request included higher concentrations of TDS for Pond

[2] The AEC s September 18 2012 consultant report submitted in EPA v Fried Scott Chemical Analysis of Waste Water Discharge and Antidegradation Assessment American Energy Corporation s minec Coarse Coal refuse Area Ponds 001 and 002 page Table 3 Expected Effluent Discharge Chemistry from Ponds 001 and 002 to Piney Creek include expected effluent concentrations of TDS at 3138 mg and sulfate of 2438 mg/L

included higher concentrations of TDS for Pond 013 sample #AEC 028 4 at 6860mg/L Also included in AEC s same response was data for Pond 001(proposed Pond 023) sample #AEC 02848 at 4 80mg/L TDS (See enclosures)

See Enclosure B for a detailed comparison of the BMP s included in the Bennoc permit with ODNR s existing BMP requirements The requirements in this permit do not include any that are in addition to what ODNR already requires In fact ODNR requires far more than what this permit would require in terms of management practices Therefore if the outfalls that the company used to calculate the projected TDS concentration (3183 mg/L) in the discharge are in compliance with ODNR regulations there is no basis to conclude that the presence of the same but less robust requirements in the NPDES permit would result in lower TDS concentrations being discharged

3 OEPA s understanding that SEPA Region 3 has been approving permits for precipitation induced discharges in est Virginia without requiring numeric water quality based effluent limits for TDS related parameters

It is important to note that WVDEP s coal permits implement West Virginia s numeric water quality standards by including WQBELs where reasonable potential exists even when the state has made a determination that the discharge is intermittent urther when WVDEP is considering requirements to implement its narrative criteria it requires the permittee demonstrate the nature of the discharge through site specific flow data DMRs and precipitation data

Ohio has a numeric standard for total dissolved solids Best management practices are not a substitute for WQBELs where there is the reasonable potential to exceed a numeric water quality standard It is unclear why OEPA would provide a guidance document from West Virginia for the implementation of a narrative standard as justification for not implementing its own numeric water quality standards in this Ohio permit That said we do have some comments on the West Virginia documents and the permit records that were included in the October 8 letter

The West Virginia guidance documents recommend that several permit conditions be included in permits if a numeric conductivity limit is not included It seems that OEPA chose 2 out of 6 of these recommended conditions and is asserting that what was drafted would rise to the level of what would be included in a WVDEP drafted permit which Region 3 would not object to Most notably absent from the Bennoc permit are

- Whole Effluent Toxicity limits
- (Sufficient) chemical monitoring
- (Sufficient) in stream biological monitoring
- Aquatic Ecosystem Protection Plan
- Adaptive Management Plan

We direct your attention to the table on Page 7 of the August guidance ("dentification and Background for Permitting guidance for Surface Coal Mining Operations to Protect West Virginia s Narrative Water Quality Standards" 47 C S R 2 §§ 3 2 e and 3 2 r) This table presents WVDEP s stressor identification protocols as used in their EPA approved TMDL process. Conductivity greater than 1533 umhos/cm and sulfate greater than 417 mg/L are identified as concentrations used to identify whether or not ionic strength is a "definite stressor" In the case of the Bennoc permit the water quality standards being contemplated are 1500 mg/L TDS (relating to approximately 2400 umhos/cm) and OEPA s original draft limits are more than 2 000 mg/L sulfate

4 Biological and Chemical Monitoring

Biological Monitoring

OEPA states that the permit requirements for biological and chemical monitoring are sufficient to demonstrate compliance with WQS Biological Assessment requirements can be found in Section N on page 1 of the permit Biological sampling is required "once during coarse coal refuse disposal operations and once not later than 3 years following reclamation " This biological assessment is not adequately defined in the permit since Section N 2 Study Plan requires that months from the effective date of the permit a plan be submitted It is difficult to asce am how OEPA can determine that a plan it has not yet received and so has not reviewed is sufficient to demonstrate compliance with water quality

Further the frequency of biological monitoring is not sufficient for any decline in biota to be observed in a timely manner so that adaptive management strategies (as specified in the WVDEP guidance document) could be implemented that would reduce the impact of the discharges to the streams Additionally EPA notes the lack of a trigger for implementing adaptive management and the absence of any description or requirement that the company develop an adaptive management plan

Chemical Monitoring

Within the 2 paragraph of page 2 of OEPA s cover letter OEPA again utilized its assertion that since the discharges are intermittent monitoring frequencies should be reduced from twice a week to once a month for p TSS chloride sulfate selenium iron and manganese Per 40 C F R §122 44(i) the type frequency and location of monitoring at each discharge location must be adequate to assure compliance with each effluent limitation including narrative limits EPA has established based on data submitted within this letter that these discharges do not appear to be intermittent and so reducing the monitoring frequency is not supported OEPA in all of its other coal permits requires at a minimum twice monthly monitoring of chemical constituents

There is no speci ic justification supplied by OEPA nor the permittee to support less frequent monitoring than what would be required of all other coal sector permittees in the state of Ohio.

Conclusions

- OEPA s assertion that the pond discharges could be character ed as intermittent precipitation induced and not occurring during critical low flow conditions is not supported by the permit application or DMR data
- OEPA s argument that BMP s included in this permit would reduce the discharge of TDS and related parameters is not supported by existing data and the BMP s included in the permit are even less stringent than what is already required by ODNR
- OEPA s argument that it is doing what has been approved in West Virginia for coal mining permits is a) not relevant as the Bennoe situation differs from the examples provided by OEPA in support of this assertion, and b) not supported by the permit language as the Bennoe permit does not include the permit conditions described in the WVDEP guidance document
- OEPA s arguments for reduction in monitoring frequency are not supported: due to the actual nature of the flow inadequate permit language and OEPA s standard monitoring frequency used in coal sector permits statewide

We trust that this letter has clari ied some of the issues raised in OEPA s October 8 2 13 cover letter If you have any questions related to EPA s review please contact Patrick Kuefler or Janet Pellegrini of my staff Mr Kuefler can be reached at (312) 3 3 6268 or by email at kue er pat ck@epa gov Janet Pellegrini can be reached at (312) 886 2 8 or by email at pellegrini janet@epa gov

Sincerely

Kevin M Pierard Chief
NPDES Program Branch

Enclosures

cc Daniel ill Ohio EPA

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	Outfall 001/023		Outfall 002/024			Outfall 001/023		Outfall 002/024	
Date	flow (gpm)	prec p (n)	flow (gpm)	prec p (n)	Date	flow (gpm)	prec p (n)	flow (gpm)	prec p (n)
11/1/2009	blank	blank	blank	blank	12/13/2009		0 43	blank	blank
11/2/2009	blank	blank	blank	blank	12/14/2009		0	blank	blank
11/3/2009	blank	blank	blank	blank	12/15/2009		0	blank	blank
11/4/2009	blank	blank	blank	blank	12/16/2009		0	blank	blank
11/5/2009	blank	blank	blank	blank	12/17/2009	800	0	blank	blank
11/6/2009	blank	blank	blank	blank	12/18/2009		0	blank	blank
11/7/2009	blank	blank	blank	blank	12/19/2009		0	blank	blank
11/8/2009	blank	blank	blank	blank	12/20/2009		0.5	blank	blank
11/9/2009	blank	blank	blank	blank	12/21/2009		0	blank	blank
11/10/2009	blank	blank	blank	blank	12/22/2009		0	blank	blank
11/11/2009	blank	blank	blank	blank	12/23/2009		0	blank	blank
11/12/2009	blank	blank	blank	blank	12/24/2009	1	0 32	blank	blank
11/13/2009	blank	blank	blank	blank	12/25/2009		0 33	blank	blank
11/14/2009	blank	blank	blank	blank	12/26/2009		0	blank	blank
11/15/2009	blank	blank	blank	blank	12/27/2009		0 02	blank	blank
11/16/2009	blank	blank	blank	blank	12/28/2009		0	blank	blank
11/17/2009	blank	blank	blank	blank	12/29/2009		0	blank	blank
11/18/2009	blank	blank	blank	blank	12/30/2009		0 16	blank	blank
11/19/2009	blank	blank	blank	blank	12/31/2009		0	blank	blank
11/20/2009	blank	blank	blank	blank	1/1/2010		0.01	blank	blank
11/21/2009	blank	blank	blank	blank	1/2/2010		0.01	blank	blank
11/22/2009	blank	blank	blank	blank	1/3/2010		0 02	blank	blank
11/23/2009	blank	blank	blank	blank	1/4/2010		0 11	blank	blank
11/24/2009	blank	blank	blank	blank	1/5/2010		0	blank	blank
11/25/2009	blank	blank	blank	blank	1/6/2010		0	blank	blank
11/26/2009	blank	blank	blank	blank	1/7/2010	900	0 17	blank	blank
11/27/2009	blank	blank	blank	blank	1/8/2010		0	blank	blank
11/28/2009	blank	blank	blank	blank	1/9/2010		0	blank	blank
11/29/2009	blank	blank	blank	blank	1/10/2010		0	blank	blank
11/30/2009	blank	blank	blank	blank	1/11/2010		0	blank	blank
12/1/2009		0	blank	blank	1/12/2010		0	blank	blank
12/2/2009		0	blank	blank	1/13/2010		0	blank	blank
12/3/2009	1500	0	blank	blank	1/14/2010	1500	0	blank	blank
12/4/2009		0	blank	blank	1/15/2010		0	blank	blank
12/5/2009		0	blank	blank	1/16/2010		0	blank	blank
12/6/2009		0 05	blank	blank	1/17/2010		0 24	blank	blank
12/7/2009		0	blank	blank	1/18/2010		0 26	blank	blank
12/8/2009		1 39	blank	blank	1/19/2010		0	blank	blank
12/9/2009		0	blank	blank	1/20/2010		0	blank	blank
12/10/2009	3800	0	blank	blank	1/21/2010	10300	0	blank	blank
12/11/2009		0	blank	blank	1/22/2010		0	blank	blank
12/12/2009		0	blank	blank	1/23/2010		0.01	blank	blank

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	Outfall 001/023		Outfall 002/024	
Date	flow (gpm)	precip (in)	flow (gpm)	precip (in)
4/18/2010		0	blank	blank
4/19/2010		0	blank	blank
4/20/2010		0	blank	blank
4/21/2010	1200	0	blank	blank
4/22/2010		0	blank	blank
4/23/2010		0.03	blank	blank
4/24/2010		0	blank	blank
4/25/2010		0.36	blank	blank
4/26/2010		0.21	blank	blank
4/27/2010	540	0	blank	blank
4/28/2010		0	blank	blank
4/29/2010		0	blank	blank
4/30/2010		0	blank	blank
5/1/2010		0.15	blank	blank
5/2/2010		1.77	blank	blank
5/3/2010		0	blank	blank
5/4/2010		0	blank	blank
5/5/2010		0.06	blank	blank
5/6/2010	2800	0	blank	blank
5/7/2010		0.04	blank	blank
5/8/2010		0	blank	blank
5/9/2010		0	blank	blank
5/10/2010		0.69	blank	blank
5/11/2010		0.15	blank	blank
5/12/2010		0	blank	blank
5/13/2010		0	blank	blank
5/14/2010	2880	0	blank	blank
5/15/2010		0	blank	blank
5/16/2010		0.22	blank	blank
5/17/2010		1.33	blank	blank
5/18/2010		0.12	blank	blank
5/19/2010		0.03	blank	blank
5/20/2010		0	blank	blank
5/21/2010	5400	0	blank	blank
5/22/2010		0.49	blank	blank
5/23/2010		0	blank	blank
5/24/2010		0	blank	blank
5/25/2010		0	blank	blank
5/26/2010		0	blank	blank
5/27/2010		0	blank	blank
5/28/2010	2500	0	blank	blank
5/29/2010		0	blank	blank

	Outfall 001/023		Outfall 002/024	
Date	flow (gpm)	precip (in)	flow (gpm)	precip (in)
5/30/2010		0	blank	blank
5/31/2010		0.47	blank	blank
6/1/2010		0	blank	blank
6/2/2010		0.44	blank	blank
6/3/2010		0.02	blank	blank
6/4/2010	1500	0	blank	blank
6/5/2010		3	blank	blank
6/6/2010		0.63	blank	blank
6/7/2010		0	blank	blank
6/8/2010	3500	0.37	blank	blank
6/9/2010		0.37	blank	blank
6/10/2010		0.25	blank	blank
6/11/2010		0.3	blank	blank
6/12/2010		0.27	blank	blank
6/13/2010		0	blank	blank
6/14/2010		0.05	blank	blank
6/15/2010		0	blank	blank
6/16/2010		0	blank	blank
6/17/2010		0	blank	blank
6/18/2010	2800	0	blank	blank
6/19/2010		0	blank	blank
6/20/2010		0	blank	blank
6/21/2010		0.27	blank	blank
6/22/2010		0.16	blank	blank
6/23/2010		1.1	blank	blank
6/24/2010		0	blank	blank
6/25/2010	1850	0	blank	blank
6/26/2010		0	blank	blank
6/27/2010		0.12	blank	blank
6/28/2010		0.11	blank	blank
6/29/2010		0	blank	blank
6/30/2010		0	blank	blank
7/1/2010		0	blank	blank
7/2/2010	1850	0	blank	blank
7/3/2010		0	blank	blank
7/4/2010		0	blank	blank
7/5/2010		0	blank	blank
7/6/2010		0	blank	blank
7/7/2010		0	blank	blank
7/8/2010	1050	0	blank	blank
7/9/2010		1.69	blank	blank
7/10/2010		0	blank	blank

nc o re data or o and precipitation

		Outfall 001/023		Outfall 002/024	
Date		flow (gpm)	prec p (in)	flow (gpm)	prec p (in)
11/2/2010		blank	blank	blank	blank
11/3/2010		blank	blank	blank	blank
11/4/2010		blank	blank	blank	blank
11/5/2010		blank	blank	blank	blank
11/6/2010		blank	blank	blank	blank
11/7/2010		blank	blank	blank	blank
11/8/2010		blank	blank	blank	blank
11/9/2010		blank	blank	blank	blank
11/10/2010		blank	blank	blank	blank
11/11/2010		blank	blank	blank	blank
11/12/2010		blank	blank	blank	blank
11/13/2010		blank	blank	blank	blank
11/14/2010		blank	blank	blank	blank
11/15/2010		blank	blank	blank	blank
11/16/2010		blank	blank	blank	blank
11/17/2010		blank	blank	blank	blank
11/18/2010		blank	blank	blank	blank
11/19/2010		blank	blank	blank	blank
11/20/2010		blank	blank	blank	blank
11/21/2010		blank	blank	blank	blank
11/22/2010		blank	blank	blank	blank
11/23/2010		blank	blank	blank	blank
11/24/2010		blank	blank	blank	blank
11/25/2010		blank	blank	blank	blank
11/26/2010		blank	blank	blank	blank
11/27/2010		blank	blank	blank	blank
11/28/2010		blank	blank	blank	blank
11/29/2010		blank	blank	blank	blank
11/30/2010		blank	blank	blank	blank
12/1/2010			0.04	blank	blank
12/2/2010			0	blank	blank
12/3/2010	ac		0	blank	blank
12/4/2010			0	blank	blank
12/5/2010			0.03	blank	blank
12/6/2010			0	blank	blank
12/7/2010			0.01	blank	blank
12/8/2010			0	blank	blank
12/9/2010			0	blank	blank
12/10/2010	ac		0	blank	blank
12/11/2010			0.1	blank	blank
12/12/2010			0.48	blank	blank
12/13/2010			0	blank	blank

		Outfall 001/023		Outfall 002/024	
Date		flow (gpm)	prec p (in)	flow (gpm)	prec p (in)
12/14/2010			0	blank	blank
12/15/2010			0	blank	blank
12/16/2010		540	0.03	blank	blank
12/17/2010			0	blank	blank
12/18/2010			0	blank	blank
12/19/2010			0	blank	blank
12/20/2010			0	blank	blank
12/21/2010			0	blank	blank
12/22/2010			0	blank	blank
12/23/2010	ac		0	blank	blank
12/24/2010			0	blank	blank
12/25/2010			0	blank	blank
12/26/2010			0	blank	blank
12/27/2010			0	blank	blank
12/28/2010			0	blank	blank
12/29/2010			0	blank	blank
12/30/2010			0	blank	blank
12/31/2010			0	blank	blank

Enclosure A 2

The DMR data are summari ed below

Table 1 Summary of DMR data for outfalls 001 and 002 submitted to SEPA by AEC in response to EPA s C A 308 information re uest of February 14 2011

Total times flow was Measured	38	
Total times Flow Measurement Attempted and o Flow was found	4	
Total times Flow Measurement Attempted	42	
% of Time flow measured when attempted	0	%
of Times Flow Measurement corresponds to 0 inches precipitation	31	
% of Times Flow Measurement corresponds to 0 inches precipitation	81	%

nclosure B comparison of BMP s included in the Bennoe permit with ODNR requirements

The BMP s included in the proposed permit can be found in Part II Section Best Management Practices for Minimizing Discharges of Total Dissolved Solids and also below in column A. Column B contains a small subset of Ohio s regulations concerning similar practices as they relate to coal mining. As you can see, each of the BMP s presented in the permit include practices already required by ODNR.

BMP included in permit	Similar practice described in Ohio Admin Code under Ohio DNR s regulations at OAC 1501 13 9 04
1. Before beginning coarse refuse disposal operations the permittee shall develop a plan for the control of surface water drainage. The permittee shall	(A) eneral Mining shall be planned and conducted to minimize disturbance to the prevailing hydrologic balance in both the permit and ad acent areas to prevent material damage to the hydrologic balance outside the permit area to assure the protection or replacement of water rights and to support approved postmining land uses in accordance with the terms and conditions of the approved permit and the requirements of mining and reclamation rules The chief may require additional preventive remedial or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented. Mining and reclamation practices that minimize water pollution and changes in ow s all be used in preference to water treatment
a. Disturb the smallest practicable area at any time during coarse refuse fill operations;	(D)(3)(a) Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling and grading;
b. Place coarse refuse to avoid runoff of coal refuse impacted water into locations other than treatment ponds;	(B)(1) All surface drainage from the disturbed area including disturbed areas that have been graded seeded or planted shall be passed through a sedimentation pond or a series of sedimentation ponds before leaving the permit area until vegetation is established at which time vegetation of the area may be the best technology currently available provided that drainage from the area (a) Meets ef luent limitations; and (b) Does not contribute suspended solids to streamflow
c In accordance with ODNR approved coal waste plan stabilize and compact fill material to promote a reduction in the rate and volume of runoff and to minimize the penetration of precipitation into the fill;	(D)(3)(b) Stabilizing the backfill material to promote a reduction in the rate and volume of runoff in accordance with the requirements of rule 1501 13 9 14 of the Administrative Code;
d To the e tent practicable divert runoff away from disturbed areas; and	(D)(3)(d) Diverting runoff away from disturbed areas;
e. Reclaim filled areas as soon as practicable following filling in accordance with the ODNR approved coal waste plan	(D)(3)(a) and prompt reve etation as required in rule 1501 13 9 15 of the Administrative Code
2. Rills and gullies shall be filled or regarded minimize erosion	(D)(3)(e) Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;
3. Discharge volumes shall be minimized during low flow conditions in the receiving waters	(B)(2) Sedimentation ponds and other treatment facilities shall be maintained until the quality of the untreated drainage from the disturbed area meets the applicable state and federal water quality standard requirements

2528 BATTLE RUN ROAD
TRADELP W 26058 309

American Energy Corporation
Century Mine
43521 Mayhugh Hill Road Twp Hwy 88
Beallsville H 43716
Attn Mr Fred Blumling

26 n 9

Tra et nc

Company	American Energy Corporation	Sampled By	QES (WD
Plant	Century Mine	Date & Time Sampled	06 05 09 0951
Source	D 0425 Pond 013	Date & Time Received	06 05 09 1330
Analysis Number	0906194		

PARAMETER	CONCENTRATION		DATE & TIME ANALYZED	ANALYST	METHOD		PQL	
pH Field	7 8	S U	06 05 09 0951	QES (WD				
pH Lab	87	S U	06 09 09 0750	TW	4500HB	[2]		
Spec c Conductance Lab	6880	umhos/cm	06 18 09 1625	LW	120 1	[3]	10 00	umhos/cm
Tota Dissc ved So ds	6860	mg/L	06 06 09 1015	MM	2540C	[2]	10	mg/L
Tota Suspended So ds	10	mg/L	06 06 09 1015	MM	2540D	[2]	10	mg/L
ron	0 2	mg/L	06 11 09 1744	TW	3111B	[1]	0 1	mg/L
Manganese	1 5	mg/L	06 11 09 1744	TW	3111B	[1]	0 02	mg/L

Analysis surpassed recommended holding time upon arrival
PQL Practical Quantitation Limit
[1] Standard Methods 18th Edition [2] Standard Methods 20th Edition [3] US EPA [4] ASTM [5] EPA SW846

Customer Name e can E Co on e
Address 43521 ayhu h H ll Road Twp Hwy 88
Beallsv le H 43716
erson to Contact:
Billin Address Sam
Date o Sample Shipment:

724 255-4691 AEC Centu y
740 782 1767 QES
740 782 1905 QES FAX
304 647 9094 TRADET AB
304 47 9097 TRADET FAX
Sampler ual y Env ronmental Servic Inc

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Temperature on Arrival C

P.O. X 2019
WHEELING, W 26 3 219

FAX (304) 47 097

2598 BATTLE RUN ROAD

LABORATORY ANALYSES

American Energy Corporation
Century Mine
43521 Mayhugh Hill Road Twp Hwy 88
Beallsville OH 43716
Attn Mr Fred Blumling

13 0

By
TraDet nc

Company	American Energy Corporation	Sampled By	QES (WD)
Plant	Century Mine	Date & Time Sampled	06 25 09 1010
Source	D-1159 Pond 001	Date & Time Received	06 26 09 0830
Analysis Number	0906733		

PARAMETER	CONCENTRATION		DATE & TIME ANALYZED	ANALYST	METHOD		PQL	
pH Fed	8 1	S U	06 25 09 1010	QES WD)				
pH Lab	8 24	S U	06 29 08 0845	MM	4500HB	[2]		
Spec c Conductance Lab	7480	µmhos/cm	07 01 09 1130	LW	120 1	[3]	10 00	µmhos/cm
Total Dissolved Solids	4780	mg/L	06 27 09 1115	MM	2540C	[2]	10	mg/L
Total Suspended Solids	10	mg/L	06 27 09 1115	MM	2540D	[2]	10	mg/L
Iron	0 1	mg/L	07 06 09 1400	TW	3111B	[1]	0 1	mg/L
Manganese	0 03	mg/L	07 06 09 1400	TW	3111B	[1]	0 02	mg/L

Analysis surpassed recommended holding time upon arrival
PQL Practical Quantitation Limit
[1] Standard Methods 18th Edition [2] Standard Methods 20th Edition [3] US EPA [4] ASTM [5] EPA SW846

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	Bea sv e OH 43716	740 782 1767 QES
erson Contact		740 782 1906 QES FAX
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Date o Samp e Shipment		3 4 547 9097 TRA ET FAX
Ho Shipped		Samp e ual Environ ente Services nc
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