

LAB PRESENTATION

Knox District Office

October 22, 2009

ABS PBF LAND RECLAMATION

14 Sites-9 Completed

- 5 reclaimed through ACT-181

- 4 reclaimed through landowner

- 1 reclaimed

- 5 reclaimed through Consent Order

ABS PEF DISCHARGES

- 17 Mine Sites
- 12 Treatment Systems in place
 - 4 Systems DEP doing O & M
 - 2 (8) Systems O & M Sole Source Grant
- 3 Treatment design contracts completed
- 1 in process obtaining rights of entry

Sole Source Through Clean Streams Foundation

- C & K Kriebel Mine (Passive)
- C & K Tremba Horner Mine (Passive)
- C & K Hill Estate Mine (Passive)
- C & K Heasley Mine (Passive)
- C & K Serina Mine (Passive)
- C & K Racic Mine (Operational)

Sole Source Through Headwaters Charitable Trust

- E.M. Orcutt Mine (Passive)
- K... Small Mine (Passive)

D.E.P. doing O & M

- Glacial Minerals Vosburg Min. (passive)
- Glacial Minerals Blair Mine (passive)
- Glacial Minerals Mowrey Mine (passive)
- H & D Mine (Discharge 4 passive)

- PBF ABS Project Development Team consisting of Compliance Manager, Engineer, Compliance Specialist, Inspector Supervisor and Tech Chief

- Field review and monitoring
- Property owner investigation
- Send Property owner survey
- Property owner meeting
- Right of entry for study and design
- Request allocation of funds
- Develop Scope of Work
- Solicitation for treatment proposals

- Pre submission field review
- Treatment design proposal submission
- Internal meeting to discuss proposal
- Final proposal
- Final contract
- Preliminary utility plan submission
- Meet with property owners to obtain easement for construction

Final treatment design submission

- Submit Act-181 proposals

Application to start for construction

Contract

- Treatment system construction

P.O. Box 669
Knox, PA 16232-0669
[date]

Knox District Office

814-797-1191

Dear Property Owner:

You have been identified as property owner of record either on or near the site of an abandoned surface mine permit on which one or more acid mine drainage discharges exist. You may or may not be aware that the mining company responsible for causing and treating the pollutional discharge has gone out of business, ceased treatment, and forfeited the reclamation bonds on the permit. The discharge(s), in many cases, have caused severe pollution to waters of the Commonwealth.

The Department of Environmental Protection (Department) has been compelled to develop and implement plans to treat the discharge(s) that are on or near your property as a result of legal action filed in federal district court. In some cases, this may involve constructing acid mine drainage treatment facilities and/or roads on your property. We are in the early stages of the planning process and would like to meet with you to discuss preliminary plans.

We have enclosed a short survey that will help us in the planning process. So, if you would be so kind as to answer the questions and use the self-addressed, stamped envelope to return the survey to us, we would greatly appreciate your response. After we receive your reply, someone will contact you to discuss the situation on your property.

The Department's goal is to address the abandoned discharge(s) polluting waters of the Commonwealth. We sincerely hope that we may count on your cooperation in accomplishing this goal.

If you have any questions, please contact me at 814-797-1191. Thank you.

Sincerely,

Joseph F. Ferrara
Compliance Manager
Bureau of District Mining Operations

Enclosure

Property Owner Survey

Surface Mine Permit No. [permit number] Property Owner [property owner name(s)]

1. Are you the current owner of Parcels # [number(s)] located in [township] Township, [county] County? Yes ___ No ___
2. If you are not the current owner, would you please provide the owner's:
Name _____
Address _____
Telephone Number _____
3. Would you be willing to sign an agreement that would allow the Department to construct and maintain acid mine drainage treatment facilities and/or roads on your property? Yes ___ No ___
4. Please provide a telephone number(s) so that a Department representative may contact you to discuss preliminary plans.
Home phone _____
Work phone _____
Cell phone _____

Thank You

Property Owner Survey

Surface Mine Permit No. 10820121 Property Owner Alfred S. & Pauline Ruth

1. Are you the current owner of Parcel #300-2F38-22 located in Venango Township, Butler County? Yes ___ No ___

2. If you are not the current owner, would you please provide the owner's:

Name _____

Address _____

Telephone Number _____

3. Would you be willing to sign an agreement that would allow the Department to construct and maintain acid mine drainage treatment facilities and/or roads on your property? Yes ~~No~~ No roads or drainage treatment on property

4. Please provide a telephone number(s) so that a Department representative may contact you to discuss preliminary plans.

Home phone 724-342-2259

Work phone _____

Cell phone _____

Thank You

Surosick PBF 33830117.1
May 2008
Pine Creek Twp, Jefferson County



Primary Facility: 33830117

Monitoring Point: 1

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT A MG/L	FE MG/L	MN MG/L	AL MG/L	SO4 MG/L	CL MG/L	ML
			4.3	5.8	50	1.09	10.8	<.5	212.9	6	
	05/25/2004				72.8	1.03	10.4	<.5	183.2	<3	
4209 400	04/20/2004				46.2		10.56	<.5	200.1	<3	
4209 752	09/12/2006		6	20.2	15.4	14.0		<.5	171.1	12	
4209 130	12/01/2006		4.8	8.0	27.1	5.53	8.72	0.849	182.7	<3	
4209 324	04/08/2008		4.1	3.2	33.2	0.937	11.9	<.5	172	<3	

Merola Discharge 2008
Irwin Twp, Venango County



Primary Facility: 61820102

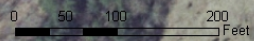
Monitor Point: S10

Approx. 1000 ft. NW of Recharge Pit A

	Date	Final Flow	pH pH units	ALK MG/L	HOT A MG/L	FE MG/L	MN MG/L	CU MG/L	SO4 MG/L	TSS MG/L
		20	3.7			<.3	14.2	16.9	469.8	<3
4217 997	01/23/2008	110	3.6	0	114		16.6	16.5	450.3	8
4217 028	03/26/2008	110	3.6	0	114	0.332		13.3	340.6	<3
4217 070	04/30/2008	38	3.6	0	114		14.6		434.1	<5
4217 093	05/28/2008	44	3.6	0	110	0.536	13.6			10
4217 130	07/23/2008	7	3.6	0	109.6	1.53	15.5	13	340.3	
4217 133	08/26/2008	6	3.6	0	99.4	1.51	15.9	11.9	485	<5



REM
16820107
Redbank, Clarion



Primary Facility: 16820107

Monitor Point: 16820107

See in

of R

pond B

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT MG/L	FE MG/L	MN MG/L	ML	CO4 MG/L	TSS MG/L	1
	04/04/2008	15	4.2	5	60	<.3	17.6	2.63	398		
4215 004			4.2	4.8	62	0.715	22.1	2.96	429.4	<5	
			4.2			0.816	17.3	2.06	432	<5	
4215 061	07/08/2008	3	4.3			1.05			432.2	12	
4215 090	08/01/2008	2	4.5	7.8	22.6	3.42	18.6	1.47		6	
4215 171	11/25/2008	5	4.4	5.6	24	3.56	11.7	1.04	307.9	18	
4215 205	01/02/2009	8	4.3	5.2	49.8	0.532	15.1	1.97	425.6	8	

Primary Facility: 16820107

Monitor Point: 16820107

Sample
2010

east

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT MG/L	FE MG/L	MN MG/L	ML MG/L	CO4 MG/L	TSS MG/L	1
	04/04/2008	5	4.1	3.6	138.4	<.3	41.3	8.51	900		
4215 000											
4215 000	07/08/2008	0									
4215 000	08/01/2008	0									
4215 170	11/25/2008	1	4.6	6.6	11.6	0.475	2.49	0.705	158.4	<5	
4215 204	01/02/2009	3	4.1	3.2	109.4	<.3	34.2	6.23	781.3	14	

Ruth
10820121
Bulter County

Upstream

9B

12.2

9F



0 100 200 400 Feet



Primary Facility: 10820121

Monitor Point
12.2

Discharge Point

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT ALK MG/L	FE MG/L	MN MG/L	ML	CO4 MG/L	TSS MG/L	1
	01/30/2008	20	3.4	0	106	12.9	22.1	3.93	563.5		
4242 204			3.3	0	158.4	6.41	26.4	13.7	719.5	6	
			3.3			2.54	28.7	10.6	726.7	6	
4242 284	06/18/2008	4	3.2				20.1		860.3	10	
4242 317	07/24/2008	6	3.2	0	145.4	1.8	30.9	7.32	500.1	<5	
4242 340	08/13/2008	1.5	3.2	0	144.8	1.71	31.3	6.76	801.3	<5	
4242 370	09/24/2008	1.5	3.3	0	42.8	2.24	34.8	7.11	1009.1	6	

Primary Facility: 10820121

Monitor Point
9F

Discharge

Point

to Weir

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT P. MG/L	FE MG/L	MN MG/L	ML	SO4 MG/L	TSS MG/L	TA
	01/30/2008	36	3.2	0	796	2.24	57.7	121	1548.8		
4242 205			3.1	0	640	1.79	46.9	94.1	1382.4	4	
			3.2			1.62	49.5	91.6	1429	10	
4242 283	06/18/2008	3	3.1			2.44	52		1871.8	28	
4242 316	07/24/2008	1	3.1	0	648.6	3.27	47.6	92.2	1411	<5	
4242 642	05/20/2009	8	3.2	0	690.6	1.66	51.7	99.4	1420.6	8	
4242 679	07/01/2009	4	3.1	0	651.2	1.89	52.3	95.2	1539.9	<5	

↳ Coal Company

Racic Inc.

617855

Scrubgrass & Shenoy Inc.

Venango & Butler Cos.





C&K Racic
61783001
Venango, Butler

Primary Facility: 61783001

Monitoring Point: 1C

1SE & 1SW Combined Before
Treatment

Coll ID	Date Collected	Final Flow	Determ Method	pH pH Units	ALK MG/L	HOT A MG/L	FE MG/L	MN MG/L	AL MG/L	SO4 MG/L	Cl MG/L
4217 420	08/11/2006	5	Est	2.8	0	418.8	36.1	16.5	20.9	1133.6	<3
4217 420	08/11/2006	5	Est	3.5	0	274.4	30.7	14.7	13.3	1105.3	10
4217 493	03/10/2006	40	Est	3.1	0	216.1	21.1	10.9	19.2	900.8	<3
4217 523	04/06/2006	30	Est	3.1	0	212	21.1	10.9	19.3	861.9	<3
4217 674	09/26/2006	25	Est	3.1	0	212	21.1	10.9	19.3	861.9	<3
4217 707	10/04/2006	30	Est	3.1	0	286.6	24	10.9	19.3	900.8	<3

Longrove Coal Company

Marion Mine Site

No. 6105

Clinton & Venango Twp

Venango & Butler Co

Martin Bell
61820105
Venango, Butler



0 150 300 600



29



29A



29W





Primary Facility: 61820105

Monitor Point
29W

Compliance
Well

in Facility

29A @

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT ALK MG/L	FE MG/L	MN MG/L	Calcium MG/L	SO ₄ MG/L	TSS mg/L	Ammonia mg/L
	04/30/2008	43	3.1	0	290	20.3	57.1	11.3	849.2		
4217 090			2.8	0	320.2	25.6	67.9	13.2	1021.7	10	
			2.8			22.8	79.3	15.2	1148.8	8	
4217 132	08/26/2008	13	2.8			25.4	66		1275.6	8	
4217 152	10/03/2008	13	2.8	0	400.6	26.2	81.4	16.4	1220	<5	
4217 177	12/30/2008	35	3.1	0	215.6	14.2	35	7.02	653.2	<5	
4217 212	03/17/2009	73	3.1	0	209.8	14.8	41.3	9.88	649.6	<5	

Winterspike Bros. Coal Co.

Emery Mine Site

Map No. 103 - 105

Fairview Butler Co

Doverspike-Emrick Mine
10940105 June 2009
Fairview, Butler



MD1



Primary Facility: 10940105

Monitor Point:
MD1

See @

ved

W&V

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT P MG/L	FE MG/L	MN MG/L	AL MG/L	CO4 MG/L	TSS MG/L	W&V
	06/04/2008	1	7.1	95.2	52.8	2.11	5.49	<.5	244.2	8	
4242 310			7.0	129.4	-76	8.23	18.4	<.5	255.7	10	
4242 000	09/23/2008	0									
4242 000	10/09/2008	0									
4242 000	03/04/2009	0									
4242 660	05/28/2009	1	7.2	93.4	78.4	1.19	3.47	<.5	256.5	6	

MD1A



Primary Facility: 10940105

Monitor Point:

See @

side

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT MG/L	FE MG/L	MN MG/L	ML	CO4 MG/L	TSS MG/L	1
	06/04/2008	5	6.9	101	62.4	1.63	7.36	<.5	272.4		
4242 000											
4242 000	09/23/2008	0									
4242 000	10/09/2008	0									
4242 489	03/04/2009	3	6.4	86.6	73.6	2.86	6.75	<.5	356	6	
4242 661	05/28/2009	3	6.9	96.2	78.2	1.16	6.9	<.5	263.3	<5	

MD2



Primary Facility: 10940105

Monitor Point
MD2

See 4L

ast

road

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT MG/L	FE MG/L	MN MG/L	ML	CO4 MG/L	TSS	road
	06/04/2008	2	6.9	82.6	51.4	1.13	4.61	<.5	386.8		
4242 312			6.9	87	66.8	1.54	4.19	<.5	398.3	<5	
			7.1			1.39	5.19	<.5	431.6	6	
4242 000	09/23/2008	0									
4242 000	10/09/2008	0									
4242 492	03/04/2009	3	6.6	69.4	55.6	0.532	0.825	<.5	480	8	
4242 664	05/28/2009	5	6.8	81	65.2	2.01	2.96	<.5	443.6	<5	

MD3



Primary Facility: 10940105

Monitor Poi.
MD3

See 30

ast

road

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT P MG/L	FE MG/L	MN MG/L	See 30 ML	CO4 MG/L	TSS ML	road
	06/04/2008	10	6.4	111.8	59.2	6.04	11.3	<.5	409		
4242 312			6.5	134.4	81.8	7.92	14.5	<.5	413.2	<5	
			6.8			8.62	16.74	<.5	459.2	6	
4242 368	09/23/2008	6	7						451.2	12	
4242 390	10/09/2008	5	6.8	119.8	97.6	3.37	9.99	<.5		6	
4242 493	03/04/2009	10	7.4	108.2	89.8	2.82	11.6	<.5	502.5	6	
4242 665	05/28/2009	10	6.6	122.6	87.8	6.32	15.4	<.5	426.1	<5	

MD4



Primary Facility: 10940105

Monitor Poi.
MD4

See 20

ast

road

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT P MG/L	FE MG/L	MN MG/L	See 20 MG/L	CO4 MG/L	TSS MG/L	road
	06/04/2008	5	7.4	77.8	52.8	<.3	3.23	<.5	400		
4242 314			7.2	96.6	74.4	2.37	7.78	<.5	427.3	14	
			6.5			7.05	13.6	<.5	426.7	6	
4242 369	09/23/2008	2	7.8						391.4	<5	
4242 391	10/09/2008	2	7.4	101.6	89.2	<.3	4.72	<.5		<5	
4242 494	03/04/2009	5	6.7	85.6	70.4	1.09	6.1	<.5	502.5	6	
4242 666	05/28/2009	5	7.2	85	66.6	0.968	5.58	<.5	433.4	<5	

MD5



Primary Facility: 10940105

Monitor Poi.
MD5

See 10

ast

road

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT A MG/L	FE MG/L	MN MG/L	See 10 ML	CO4 MG/L	SS ML	road
	06/04/2008	2	6.9	63.8	33.4	1.77	2.79	<.5	419.2		
4242 315			6.7	68.8	43.2	3.04	3.61	<.5	409.8	<5	
4242 000	09/23/2008	0									
4242 000	10/09/2008	0									
4242 495	03/04/2009	10	6.1	23.8	-12	0.326	2.18	<.5	416.5	16	
4242 667	05/28/2009	8	6.4	31.8	14.6	0.418	1.65	<.5	409.6	<5	

5W



Primary Facility: 10940105

Monitor Point:
5W

Pre existing

Case

of M72

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT A MG/L	FE MG/L	MN MG/L	AL MG/L	SO4 MG/L	CL MG/L	COND MG/L
4242 275	06/04/2008	15	7	36.8	-7.2	1.43	2.86	<.5	360.1	8	
		0									
	08/26/2008	0									
4242 000	09/23/2008	0									
4242 000	10/09/2008	0									
4242 491	03/04/2009	5	7.2	35.0	21.5	0.419	1.73	<.5	379.5	6	
4242 663	05/28/2009	5	6.8	39.4	23.8	0.543	0.99	<.5	375.6	<5	

1W Upstream



Primary Facility: 10940105

Monitor Poi.
1W

Trib #1
Trib C.

Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT P. MG/L	FE MG/L	MN MG/L	ML MG/L	CO4 MG/L	TSS MG/L	1
	06/04/2008		6.8	49	22.2	2.2	0.993	<.5	80.7		
4242 311			6.9	72	52.4	2.74	1.36	<.5	100.4	6	
			7.5			0.464	2	<.5	273.5	8	
4242 367	09/23/2008		7.8			0.26	1.2		224.6	30	
4242 389	10/09/2008		7.6	83.6	70.8	0.306	0.419	<.5		<5	
4242 490	03/04/2009		7	30.8	21.6	0.937	0.43	<.5	43.8	8	
4242 662	05/28/2009		7.2	54.6	37.6	1.35	1.39	<.5	105.4	<5	

2W Downstream



Primary Facility: 10940105

		Monitor Point: 2W						1.68 Down	Year		
Coll ID Seq	Date Collected	Final Flow	pH pH units	ALK MG/L	HOT ALK MG/L	FE MG/L	MN MG/L	ML	CO4 MG/L	TSS MG/L	1
	06/04/2008		7.3	50.8	21.4	0.694	2.07	<.5	211.3		
4242 309			7.2	64	49.2	1.45	2.9	<.5	201.4	10	
			7.6			<.3	3.5	<.5	357.8	<5	
4242 366	09/23/2008		7.6			2	4.5		355.6	<5	
4242 388	10/09/2008		7.4	68	-53	<.3	2.37	<.5	200	<5	
4242 488	03/04/2009		7.4	42	29.8	0.42	0.89	<.5	165.4	6	
4242 659	05/28/2009		7.4	52.4	33.8	0.62	1.92	<.5	161.5	<5	

Abandoned Oil Well Below



Oil well looking upstream



Oil well looking downstream

