BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,)
)
Complainant,)
)
v.)
)
THERE'S AN INTERCOMPTONIC)
FREEMAN UNITED CUAL MINING)
COMPANY, LLC,)
a Delaware inniced hability company, and SPRINCEIELD COAL COMPANY LLC)
a Delawara limited liability company)
a Delaware minited hability company,	
Respondents.)

PCB NO. 2010-061 and 2011-002 (Consolidated – Water --Enforcement)

AFFIDAVIT OF THOMAS J. AUSTIN

Thomas J. Austin, being first duly swom upon oath, deposes and states as follows:

- 1. My name is Thomas J. Austin. I am currently the Vice President of Human Resources and Government Relations for Springfield Coal Company, LLC. ("Springfield Coal"). I have held this position since Springfield Coal acquired the Industry Mine from Freeman United Coal Mining Company, LLC ("Freeman United") on August 31, 2007.
- 2. From November 28, 2005 through August 31, 2007, I was the Vice President of Human Resources and Government Relations for Freeman United. From December 27, 2004 through November 28, 2005, I was the Director of Environmental Health and Safety for Freeman United.
- 3. As Director of Environmental Health and Safety at Freeman United and as Vice President of Human Resources and Government Relations for Freeman United and Springfield Coal, I was aware that the discharge monitoring reports ("DMRs") were submitted to the Illinois Environmental Protection Agency ("IEPA").
- 4. The DMRs that Freeman United and Springfield Coal submitted provided IEPA with detailed information on the specific levels of regulated constituents in discharges from the regulated outfalls at the Industry Mine.
- 5. On or about March 11, 2005, Freeman United received Violation Notice W-2005-00167, which is attached as Exhibit 1A to my affidavit. This violation notice referenced three violations of the Industry Mine's manganese effluent limit at Outfall 019.
- 6. On May 19, 2005, in response to the March 11, 2005 violation notice, Freeman United submitted a proposed Compliance Commitment Agreement ("CCA") to IEPA. A copy

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of the May 19, 2005 CCA is attached as Exhibit 1B to my affidavit. The CCA outlined a number of specific steps that Freeman United intended to undertake to address the manganese effluent violations referenced in the violation notice.

- 7. On or about June 16, 2005, IEPA notified Freeman United that the CCA was accepted, although IEPA imposed an additional monitoring requirement. A true and correct copy of the June 16, 2005 IEPA letter is attached as Exhibit 1C to my affidavit.
- 8. During the two-year period that the June 2005 CCA was in effect, Freeman United continued to submit DMRs to IEPA in accordance with its NPDES permit.
- 9. I understood that once IEPA approved the CCA, Freeman United had addressed, to the satisfaction of IEPA, the alleged violations that were the subject of the March 11, 2005 NOV. I am not aware that IEPA or any other state agency between June 2005 and March 2007 advised Freeman United of any intent to take any further enforcement action related to effluent discharges from the Industry Mine.
- 10. As a general matter, had IEPA notified Freeman United of additional violations and/or issues, I would have ensured that the CCA that Freeman United submitted responded to those violations or issues.
- 11. In the Spring of 2006, Freeman United commissioned Key Agricultural Services, Inc. to prepare a Manganese Case Study of the Industry Mine. The Case Study concluded that "the Mn levels found in the water of retention pond 19 are most likely due to the naturally occurring Mn levels of the soil material in the region and not due to acid rock drainage." A true and correct copy of the Manganese Case Study is attached as Exhibit 1D to my affidavit.
- 12. On March 30, 2007, Freeman United sent IEPA a proposed two-year CCA extension. A true and correct copy of the March 30, 2007 proposed CCA extension is attached as Exhibit 1E to my affidavit. This proposed CCA extension also enclosed a copy of the Manganese Case Study.
- 13. On or about July 13, 2007, Freeman United received a letter from IEPA relating to Freeman United's March 30, 2007 proposed CCA extension. A true and correct copy of the July 13, 2007 IEPA letter is attached as Exhibit 1F to my affidavit.
- 14. On August 14, 2007, Freeman United sent a letter to IEPA stating that effective September 1, 2007, Springfield Coal would be the owner/operator of the Industry Mine and requesting transfer of the NPDES permit. A true and correct copy of the August 14, 2007 Freeman United letter is attached as Exhibit 1G to my affidavit.
- 15. On August 30, 2007, Freeman United submitted a revised CCA extension request to IEPA that responded to IEPA's comments in its July 13, 2007 letter. A true and correct copy of the August 30, 2007 CCA is attached as Exhibit 1H to my affidavit.

- 16. IEPA did not formally respond in writing to the August 30, 2007 CCA extension request. However, after the Industry Mine was sold to Springfield Coal, I had a telephone conversation in September of 2007 with IEPA in which I was advised by IEPA to continue to operate the Industry Mine pursuant to the terms of the August 30, 2007 CCA extension request.
- It was my understanding from IEPA's representations that Springfield Coal was operating under a valid and enforceable CCA from August 30, 2007 until August 30, 2009. During this two year time period, Springfield Coal was working with IEPA pursuant to the terms of this August 30, 2007 CCA.
- 18. Except with respect to the telephone conversation referenced in paragraph 16 above, between July 13, 2007 and October 8, 2009, Freeman United and/or Springfield Coal did not receive any written communications from IEPA concerning: (a) Freeman United's August 14, 2007 transfer letter; (b) the August 30, 2007 CCA extension letter; or (c) any issues with the Industry Mine's discharges not meeting the effluent limitations in the NPDES Permit. As a general matter, had IEPA notified Freeman United and/or Springfield Coal of additional violations and/or issues, I would have ensured that the August 30, 2007 CCA responded to those violations or issues.
- 19. During the period of time I was employed by Freeman United and Springfield Coal, we exercised our best efforts to comply with all applicable effluent limits in the Industry Mine's NPDES permit. The CCAs that were submitted included the technically practicable and economically feasible means to enable the Industry Mine to meet the effluent limits in its NPDES permit.
- 20. On April 21, 2010, Springfield Coal sent a letter to Mr. Chad Kruse at IEPA seeking clarification from IEPA regarding the application of 35 IAC 406.106(b) to the effluent limitations in the Springfield Coal's NPDES Permit. Springfield Coal never received either an oral or written response from IEPA to the April 21, 2010 letter. A true and correct copy of the April 21, 2010 letter is attached as Exhibit 11 to my affidavit.
- 21. On July 20, 2010, Springfield Coal met with IEPA to discuss the status of the NPDES renewal application which was submitted by Freeman United on August 15, 2003. During the meeting, when we asked IEPA where in the queue the NPDES renewal application was for consideration, IEPA informed Springfield Coal that the renewal application from 2003 "was not even in the queue."
- 22. Sampling of the streams traversing the Industry Mine property was conducted in 1979 prior to any mining operations commencing on the property. I have reviewed the data generated from this sampling and it shows that there were elevated levels of a number of constituents, including sulfate, manganese, iron, total suspended solids (TSS), and pH in the surface water. This sampling identified the following constituents and maximum concentrations: manganese (10.4 mg/l), sulfates (601 mg/l), and iron (3.54 mg/l). All of these concentrations would be considered exceedances of the Industry Mine's current NPDES permit. This data is reported in the true and correct copies of the relevant

portions of the Environmental Impact Statement for the Proposed Freeman United Coal Mining Company Industry Mine Site, dated June 19, 1979, and Freeman United Coal Mining Company Industry Mine Surface Disturbance Report Volume I, which are attached as Exhibits 1J and 1K to my affidavit.

- 23. In 1991 and 1992, the Industry Mine planned to expand its operations and had samples taken of surface water runoff in the areas where many of the now existing ponds were to be built. This area had been subject to some previous historic underground coal mining by other companies. I have reviewed the data generated from this sampling and it identified the following constituents and maximum concentrations: manganese (20.7 mg/l), sulfates (900 mg/l), iron (15.6 mg/l), TSS (120 mg/l), and pH (3.45). All of these concentrations would be considered exceedances of the Industry Mine's current NPDES permit. This data is reported in the true and correct copy of the relevant portions of the Freeman United Coal Mining Company Industry Mine Permit Application No. 261, dated July 1, 1992, which is attached as Exhibit 1L to my affidavit.
- 24. Sampling of the streams traversing the Industry Mine property have been conducted since 2003. I have reviewed the data generated from such sampling and it has regularly shown that the concentrations of iron, chlorides, and TSS are at higher concentrations upstream of Industry Mine rather than downstream. Moreover, the upstream sampling has identified regular occurrences of iron and TSS at concentrations in excess of the effluent limits in the Industry Mine's NPDES Permit. The following are the effluent limitations in the NPDES Permit and examples of upstream sampling results:

NPDES Permit Limits	Iron - mg/l	Total Suspended Solids (TSS) mg/l
30 Day Avg.	3.0	35
Daily Max	6.0	70

Date of Upstream Sample	Iron – mg/l	Total Suspended Solids (TSS) mg/l
7/18/2003	32.5	1900
3/5/2004	4.77	153
4/22/2009		63
10/30/2009	12.4	83
11/30/2009		167
1/24/2010		86
3/11/2010	4.86	203
7/21/2010	18.3	387
2/28/2011	19.6	114
4/25/2011		73
5/25/2011	36.2	760

True and correct copies of the laboratory reports from which this data is taken are attached as Exhibits 1M to my affidavit.

- 25. At the Industry Mine, chemical addition has been conducted at Ponds 18 and 19 on a periodic basis mainly to lower the manganese concentrations by attempting to raise the pH in the ponds. Chemical addition has been conducted very sporadically at Ponds 26, 2, and 3.
- 26. I have reviewed Larry Crislip's March 1, 2012 affidavit and the exceedances he alleges of the sulfate effluent limitation in the NPDES Permit. I have also reviewed the sulfate data reported on the DMRs for the Industry Mine and have reviewed the current water quality standard for sulfate adopted by the Illinois Pollution Control Board on September 19, 2008. If the NPDES Permit for the Industry Mine had incorporated the current sulfate standard, there would have only been 19 excursions for sulfate from September 2008 through 2011 as opposed to the 77 excursions alleged in Larry Crislip's affidavit, a reduction of over 75%.
- 27. I have reviewed Larry Crislip's March 1, 2012 affidavit and the exceedances he alleges of the effluent limitations in the NPDES Permit. I have also reviewed the data reported on the DMRs for the Industry Mine that were submitted to IEPA. From my review of these documents, I have noted that there are numerous discrepancies between the information in Larry Crislip's affidavit and the data reported on the DMRs. For example Mr. Crislip claims that on February 14, 2005 for Outfall 18 the concentration of iron in the discharge was 13.0 mg/l, whereas the DMR shows a value of only 0.43 mg/l. This would not be considered an exceedance of the effluent limitation in the NPDES Permit. Also, Mr. Crislip identifies the following as exceedances of the monthly average effluent limitations in the NPDES Permit, however, the DMRs indicate that less than three samples were taken in those particular months and therefore pursuant to 35 IAC 304.104(b), which requires a monthly average to be based on at least three daily composites, these would not be exceedances:

Constituent	Month/Year	Outfall	Permit Limit	Actual Discharge
Iron	January 2005	018	3.5 mg/L	4.42 mg/L
Iron	January 2005	024W	3.0 mg/L	4.65 mg/L
Iron	January 2005	029	3.0 mg/L_	4.98 mg/L
lron	February 2005	029	3.0 mg/L	3.08 mg/L
Manganese	February 2005	018	2.0 mg/L	10.3 mg/L
Manganese	February 2005	019	2.0 mg/L	11.3 mg/L
Manganese	March 2005	019	2.0 mg/L	6.76 mg/L
Manganese	June 2005	018	2.0 mg/L	6.66 mg/L
Manganese	June 2005	019	2.0 mg/L	5.78 mg/L
Manganese	June 2006	019	2.0 mg/L	3.38 mg/L
Manganese	January 2007	019	2.0 mg/L	7.95 mg/L
Manganese	February 2007	019	2.0 mg/L	15.2 mg/L
Manganese	May 2007	019	2.0 mg/L	5.66 mg/L
Manganese	January 2008	019	2.0 mg/L	12.9 mg/L
Manganese	December 2008	018	2.0 mg/L	2.2 mg/L

Manganese	January 2009	018	2.0 mg/L	2.165 mg/L
Manganese	March 2009	026	2.0 mg/L	2.725 mg/L
TSS	January 2005	003	35.0 mg/L	48.5 mg/L
TSS	January 2005	018	35.0 mg/L	38 mg/L
TSS	February 2008	029	35.0 mg/L	64 mg/L

This concludes my affidavit.

Affiant:

Thomas J. Austin

Subscribed and sworn to before me this $\frac{27}{4}$ day of April, 2012.

Notary Public

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PEOPLE OF THE STATE OF ILLINOIS,)
Complainant,)
ENVIRONMENTAL LAW AND)
POLICY CENTER, on behalf of PRAIRIE) PCB NO. 2010-061 and 2011-002
RIVERS NETWORK and SIERRA CLUB,) (Consolidated–Water
ILLINOIS CHAPTER,) Enforcement)
Intervenor,)
v.)
FREEMAN UNITED COAL MINING)
COMPANY. LLC.)
a Delaware limited liability company, and	ý
SPRINGFIELD COAL COMPANY, LLC,)
a Delaware limited liability company,)
Despendents)
терицения.	J

AFFIDAVIT OF THOMAS J. AUSTIN

Thomas J. Austin, being first duly sworn upon oath, deposes and states as follows:

- My name is Thomas J. Austin. I am currently the Vice President of Human Resources and Government Relations for Springfield Coal Company, LLC. ("Springfield Coal"). I have held this position since Springfield Coal acquired the Industry Mine from Freeman United Coal Mining Company, LLC ("Freeman United") on August 31, 2007.
- 2. From November 28, 2005 through August 31, 2007, I was the Vice President of Human Resources and Government Relations for Freeman United. From December 27, 2004 through November 28, 2005, I was the Director of Environmental Health and Safety for Freeman United.
- 3. As Director of Environmental Health and Safety at Freeman United and as Vice President of Human Resources and Government Relations for Freeman United and Springfield Coal, I was aware that the discharge monitoring reports ("DMRs") were submitted to the Illinois Environmental Protection Agency ("IEPA").
- 4. I have reviewed the Prairie Rivers Network and Sierra Club's ("Intervenors") Motion for Summary Judgment filed April 27, 2012 and the exceedances they allege of the sulfate effluent limitation in the NPDES Permit. I have also reviewed the sulfate

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data reported on the DMRs for the Industry Mine and have reviewed the current water quality standard for sulfate adopted by the Illinois Pollution Control Board on September 19, 2008. Under this new standard, Springfield Coal would have had significantly fewer exceedances for sulfate. In their Motion, the Intervenors have alleged that from the time Springfield Coal began operating the Industry Mine in September 2007 through September 2011, Springfield Coal had 124 excursions of the sulfate effluent limitation in its NPDES Permit. However, if Springfield Coal had been subject to the new increased sulfate standard during this four year period, there would have been 91 less excursions, a reduction of almost 75%.

I have reviewed the Intervenors' Motion for Summary Judgment filed April 27, 2012 and the exceedances they allege of the effluent limitations in the NPDES Permit. I have also reviewed the data reported on the DMRs for the Industry Mine that were submitted to IEPA. There are numerous discrepancies between the information in the Intervenors' Motion for Summary Judgment and the data reported on the DMRs. There are 66 instances where the Intervenors have alleged there to be violations when in fact no such violations have occurred. For example, the Intervenors allege that in April 2008, June 2008, and February 2011 Springfield Coal's discharges for Outfall 017 exceeded its permit limit. However, Outfall 017 was not discharging during the months claimed. In September 2010, Intervenors allege that there was a discharge of sulfate from Outfall 009 at a concentration of 1136 mg/L. However, this is actually an averaged value and the NPDES Permit does not have a monthly average effluent limitation for sulfate, therefore, this would not be an exceedance of the effluent limitation in the NPDES Permit. And in January 2010, the Intervenors allege that the Industry Mine's discharge at Outfall 019 had a pH of 9.04, when actually the DMR shows a pH value of 8.38, which is not a violation of the NPDES Permit.

Also, the Intervenors identify the following 61 occurrences as exceedances of the monthly average effluent limitations in the NPDES Permit, however, the DMRs indicate that less than three samples were taken in those particular months and therefore pursuant to 35 IAC 406.101(b), which requires a monthly average to be based on at least three grab samples, these would not be exceedances:

Constituent	Month/Year	Outfall	Discharge
			Concentration
Iron	January 2010	033	3.52 mg/L
Iron	January 2010	031	8.08 mg/L
Iron	June 2010	031	4.39 mg/L
Iron	June 2010	032	12.18 mg/L
Iron	June 2010	033	4.905 mg/L
Iron	July 2010	032	7.02 mg/L
Iron	February 2011	031	4.30 mg/L
Iron	February 2011	033	4.66 mg/L
Iron	April 2011	031	4.04 mg/L
Iron	May 2011	031	24.10 mg/L
Iron	May 2011	035	4.84 mg/L

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Iron	June 2011	031	8.575 mg/L
Manganese	January 2008	019	12.9 mg/L
Manganese	May 2008	019	6.95 mg/L
Manganese	July 2008	019	3.79 mg/L
Manganese	August 2008	019	3.43 mg/L
Manganese	September 2008	019	3.47 mg/L
Manganese	December 2008	018	2.2 mg/L
Manganese	January 2009	018	2.165 mg/L
Manganese	January 2010	009	2.76 mg/L
Manganese	March 2010	018	2.39 mg/L
Manganese	May 2010	018	2.13 mg/L
Manganese	June 2010	018	2.32 mg/L
Manganese	December 2010	018	2.55 mg/L
Manganese	January 2011	003	2.13 mg/L
Manganese	January 2011	009	2.91 mg/L
Manganese	January 2011	018	4.97 mg/L
Manganese	February 2011	018	2.78 mg/L
Manganese	May 2011	018	3.99 mg/L
Manganese	June 2011	018	3.18 mg/L
Manganese	July 2011	018	2.73 mg/L
Manganese	September 2011	018	2.13 mg/L
Manganese	January 2010	026	5.12 mg/L
Manganese	May 2010	026	2.695 mg/L
Manganese	December 2010	026	2.75 mg/L
Manganese	January 2011	024W	2.47 mg/L
Manganese	January 2011	026	2.61 mg/L
Manganese	February 2011	019	2.75 mg/L
Manganese	February 2011	024W	2.36 mg/L
Manganese	February 2011	026	2.73 mg/L
Manganese	March 2011	019	2.89 mg/L
Manganese	April 2011	019	2.25 mg/L
Manganese	May 2011	019	2.88 mg/L
Manganese	June 2011	026	2.09 mg/l
Manganese	July 2011	019	2.19 mg/l
Manganese	September 2011	019	3.07 mg/L
TSS	February 2008	003	49.0 mg/L
TSS	February 2008	029	64.0 mg/L
TSS	June 2008	003	41.0 mg/L
TSS	March 2010	031	42.5 mg/L
TSS	March 2010	033	37.0 mg/L
TSS	June 2010	018	49.0 mg/L
TSS	July 2010	018	38.5 mg/L
TSS	May 2010	033	43.0 mg/L
TSS	June 2010	031	44.0 mg/L
TSS	June 2010	032	45.5 mg/L

TSS	June 2010	033	36.0 mg/L
TSS	July 2010	032	47.0 mg/L
TSS	February 2011	033	64.0 mg/L
TSS	April 2010	035	60.0 mg/L
TSS	May 2010	035	36.0 mg/L

- 6. In addition to the Compliance Commitment Agreement submitted to the IEPA on August 30, 2007, Springfield Coal has submitted to IEPA compliance plans on February 18, 2010, May 7, 2010, June 3, 2010, June 30, 2011, and August 1, 2011. Springfield Coal has spent over \$600,000 in undertaking the work under the compliance plans and work outside of the compliance plans to help maintain compliance with the NPDES Permit.
- 7. Springfield Coal has employed and utilized professional engineers to assist in, among other things, developing compliance plans and to ensure that the Springfield Coal complies with the terms of its NPDES Permit. Springfield Coal has utilized three licensed professional engineers from 2007 to the present at the Industry Mine, including Steven C. Phifer, P.E., Craig A. Schoonover, P.E., and Cory A. Schoonover, P.E. These engineers have significant experience in environmental management and remediation, civil engineering, construction engineering, mining engineering, and management of coal combustion waste. They have worked at consulting firms in the past. For example, Steven C. Phifer, P.E., served as Freeman United's Environmental Engineer/Project Engineer from 1978 to 2008 and is currently serving as Springfield Coal's Environmental Engineer from 2010 to the present. Craig A. Schoonover, P.E., has over twenty-five years of experience in environmental management, planning, engineering, permitting, remediation, and regulatory compliance.
- 8. Prior to July 21, 2003, the Industry Mine's NPDES Permit had an effluent limitation for sulfate of 3500 mg/l. Based upon my staff's review of the DMRs, from 1989 to July 21, 2003, the Industry Mine had zero exceedances of the sulfate effluent limitation in its NPDES Permit. On July 21, 2003, NPDES Permit was modified to significantly lower the sulfate effluent limitation to the limits that currently exist in the NPDES Permit (i.e., as low as 500 mg/l). Since July 21, 2003, the operations of the Industry Mine have not changed in any significant way which would materially affect the concentrations of sulfate being discharged.
- 9. Many of the Industry Mine outfalls did not discharge on a daily basis. The frequency of the discharges from the different outfalls at the Industry Mine was not constant, varying due to factors such as rainfall; thus, a given outfall may have discharged only one or two days in a reporting period, or not at all.
- On April 27, 2012, I submitted an affidavit in the above matter (herein "April 2012 Affidavit"). To my knowledge, all of the information and exhibits in the April 2012 Affidavit is accurate and true except for one minor correction. Item number 22 of the April 2012 Affidavit states the following: "Sampling of the streams traversing the

Industry Mine property was conducted in 1979 prior to any mining operations commencing on the property." Based upon my review of documents in preparation for submitting this affidavit, I discovered that the sampling of the streams occurred in 1978, not 1979.

11. Item number 24 of the April 2012 Affidavit has been updated to include how upstream sampling has identified regular occurrences of settleable solids in excess of the effluent limits in the Industry Mines' NPDES Permit. Below is the updated version, including information regarding the settleable solids:

Sampling of the streams traversing the Industry Mine property have been conducted since 2003. I have reviewed the data generated from such sampling and it has regularly shown that the concentrations of iron, chlorides, and TSS are at higher concentrations upstream of Industry Mine rather than downstream. Moreover, the upstream sampling has identified regular occurrences of iron, TSS, and settleable solids at concentrations in excess of the effluent limits in the Industry Mine's NPDES Permit. The following are the effluent limits in the NPDES Permit and examples of upstream sampling results:

NPDES Permit Limits	Iron - mg/l	Total Suspended Solids (TSS) mg/l	Settleable Solids ml/l
30 Day Avg.	3.0	35	
Daily Max	6.0	70	0.5

Date of Upstream	Iron-mg/l	Total Suspended Solids (TSS)	Settleable Solids
Sample		mg/l	ml/l
7/18/2003	32.5	1900	1.2
3/5/2004	4.77	153	
4/22/2009		63	
10/30/2009	12.4	83	
11/30/2009		167	
1/24/2010		86	
3/11/2010	4.86	203	
7/21/2010	18.3	387	
2/28/2011	19.6	114	1.0
4/25/2011		73	
5/25/2011	36.2	760	

True and correct copies of the laboratory reports from which this data is taken were attached as Exhibits 1M to the April 2012 Affidavit.

This concludes my affidavit.

Affiant:

Thomas J. Aùstin

Subscribed and sworn to before me this 6 day of June, 2012.

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Notary Public

PATRICIA L CAMILLE Y COMMISSION EXPIRE DECEMBER 3, 2015



Freeman United Coal Mining Company

August 30, 2007

Ms. Beverly Booker Illinois EPA, Bureau of Water CAS #19, P.O. Box 19276 Springfield, IL 62794-9276

Re: Industry Mine NPDES Facility I.D. IL0061247 Violation Notice: W-2005-00167 Pond 19 Compliance Commitment Agreement

Dear Ms. Booker,

In response to the Agency's July 13, 2007 rejection of our March 30, 2007 request for extension of the Compliance Commitment Agreement (CCA) for Pond 19 at the Industry Mine, I herein respond as follows:

Repair and modification of the Industry Mine Pond 19 decant structure this summer allows the mine personnel additional flexibility in controlling discharges from the pond at Outfall 019. Installation of a valve on the discharge piping allows periodic discharges. In addition, a pump that will allow better mixing between the upper and lower portions of the pond has been put in place at the pond. These actions allow us to present the following proposal:

Pond 19 Proposal

- 1. The term of this agreement shall be two years from the date of the Agency's acceptance of this proposal.
- 2. During the term of this agreement:
 - a. Freeman will continue to maintain the forms of treatment, as set out in the May 12, 2005 letter to the Agency, to control the manganese levels in the discharge from Pond 19;
 - b. Except during periods of higher flows in Grindstone Creek in response to larger precipitation events, Freeman will endeavor only to discharge water from Pond 19 only when the Total Manganese level in the pond is below the permit limits as determined by on-site monitoring.

PO Box 259 Farmersville, IL 62533 Tel 217 627-2161 Fax 217 627-3411

- c. Freeman will continue to monitor the effluent from Pond 19 as a Reclamation Area Discharge one time per month with the following parameters monitored: pH, Total Settleable Solids, Sulfates, Chlorides, Total Manganese, and Flow Rate.
- d. Freeman will monitor Grindstone Creek downstream from the Pond 19 effluent monthly when monitoring the Pond 19 effluent with the following parameters monitored: pH and Total Manganese.
- 3. During the term of this Agreement, Freeman will continue to explore alternatives to treatment of the water in Pond 19 that would result in an ultimate resolution and water quality in consistent compliance with the General Use Water Quality Standard.
- 4. Not later than sixty (60) days before the expiration date of the term of this Agreement, Freeman will seek to meet with the Agency, at a time and place mutually convenient, to review the status of Pond 19 and to determine whether any further action is required regarding Pond 19 and the drainage area it serves.

Respectively submitted,

FREEMAN UNITED COAL MINING COMPANY

By:

Steven C. Phifer, Environmental Engineer

PO Box 259 Farmersville, IL 62533 Tel 217 627-2161 Fax 217 627-3411

P.O. Box 9320 Springfield, Illinois 62791-9320 Phone: 217-698-3300 Fax: 217-698-3380

February 18, 2010

Chad Kruse Assistant Counsel Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276

Re: Violation Notice W-2009-00306 Springfield Coal Industry Mine

Dear Mr. Kruse:

On January 6, 2010 we met with you and other representatives of the IEPA to discuss the above-referenced Violation Notice. At the meeting, we discussed the action steps Springfield Coal Company is taking and plans to take in response to the Violation Notice. This letter provides a summary of such action steps.

The Industry Mine opened in 1982 and was operated by Freeman United Coal Mining Company under permits issued by the Office of Mines and Minerals and the Illinois Environmental Protection Agency until September 1, 2007. At that time Springfield Coal Company, LLC purchased the assets of the Industry Mine and requested the permit be transferred to Springfield Coal.

Springfield Coal Company, LLC has been in control of the Industry Mine since September 1, 2007. Reclamation work for the areas around the ponds has been mostly completed, as per the reclamation plans. The majority of the affected watershed for each pond has had a Phase I bond release. All the drainage areas from which these ponds collect the surface runoff and groundwater seepage are "Reclamation Areas" as defined in 35 ILAC 402.101.

As pointed out previously, when the initial applications for permits were prepared, it was noted that there was prior coal mining in upstream areas off-site of two of the ponds at the Industry Mine with the largest number of excursions, ponds 18 and 19. This was noted in pre-mining information of the original permit. Runoff and seepage from these areas was already affecting water quality within the permit area prior to any mining by the prior permittee of the Industry Mine, Freeman United Coal Mining Company.

As required by IEPA, a renewal application for the NPDES permit for the permitted areas was submitted in August of 2003. As of the date of this letter, the renewal has not been issued, however, the prior NPDES permit continues in effect until IEPA acts upon the renewal application.

Revisions to the various effluent standards have occurred since the last time the permit was modified and/or renewed. The sulfate standard now uses water hardness and chloride to calculate sulfate limits. If the permit had been revised in a timely manner almost all of the sulfate excursions would have been well below the new standards.

A number of treatment technologies have been utilized over the years especially for manganese excursions from pond 19.

Those have included:

- 1. The channels from the seeps to pond 19 have been lined with limestone rip rap to increase aeration before the groundwater reaches pond 19.
- 2. Approximately 20,000 cubic yards of material has been excavated from the upper portions of pond 19, increasing its capacity to approximately 30,000 cubic yards, essentially providing a two cell system.
- 3. Soda ash briquettes in a metal aeration basket have been place periodically in the flow from the seeps near the upper end of pond 19.
- 4. Windmills have been constructed to drive aeration units in the pond.
- 5. Hydrated limestone slurry is being applied on a weekly basis except when pond surface is frozen

Despite all of the above, the combined treatment steps have not consistently reduced manganese concentrations at the outfall of pond 19 to meet the discharge limits.

As we discussed at our January 6 meeting, the following is Springfield Coal's compliance plan for ponds 9, 18, 19, 24W, and 26:

1. For ponds 9, 24W, and 26, the excursions primarily relate to sulfate limits. Prior to the July 21, 2003 modification of the permit, the sulfate effluent standard was 2,500 mg/l, and there were very few excursions for sulfate at the three (3) ponds. As previously noted, if IEPA would approve our renewal application, the method for a calculated SO4 would be in effect. With this revised effluent standard, the vast majority of the past excursions would have fell below those revised sulfate limits. Additionally, in the future, any discharges monitored for sulfate, would very likely be below he calculated sulfate limit. Springfield Coal requests that the renewal to NPDES Permit No.

IL00661247 be approved or IEPA enter into a consent order with Springfield Coal which establishes sulfate discharge limits based on the revised effluent standard.

- 2. For ponds 18 and 19
 - A) Springfield will continue to maintain previous forms of treatment set out above to treat for manganese in pond 19.
 - B) Springfield will treat both ponds with hydrated lime and/or soda ash briquettes, or other approved materials on a regular basis. Springfield Coal will mix the lime using windmills, and/or mechanical means to insure mixing and aeration.
 - C) Springfield Coal will add soda ash and/or soda ash with potassium permanganate to both ponds on a regular basis.
 - D) Springfield Coal will monitor the water in both ponds 18 and 19 on a regular basis. Water will not be discharged from these ponds until the water meets discharge requirements. At such time, we will either pump or drain the ponds down to sufficient levels for the ponds to hold the anticipated inflow expected until such time that they need to be discharged again. Springfield will repeat the process on an as needed basis.

Springfield Coal proposes to undertake these action steps for Ponds 18 and 19 for a period of one year or until a more permanent solution can be found.

Thank you for your attention to this matter. After IEPA has had a chance to review this letter, we would like to schedule a meeting in order to discuss resolving this matter.

Sincerely,

Thomas J. Austin Vice President, Human Resources & Government Relations

P.O. Box 9320 Springfield, Illinois 62791-9320 Phone: 217-698-3300 Fax: 217-698-3380

May 7, 2010

Chad Kruse Assistant Counsel Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276

Re: Violation Notice W-2009-00306 Springfield Coal Industry Mine

Dear Mr. Kruse:

This is a follow-up to our letter to you of February 18, 2010, regarding the abovereferenced matter. In that letter, we outlined action steps we were planning to take in response to the Violation Notice. We have been undertaking those steps, which have primarily involved treating the water in Ponds 18 and 19 with lime, soda ash and/or potassium permanganate. While these steps have been successful over the last few months, we see these steps to be "stop gap" measures while we evaluated longer term solutions. This letter will outline the steps we plan to take which we believe will offer a long term solution to the issues, and will reduce the amount of lime and other treatment chemicals needed.

As discussed in further detail below, we are planning two actions: 1) removal of sediments from Pond 19; and 2) construction of an ash wall upgradient of Pond 19.

Removal of Sediments from Pond 19

We are planning to remove much of the accumulated sediments from Pond 19. The sediments are a build-up of lime and other treatment chemicals used in the pond, manganese which has settled out of the water as a result of the treatment, and normal sediment accumulated over time via surface runoff from upgradient areas. Undertaking this work will reduce the amount of sediment (and manganese) that is re-suspended when treatment of the pond is conducted. Also, removing the sediments will allow for additional storage capacity in the pond, and will therefore allow us additional time to treat the water if sampling of the water in the pond shows any of the parameters above

permit limits and we need to conduct further treatment to lower the constituent concentrations to levels within permit limits.

Removal of the sediment from a pond is dependent on the amount of accumulated sediment in the pond and the storage volume remaining in the impoundment. Sediment removal, when needed, is part of the maintenance plan for the pond under our permit with the Office of Mines & Minerals. We have informed Mines & Minerals that we plan to conduct this work, and they are in agreement. The sediment removal work will be done using backhoes and scrapers. The removed sediments will initially be stockpiled upgradient of the pond to allow them to dewater. After dewatering, the sediments will be permanently placed on-site in a location approved by Mines & Minerals.

The watershed for Pond 18 is considerably larger than the watershed for Pond 19. Therefore, the groundwater flow is a much smaller percentage of the entire discharge volume. Pond 18 does not have the concentrations of manganese as those in Pond 19. Currently, treatment with lime, soda ash and/or potassium permanganate of Pond 18 is not as intensive as Pond 19. At this time we are not planning to remove the sediments from Pond 18. We will evaluate how the cleaning of sediment from Pond 19 affects manganese concentrations and treatment requirements for Pond 19. The results will determine if sediment removal from Pond 18 is a viable solution.

Installation of an Ash Wall at Pond 19

Upgradient of Pond 19, there are several areas of groundwater seeps that come to the surface and flow down into the pond. These groundwater seeps have high levels of manganese. It should be noted that even before there was mining at the Industry Mine, samples were taken of surface water runoff in the area where Pond 19 was to be built and the surface water showed concentrations of manganese at levels higher than the limits for manganese which were ultimately adopted into our NPDES permit.

In order to address these groundwater seeps so they are not creating higher levels of manganese in Pond 19, we plan to install an in-ground ash wall upgradient of Pond 19. The wall would essentially involve digging a trench 6' wide and 300' to 400' long and filling it (up to 1' to 2' of grade) with a coal combustion by-products ash that is approved for beneficial use at the Industry Mine. The trench would be approximately 15' deep and extend 2 to 3 feet into the fireclay (underclay). Fireclay is considered an impermeable layer (aquatard) and would prevent downward movement of the groundwater. There would then be a 1' to 2' soil cap put on top of the ash wall so that the top of soil cap would be at original surface elevation. The wall is designed to be permeable, whereby groundwater would pass through the higher pH beneficial use ash raising the pH of groundwater, which would cause some of the manganese to drop out of the water before it reaches the pond. Also, it would help raise the pH of the water in the pond and therefore less lime would be needed for additional treatment in the pond.

The ash wall would be installed using a local contractor, with supervision provided by Springfield Coal Company, LLC personnel.

We have been in contact with Mines & Minerals to let them know about this proposed ash wall and are obtaining their approval before it is constructed.

As discussed previously, the characteristics of Pond 18 are different that at Pond 19. The success of the ash wall at Pond 19 will determine if an ash wall is a viable solution for Pond 18.

Our timing for undertaking this work will be during the good weather summer months.

Until these steps are untaken, we plan to continue to treat the water in Ponds 18 and 19 as set forth in our letter of February 18, 2010. The ash wall, as currently proposed, will treat a portion of the groundwater seeps. Success of the ash wall will determine if the ash wall would be extended to treat additional groundwater seeps entering Pond 19.

We are also planning to install at each pond, shutoff and drawdown valves on the discharge pipes. We have been treating the water in the ponds and, when our sampling shows that the water meets the NPDES limits, discharging the water by pumping. The drawdown valve will provide another method for discharging water. We want to install shutoff valves so if the water in the ponds gets up to the level of the discharge pipes but does not meet our NPDES permit limits, we can close the valves and continue treating the water until it meets the permit limits.

Thank you for your attention to this matter. If you have any questions regarding the action steps outlined in this letter, please do not hesitate to contact us.

Sincerel

Thomas J. Austin Vice President, Human Resources & Government Relations

cc: Tom Davis Dale Guariglia Roger Callaway Scott Fowler

P.O. Box 9320 Springfield, Illinois 62791-9320 Phone: 217-698-3300 Fax: 217-698-3380

June 3, 2010

Chad M. Kruse Assistant Counsel Illinois Environmental Protect Agency 1021 North Grand Avenue East PO Box 19276 Springfield, Illinois 62794-9276

> Re: Violation Notice W-2009-00306 Industry Mine—Long-term Compliance Action Steps

Dear Mr. Kruse:

In response to your questions concerning our long term compliance steps.

An application to renew the Industry Mine NPDES permit was filed with your office August 2003 and again in August 2008. A renewal of the permit would incorporate the updated calculated sulfate standard and we would be able to maintain compliance with the new standard in effect. The permit should be renewed by your agency with the updated sulfate standard as soon as possible. The sulfate excursions under the old standard would stop by using the calculated sulfate standard.

Removal of sediment from Pond 19

If over time, we find the treatment lime, soda ash and other sediments accumulated in the pond, and are affecting water quality and treatment, we would remove the sediment in a procedure similar to the one outlined previously in my May 7, 2010 letter. This pond was constructed as a sediment structure. If the ash wall works as we anticipate, we will be required to treat with less lime and/or soda ash than we do now. This should considerably reduce the build up of treatment materials in the pond.

Currently the Illinois Department of Natural Resources, Office of Mines and Mineral (IDNR,OMM) is reviewing our submittal for cleaning out of Pond 19. After approval by

IDNR.OMM, the IEPA will be notified where on the Industry Mine site the Pond 19 sediments will be permanently placed after dewatering is complete.

Installation of an ash wall up gradient of pond 19

While we have no direct firm evidence that the groundwater flowing through the ash wall will have the manganese reducing effect we anticipated, we do know that water passing over and/or through beneficial use ash will raise the pH of the water. This should cause some of the manganese to drop out of the water before it reaches Pond 19. The Industry Mine has coal combustion by products ash sources approved for beneficial use. Attached is the analysis of the ash we intend to utilize in construction of the wall.

The groundwater seeps are located along a hillside and daylight to the surface at an elevation approximately 15 feet above the Pond 19 normal water elevation. The ash wall will be installed up gradient of the seeps on a portion of the total length of the seeps. For now, we want to try a small length of wall, which we feel will raise the pH of the groundwater passing through and allow the manganese to drop out. The ash wall will be installed a minimum of three feet into the undisturbed fireclay or below the seep elevation. The top of the ash wall will be approximately two feet below existing ground surface elevation, which is well above the seep elevation. A soil cap would be put on top of the ash wall, and any surface runoff would flow over and not through the wall. The surface runoff would continue to flow to Pond 19.

The beneficial ash that would be used in the ash wall is a very flowable material. Any voids created during the excavation of the trench would be filled by the ash as it is installed in the excavated trench. The area where the wall would be installed was mined in the mid 90's, after this amount of time, any voids created by mining would be minimal.

We can not guarantee over an extended amount of time that the proposed ash wall will not become impermeable. We are proposing to install the ash wall up gradient of only a portion of the length of the seeps. Should the wall become impermeable, the groundwater contacting the ash wall would rise very slightly in elevation and then "flow" to an existing seep not influenced by the ash wall. However, should the ash wall remain permeable, and is effective in raising the pH and reducing the amount of manganese enter Pond 19, an additional length of ash wall would be installed

At this time, we have not developed an alternative plan for the ash wall if it becomes impermeable. We will have to evaluate alternatives at that time.

If you have any questions, please give me a call. We have a contractor in place to start the project and want to continue to take steps to insure continuous compliance. Your rapid

response by renewing our permit and approving this compliance commitment will help insure that compliance continues.

Sincerel

Thomas J. Austin VP Human Resources & Government Relations

CC: Thomas Davis Chief, Environmental Bureau/Springfield Illinois Attorney General's Office 500 South Second Street Springfield, Illinois 62706

> Dale Guariglia One Metropolitan Square, 211 N. Broadway Suite 3600 St. Louis, Missouri 63102

Larry Crislip 2309 W. Main St., Suite 116 Marion, Illinois 62959

Roger Callaway 1021 North Grand Avenue East PO Box 19276 Springfield, Illinois 62794-9276

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Spring	field Coal Company			Client P	Project: Indu	istry Mi	ne Ash Samples	
WorkOrder: 09100111				Client Sam	pie ID: ADM	A - Clint	ton	
Lab ID: 09100	111-004			Collection	n Date:			
Report Date: 22-Oct	-09				Marrix: SO	D		
	· · · · · · · · · · · · · · · · · · ·						and a second state of the	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed Ana	iyst –
ASTM D3987, SW-846 9012/	A. IN SHAKE EXTRACT	(TOTAL	AMODIF	IED				
Cyanide		0.007		< 0.007	mg/L	1	10/16/2009 9:39:13 AM	RCE
ASTM D3987. SW-846 9036,	IN SHAKE EXTRACT (1	OTAL)						
Sulfate, SHAKE		500		1800	mg/L	10	10/16/2009 2:36:00 PM	DLW
ASTM D3987. SW-846 9214.	IN SHAKE EXTRACT							
Fluoride		0.10		1.87	mg/L	1.	10/21/2009 11:15:00 AM	B SJ
ASTM D3987. SW-846 9251,	IN SHAKE EXTRACT							
Chloride, SHAKE		1		45	mg/L	1	10/16/2009 2:36:00 PM	DL₩
EPA 600/2-78-54 SLURRY								
Neutralization Potential		0		270	CaCO3 T/KT	1	10/19/2009 7:50:00 AM	MK
EPA 670 2-74-70 SLURRY								
Net Neutralization		D		270	CaCO3 T/KT	1	10/19/2009 9:30:00 AM	MK
Potential Acidity		0		0	CaCO3 T/KT	1	10/16/2009 9:10:00 AM	MK
EPA 670, SM2310B SLURRY	<u>Y</u>							
Acidity		D		-256,219	CaCO3 T/KT	1	10/15/2009 11:10:00 AM	MK
EPA 670. SM2320B SLURR	<u>Y</u>							
Alkalinity		0		301	CaCO3 T/KT	1	10/15/2009 11:10:00 AM	MK
EPA 670. SM2540C SLURR	<u>Y</u>							
Total Dissolved Solids		20		4600	mg/L	1	10/16/2009 8:55:00 PM	JMT
EPA 670, SW-846 9045C SL	URRY							
рH		1.00		12.5		1	10/15/2009 10:10:00 AM	MK
SW-846 1311, 3010A, 6010B.	METALS IN TCLP EXT	RACT B	<u>V ICP</u>				10/10/00/00 0.00.00 011	
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	10/16/2009 3:09:06 PM	LAL
Barium	NELAP	0.0100		0.885	ന്നു/L	2	10/19/2009 1:54:55 PM	LAL
Beryllium	NELAP	0.0020		< 0.0020	mg/L	2	10/19/2009 1:54:55 PM	LAL
Boron	NELAP	0.400	J	0.031	mg/L	1	10/16/2009 3:09:06 PM	LAL
Cadmium	NELAP	0.0040	J	0.0006	mg/L	2	10/19/2009 1:54:55 PM	LAL
Chromium	NELAP	0.0100		0.0267	mg/L	1	10/16/2009 3:09:06 PM	LAL
Cobalt	NELAP	0.0100	J	0.0029	mg/L	1	10/16/2009 3:09:06 PM	
Copper	NELAP	0.0100		< 0.0100	mg/L	1	10/16/2009 3:09:06 PM	LAL
iron	NELAP	0.0400		< 0.0400	mg/L	2	10/19/2009 1:54:55 PM	
Manganese	NELAP	0.0050		< 0.0050	mg/L	1	10/16/2009 3:09:06 PM	
Nickel	NELAP	0.0200		< 0.0200	mg/L	2	10/19/2009 1:54:55 PM	
Silver	NELAP	0.0200		< 0.0200	mg/L	2	10/19/2009 1:54:55 PM	LAL
Zinc	NELAP	0.0200	J	0.0055	mg/L	2	10/19/2009 1.54.55 FM	LAL
SW-846 1311, 3020A, META	LS IN TELP EXTRACT I	BY GFA	Δ _		mer (l	-	10/10/2009 4-07-10 544	MEK
Antimony, TCLP by GFAA	7041 NELAP	0.0050	5	< 0.0050	mg/L		10/15/2009/4:07.10 PM	MEN
Lead TCLP by GFAA	7421 NELAP	0.0020	J	0.0006	mg/L	1	10/20/2009 47 13:44 210	MEN
Selenium. TCLP by GFAA	7740 NELAP	0.0060		Q,UU67	mg/L		10/19/2009 11.17.36 AW	MER

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: S		Client Project: Industry Mine Ash Samples							
WorkOrder: 0	Client Sample ID: ADM - Clinton								
Lab ID: 0	Collection Date:								
Report Date: 2	2-Oct-09				М	atrix: SO	LID		
Analyses	and a second	Certification	RL.	Qual	Result	Units	DF	Date Analyzed	Analyst
SW-846 1311, 3020A. I	METALS IN TC	LP EXTRACT	BY GFA.	A					
Thaliium, TCLP by GFA	A 7841	NELAP	0.0020		< 0.0020	mg/L	1	10/19/2009 2:53;52 F	ум мек
SW-846 1311, 7470A 1	N TCLP EXTR.	ACT							
Mercury		NELAP	0.00020		< 0.00020	mg/L	1	10/15/2009	ALU
SW-846 1311, 9066, IN	TCLP EXTRA	<u>ct</u>							
Phenois			0.005		0.023	mg/L	1	10/16/2009 9:39:13 A	AM RCE

Sample Narrative

SW-846 1311, 3020A. Membs in TCLP Extract by GFAA

Sb- Matrix interference present in sample.

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Coal Company Client Project: ADM- Clinton WorkOrder: 09070515 Client Sample ID: ADM- Clinton Lab ID: 09070515-001 Collection Date: 7/1/2009 Report Date: 17-Jul-09 Matrix: SOLID Analyses Certification RL Qual Result Units DF Date Analyzed Analyst ASTM D3987, SW-846 3005A, 6010B, METALS IN SHAKE EXTRACT BY ICP Arsenic 0.0250 < 0.0250 7/15/2009 4:34:26 PM mg/L 1 LAL 0.0050 Barium 0.234 mg/L 1 7/15/2009 4:34;26 PM LAL Beryllium 0.0010 < 0.0010 mg/L 1 7/15/2009 4:34:26 PM LAL Boron 0.0200 0.0290 mg/L 1 7/15/2009 4:34:26 PM LAL 0.0020 < 0.0020 Cadmium mg/L 1 7/15/2009 4:34:26 PM LAL 0.0100 Chromium 0.0624 mg/L 7/15/2009 4:34:26 PM 1 LAL Coball 0.0100 0.0025 7/15/2009 4:34:26 PM mg/L LAL 1 Copper 0.0100 < 0.0100 7/15/2009 4:34:26 PM ma/L 1 LAL Iron 0.0200 < 0.0200 mg/L 7/15/2009 4:34:26 PM 1 LAL 0.0050 < 0.0050 Manganese mg/L 1 7/15/2009 4:34:26 PM LAL Nickel 0.0100 < 0.0100 mg/L 1 7/15/2009 4:34:26 PM LAL Silver 0.0100 < 0.0100 7/15/2009 4:34:26 PM mg/L 1 LAL Zinc 0.0100 0.0072 7/15/2009 4:34:26 PM J mg/L 1 LAL ASTM D3987. SW-846 3020A. METALS IN SHAKE EXTRACT BY GFAA Antimony, SHAKE by GFAA 7041 0.0050 < 0.0050 mg/L 1 7/16/2009 4:06:26 PM MEK Lead, SHAKE by GFAA 7421 0.0020 0.0025 mg/L 1 7/15/2009 3:32:12 PM MEK Selenium, SHAKE by GFAA 7740 0.0060 0.0094 mg/L 1 7/16/2009 10:23:46 AM MEK Thallium, SHAKE by GFAA 7841 0.0020 < 0.0020 7/15/2009 3:55:56 PM MEK mg/L 1 ASTM D3987, SW-846 7470A IN SHAKE EXTRACT 0.00020 0.00030 1 7/15/2009 ALU Mercury, SHAKE mg/L

Sample Narrative

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINDIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfo WorkOrder: 0907081	Client Project: ADM- Clinton Client Samule ID: ADM-Clinton								
Lab ID: 09070813-001 Report Date: 29-Jul-09			Collection Date: 7/1/2009 Matrix: SOLID						
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Ans	alyst
ASTM D3987, SW-846 9066, I Phenol, SHAKE	N SHAKE EXTRACT	0,005		0.019	mg/L	1	7/28/2009 2:45:21	РМ	RCE

Sample Narrative

'

P.O. Box 9320 Springfield, Illinois 62791-9320 Phone: 217-698-3300 Fax: 217-698-3380

June 30, 2011

Mr. Chad M. Kruse Assistant Counsel Illinois EPA 1021 North Grand Ave. East Mail Code # 21 Springfield, Illinois 62794

Re: Industry Mine

Dear Mr. Kruse:

From our meeting and discussion on June 14, 2011, Springfield Coal provides the following update to Illinois Environmental Protection Agency (IEPA) in response to the compliance actions steps A through E set forth in your June 17, 2010 letter.

- A. The sediments that were removed from Pond 19 have been temporarily placed up drainage from pond 19. We are allowing the material to dewater and dry and it will then be transported to the pre-approved combustion waste disposal site at the mine. This will be done in the near future after the material is completely dry. The Division of Mines & Minerals is aware of this work and has approved of it.
- B. We have samples taken from the outfall of Pond 19 before the sediment removal and installation of the ash slurry wall and we are taking samples after. When we get enough post-installation samples to be comfortable with our analysis, we will provide IEPA with a review of the benefits from the wall and the sediment removal. Due to the number of variables, a single month of samples would not be a valid representation to adequately assess the effectiveness of these measures.
- C. There may have been some confusion regarding the length of the slurry wall. In our May 7, 2010 letter to you we indicted that the wall would be 300' to 400' in length and that the success of the ash wall will determine if the wall would be extended. Your June 17, 2010 letter assumed that a much shorter

wall would be installed and then extended to 300' to 400' feet if the shorter wall was successful. As built, the initial slurry wall installation was approximately 400' in length. The full slurry wall would have been approximately 1800 feet. We do not have intentions at this time to expand the slurry wall from its original length.

- D. As discussed above, sediment was removed from Pond 19. We have not conducted any subsequent removal of sediment from Pond 19. We are evaluating Pond 18 for sediment removal and will notify you of our determination. If we elect to remove sediment from Pond 18 or additional sediment from Pond 19, a plan will be submitted to IEPA prior to removal, which will detail the placement and disposal of the sediment.
- E. All compliance steps that we have committed to do have been completed. Other than the installation of the new draw down pipe and valve at Pond 18. Treatment is ongoing and we do not intend to terminate any compliance steps. As discussed above, we do not have any present plans to install the complete 1800' slurry wall. The discharge pie will be installed in Pond 18 once we determine if it will be dredged. Dredging or not dredging will dictate the location of the discharge pipe.

If you have any questions regarding this matter, please do not hesitate to contact us.

Sincerely

Thomas J. Austin VP Human Resources & Government Relations

Cc D. Guariglia T. Davis J. Dexter



Dale A. Guariglia Direct: 314-259-2606 daguariglia@bryancave.com

August 1, 2011

Thomas Davis Chief, Environmental Bureau/Springfield Illinois Attorney General's Office 500 South Second Street Springfield, Illinois 62706

RE: People v. Springfield Coal Company Pollution Control Board No. 2010-061

Dear Mr. Davis:

In response to your letter of June 29, 2010 [sic, 2011], this letter shall constitute Springfield Coal Company's ("Springfield Coal") written compliance plan to address the effluent quality discharges from the sedimentation ponds at the Industry Mine in Industry, Illinois.

In preparing this compliance plan, Springfield Coal reviewed 17 months of discharge monitoring reports, going back to January 1. 2011 in order to help identify what issues exist. Attached is a spreadsheet we have prepared which summarizes the excursions which have occurred under the current NPDES permit. The spreadsheet is organized by pond number and constituent type.¹⁷ You will note that the spreadsheet is divided into two parts, showing the excursions for Ponds 002 - 030, and Ponds 031 - 035. We have done this since the issues with these two sets of ponds are different.

With regard to Ponds 002 - 030, which include 13 ponds, there have been a total of 21 excursions over the 17 months in question. Thirteen of the 21 excursion relate to manganese. Two of these 21 excursions were from Pond 019, both of which occurred prior to the pond being dredged in the Fall of 2010. There has been no excursions from Pond 019 since it was dredged. Twelve of the remaining 19 excursions are from two ponds: 018 and 026. In short, with regard to Ponds 002 –

Bryan Cave LLP One Metropolitan Square 211 North Broadway Suite 3600 St. Louis, MO 63102-2750 Tel (314) 259-2000 Fax (314) 259-2020 www.bryancave.com

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We have not included on the attached spreadsheet, any sulfate excursions under the current NPDES permit. A compliance plan related to the sulfate excursions was submitted to IEPA on February 18, 2010, which has been accepted by IEPA. In short, that plan provided for the NPDES permit to be amended, which would then correct the sulfate limitation in the permit.

Bryan Cave LLP

Mr. Thomas Davis August 1, 2011 Page 2

030, the ponds which appear to have the most issues are Ponds 018 and 026, and the main concern with these ponds is manganese.^{2/}

Springfield Coal has determined that Ponds 018 and 026 would benefit from removal of accumulated sediment (dredging). Dredging Ponds 018 and 026 will increase capacity and provide increased retention time, allowing more time for possible contaminants to drop out of solution and not be discharged from the ponds.

Normal maintenance of outfalls such as removing accumulated sediment is approved under Springfield Coal's current IEPA and OMM permits. However approval will be sought for both temporary and/or permanent disposal locations of the dredged sediment. Springfield Coal has located a contractor to perform the work necessary and can start as soon as this compliance plan is approved by IEPA and disposal sites have been approved by IEPA and OMM. Once this compliance plan is approved, Springfield Coal will move forward to obtain approvals from IEPA and OMM for the location of the temporary and/or permanent disposal locations of the dredged sediment. It is anticipated that the dredging of the above mentioned ponds can commence this summer if the approvals are obtained in an expedient time frame.

Springfield Coal also plans to continue the treatment of Ponds 18 and 19, as set forth in Springfield Coal's previous letters. Springfield Coal also tests and treats its sediment ponds as needed on an ongoing basis to ensure water quality meets current standards. It is Springfield Coal's position that swift corrective action, if necessary, to any outfall with excursions either one-time or reoccurring is the best practice to ensure the quality of water leaving its outfalls now and in the future.

With regard to excursions identified on the attached spreadsheet for Ponds 31 - 35, these are unrelated to the issues involving manganese with Ponds 002 - 030. You will note that the constituents at issue at Ponds 031 - 035 are iron and suspended solids. As we discussed at our meeting on June 14, 2011, Ponds 031 - 035 are newer ponds. The issues at these ponds relate to sediment runoff in areas around the ponds while the areas were being seeded and while the vegetation is maturing. We do not see these as long term problems and we are taking steps to address unseeded areas and help the vegetation mature.

Thank you for your attention to this matter. Springfield Coal looks forward to your response.

^{2/} It should be noted that IEPA has proposed to revise the manganese water quality standard to a calculated standard which will be less restrictive based upon new aquatic life toxicity data. Based upon the proposed standard, twelve of the thirteen manganese excursions identified in the attached spreadsheet would be in compliance with the new calculated standard.

Bryan Cave LLP

Mr. Thomas Davis August 1, 2011 Page 3

If you have any questions regarding Springfield Coal's compliance plan, please do not hesitate to contact me.

Very truly yours,

J R.A

Dale A. Guariglia

cc: Tom Austin Mike Caldwell Chad Kruse Jessica Dexter

Industry Mine, NPDES Permit No. IL0061247 Excursion Summary January, 2010 thru May, 2011

Excursions Occurring Under Existing NPDES Permit (Excludes Sulfate Excursions)

	ρΗ	Iron (a	as Fe)	Manganese (as Mn)		Total Suspended Solids		T. Set Solids	Total
Pond		Mon. Ave.	Daily Max	Mon. Ave.	Daily Max	Mon. Ave.	Daily Max		
002	0	0	0	0	0	0	0	0	0
003	0	0	0	0	0	0	0	0	0
009	0	0	0	2	0	0	0	0	2
018	0	0	1	3	2	0	0	0	6
019	0	0	0	2	0	0	0	0	2
020	0	0	0	0	0	0	0	1	1
021	1	0	0	0	0	0	0	2	3
022	0	0	0	0	0	0	0	0	0
024W	0	0	0	1	0	0	0	0	1
026	1	0	2	2	1	0	0	0	6
027	0	0	0	0	0	0	0	0	0
029	0	0	0	0	0	0	0	0	0
030	0	0	Ō	0	0	0	0	0	0
Total	2	0	3	10	3	0	0	3	21
0.0.1									
031	0	1	4	0	0	1	2	0	8
032	0	2	4	0	0	1	0	1	8
033	0	0	1	0	0	0	0	0	1
035	0	0	0	0	0	1	0	0	1
Total	0	3	9	0	0	3	2	1	18

IDNR OMM-LRD Notice of Violation No. 38-08-11, dated April 14, 2011, addresses areas within Permit 357 needing seeded and mulching Outfalls 031, 032, 033, and 035 are located within Permit 357. Run-off from areas of inadequate vegetation can increase Total Suspended Solid values, as well as affect Iron (as Fe) values.

RECEIVED CLERK'S OFFICE BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

FEB 0 5 2007 STATE OF ILLINOIS

IN THE MATTER OF:)	Pollution Control Board
)	
PROPOSED AMENDMENTS TO:)	
35 Ill. Adm. Code 302.102(b)(6), 302.102(b)(8))	R07-09
302.102(b)(10), 302.208(g), 309.103(c)(3),	j	(Rulemaking - Water)
405.109(b)(2)(A), 405.109(b)(2)(B), 406.100(d);	ý	Č ,
REPEALED 35 Ill. Adm. Code 406.203, PART 407; and	ý	
PROPOSED NEW 35 Ill. Adm. Code 302.208(h)	í	

NOTICE OF FILING

Dorothy Gunn, Clerk Marie E. Tipsord Illinois Pollution Control Board Hearing Officer 100 West Randolph Street Suite 11-500 Chicago, Illinois 60601 Chicago, Illinois 60601

Mathew Dunn Illinois Attorney General's Office **Environmental Control Division** James R. Thompson Center 100 West Randolph Street Chicago, Illinois 60601

Illinois Pollution Control Board 100 West Randolph, Suite 11-500

Jonathan Furr Illinois Department of Natural Resources One Natural Resources Way Springfield, Illinois 62702-1271

ALSO SEE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the Illinois Environmental Protection Agency's written testimony of Robert Mosher and Brian Koch, a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By:

Sanjay K Sofat, Assistant Counsel Division of Legal Counsel

Dated: February 2, 2004 Illinois Environmental Protection Agency 1021 North Grand Avenue East Springfield, Illinois 62794-9276 (217) 782-5544

THIS FILING PRINTED ON RECYCLED PAPER

	RECEIVED
	CLERK'S OFFICE
REFORE THE HILINOIS BOLLITION CONTROL BOADD	
DEFORE THE ILLINGIS FOLLUTION CONTROL BOARD	j

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FEB 0 5 2007

IN THE MATTER OF:

PROPOSED AMENDMENTS TO: 35 Ill. Adm. Code 302.102(b)(6), 302.102(b)(8) 302.102(b)(10), 302.208(g), 309.103(c)(3), 405.109(b)(2)(A), 405.109(b)(2)(B), 406.100(d); REPEALED 35 Ill. Adm. Code 406.203, PART 407; and PROPOSED NEW 35 Ill. Adm. Code 302.208(h) STATE OF ILLINOIS Pollution Control Board

R07-09 (Rulemaking - Water)

TESTIMONY OF ROBERT MOSHER

Qualifications/Introduction

My name is Robert Mosher and I have been employed by the Illinois Environmental Protection Agency for over 21 years. For almost the last 20 years I have been the manager of the Water Quality Standards Unit. My duties in this capacity are primarily to oversee the development of new and updated water quality standards and together with others in the Division of Water Pollution Control, to apply those standards in NPDES permits and Section 401 Water Quality Certifications. I have a B.S. in zoology and environmental biology and an M.S. in zoology from Eastern Illinois University.

In my testimony today, I will discuss the current regulatory environment that necessitates changes to water quality standards for sulfate, total dissolved solids ("TDS") and mixing zones. First, I will relate the general benefits that the Agency's proposed changes will bring to our system of water quality standards and water quality based effluent limitations in NPDES permits. Second, I will discuss the deletion of the water quality standard for total dissolved solids. Third, I will explain the changes proposed for

mixing zone standards and the basis for these in terms of the reasoning behind the changes and the discharges that would benefit from these changes. Finally, I will cover the reasons for the deletion of portions of 35 Illinois Administrative Code ("IAC") Subtitle D, Mine Related Water Pollution regulations.

Sulfate Aquatic Life Water Quality Standard:

General Use water quality standards for sulfate (500 mg/L) and TDS (1,000 mg/L) have existed in Illinois regulations since 1972. These standards were adopted to protect aquatic life and agricultural uses, however, few modern studies were available to determine appropriate values. Adopted standards stemmed more from the opinion of a few experts than from documented scientific experiments. Because coal mine effluents in particular are often high in sulfate, a special standard was developed that is unique to mine discharges and is found in Title 35, IAC, Subtitle D, Mine Related Water Pollution. Adopted in 1984, this sulfate standard of 3,500 mg/L also was not documented by the kind of aquatic life toxicity or livestock tolerance studies that are now expected in standards development. Under existing General Use water quality standards, permitting many mine discharges without the special rules provided in Subtitle D would be problematic because many mines cannot meet General Use sulfate and TDS standards in effluents at the point of discharge and do not qualify for conventional mixing zones. Other industries also have difficulty meeting the general standards and many have received adjusted standards or site-specific water quality standards relief from the Illinois Pollution Control Board given that regardless of the source, sulfate and many of the other constituents of TDS are not treatable by any practical means.
A solution to this dilemma was to re-evaluate the sulfate and TDS standards that account for most of the permitting problems. Studies of aquatic life communities downstream from high sulfate and TDS discharges appeared to show that organisms incur no detrimental effect from concentrations of these pollutants higher than the existing water quality standards. Since no national criteria exist for these pollutants and few other states even have sulfate and TDS standards, a long process was begun to gather existing information on sulfate aquatic life toxicity. When available data proved inadequate to derive a standard, new studies were commissioned with sponsorship from USEPA, the Illinois Coal Association and Illinois EPA. At the same time, investigations on the tolerance of livestock to sulfate in drinking water were begun.

This new research into sulfate toxicity found that, as suspected, high sulfate concentrations pose a problem of osmotic (salt) balance for some organisms. Many organisms, including all species of fish tested and many invertebrate species are very tolerant of sulfate, so much so that no known existing concentrations in Illinois would cause harm. Other species including the invertebrate water fleas (*Daphnia* and *Ceriodaphnia*) and scud (*Hyalella*) have a harder time maintaining salt balance under high sulfate conditions, which leads to toxicity. Unlike other toxicants that have ongoing effects that lead to mortality over extended time periods, sulfate-induced mortality occurs relatively quickly, but with no apparent residual effect. The new research also found that two common constituents of natural waters, chloride and hardness, are key to an understanding of the toxicity of sulfate. Brian Koch will further explain in his testimony how sulfate standards were developed to protect both aquatic life and livestock water uses.

TDS Water Quality Standard:

While sulfate was being evaluated, it became increasingly obvious that TDS is a very inappropriate parameter for use in water quality standards. TDS is the sum of all dissolved substances in water and is dominated by the common ions of sulfate, chloride, sodium, calcium, carbonate and magnesium in various proportions. Our investigations into sulfate toxicity reinforced the notion that it makes little sense to have a standard that covers all these substances together when the toxicity of each constituent is really what is important. For example, a water sample with high chloride and a TDS concentration of 2,000 mg/L is acutely toxic to some species of aquatic life, but a sample with high sulfate at that same TDS concentration is nontoxic. In my experience with toxicity testing with ambient waters and effluents, I am not aware of an instance where any common ions other than sulfate or chloride cause toxicity. With protective sulfate and chloride standards in force, salt toxicity is effectively regulated and there is no need for a TDS standard. Illinois EPA is therefore proposing that the TDS water quality standard be deleted along with the adoption of the new sulfate standard. The existing chloride standard is considered to be protective of uses without being overprotective and therefore is not proposed to be changed by our proposal.

Changes to the Board's Mixing Regulations at 35 Ill. Adm. Code 302.102:

Mixing zone standards at 35 IAC 302.102 dictate the conditions under which the Agency may allow dilution of an effluent by its receiving water. As regulations change, the realities of mixing needs must be reassessed. Sulfate is part of a small group of substances for which treatment is usually infeasible and for which mixing becomes an important option in regulation. The other common substances for which treatment does

not exist are chloride, boron and fluoride. It is not uncommon for discharges from coal mining operations as well as other activities to exceed these water quality standards and require some mixing zone allowance to achieve attainment of standards in the receiving stream.

Most high sulfate discharges from coal mines occur during wet weather events that bring sediment-laden water into treatment ponds and from there the water is discharged to water bodies where water quality standards apply. The ponds function to remove sediment and if necessary, control pH, but sulfate and chloride are not reduced. Water from the un-mined or reclaimed watershed also enters streams during sedimentation pond discharge events and provides dilution for these effluents. At many mines this is a simultaneous process, in other words, rain makes both the effluent and the receiving stream flow and lack of rain means both sources do not flow. For the past few years, Illinois EPA has granted wet weather discharges allowed mixing zones for sulfate and sometimes chloride, with consideration of these upstream flows. We now propose to augment the mixing regulations to make them clear in this regard. The changes to the mixing standards will allow mixing if it is verifiable that upstream dilution will always exist when an effluent is discharged.

35 Ill. Adm. Code 302.102(b)(6) and (b)(10):

Two aspects of the mixing regulations found at 35 IAC 302.102 are proposed for change. The first of these is the prohibition at 302.102(b)(6) and (10) preventing any receiving stream being entirely used for mixing. The existing standard dictates that a zone of passage, an area not impacted by the mixture of effluent with the receiving water, must be preserved for use by aquatic life whenever mixing is allowed. This is a concept recognized in regulations nationwide as a precept of mixing zones. However, there is one

circumstance of mixing of effluent with receiving water that practically and physically cannot include a zone of passage. Many discharges of storm water, particularly those from mines, are located high in the watershed where only a few square miles or less of drainage area supplies the receiving stream. These receiving streams are so small and narrow that storm water driven effluent will mix completely across the stream channel and leave no zone of passage as would have been physically realized in a wider stream. Under a strict interpretation of the existing mixing standards, these discharges would not be allowed mixing and a large segment of dischargers would not be able to exist.

If the Agency's proposal to do away with the zone of passage requirement in very small streams high in watersheds is to be functional, a method of defining 'very small streams' is needed. With the help of the Illinois State Water Survey, the Illinois EPA proposes that a concept similar to the commonly used and well understood 7Q10 flow be adopted to identify these streams. 'Small' may be equated with a stream's ability to maintain flow. Streams very high up in watersheds will typically dry up during periods of little rainfall and then fill with water again when rainfall returns. The more often a stream is dry, the more hostile that habitat will be to aquatic life. Streams losing all flow for at least a one week period nine out of ten years on average will present only a very limited habitat for aquatic life. This will consist of organisms that can live out their life cycles in a relatively short time and then survive dry conditions as eggs or dormant stages. Fish will use these headwater streams on a migratory basis, with a few pioneering species possibly using them only seasonally as spawning or feeding areas. Streams identified as 7Q1.1 zero flow are defined as having no flow for at least seven days in nine out of every ten years.

Under our proposal, wet weather discharges to streams determined to be 7Q1.1 zero flow will be allowed the entire stream volume for mixing. Aquatic life that may inhabit the stream at the time of discharge will be protected because an analysis of the effluent and the amount of flow expected in the stream during discharge events will be required in order to determine that the available mixing will reduce effluent concentrations to below water quality standards. For streams that have been determined to have adequate dilution potential for a given discharge, the force present in these storm water driven effluents will be sufficient to cause near instant mixing to occur. Therefore, aquatic life will not be exposed to concentrations over the water quality standards. Fish will be able to migrate through the area of mixing with no ill effects.

35 Ill. Adm. Code 302.102(b)(8):

The other change to mixing zone regulations is to delete the statement in 35 IAC 302.102(b)(8) that prohibits mixing in streams that have a 7Q10 flow of zero. The storm water mixing I just described depends on this change as well as non-storm water discharges that have unique characteristics. The existing definition of Dilution Ratio at 35 IAC 301.270 states that dilution ratio is to be determined from the 7Q10 stream flow or the lowest flow that is present when discharge occurs, whichever is greater. This implies that for non-continuous dischargers, the allowed stream flow to be used in the mixing based permit limit calculation is the flow expected when the discharge occurs. Under our proposal, these flows must allow for a zone of passage, which is 75% of the stream flow if the dilution ratio is 3:1 or greater and the stream 7Q1.1 is greater than zero. Many effluents are continuously discharged and consequently the default stream flow for calculating dilution is 7Q10. These would include sewage treatment plants, power plants and most industrial discharges. However, some facilities outside these

general categories produce effluent only periodically, and where it can be demonstrated that effluent will only be discharged at times and in quantities that will be sufficiently diluted by the stream flow present at the time of discharge, that stream flow may be used for the mixing granted. Deleting the sentence 'Mixing is not allowed in receiving waters which have a zero minimum seven day low flow which occurs once in ten years' enables the definition of dilution ratio to guide the Illinois EPA in granting mixing. Discharges that can be withheld until sufficient stream flow exists, or naturally are only produced in tandem with higher stream flows, will benefit from this clarification.

It is important to note that all other aspects of the mixing zone regulation, and for that matter all other water regulations, are still in force and work together with the changes proposed. Especially important is the reference to the provisions of 35 IAC 304.102 which stipulates that the best degree of treatment must be provided to effluents before mixing may be allowed.

Changes to Subtitle D of the Board Regulations:

. . . .

With the changes proposed for sulfate and TDS, and the deletion of Subtitle D mine exemptions to water quality standards, Illinois EPA is proposing to regulate all types of discharges in an equitable manner. Water quality based permit limit decisions will now be required in lieu of the special exemptions formerly allowed for mines. Additionally, as a housekeeping measure, an outdated portion of Subtitle D unrelated to water quality standards will also be deleted.

The changes to standards proposed in the Illinois EPA's petition are based on sound science and assure the protection of designated uses of waters of the state. These modernized standards will benefit mines and other dischargers of sulfate and other dissolved salts that are not amenable to treatment. Permit limits issued using the new

sulfate and mixing regulations will be protective, yet not overly so, and will cause no unnecessary burden on economic activity. The Agency requests that the Board adopt this proposal.

By: Rohnt Maln_

Robert Mosher

February 1, 2007

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Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276

5350 Richland Road Pleasant Plains, Illinois 62677 Phone 217-785-3950 E-mail Bob.Mosher@Illinois.gov

Robert G. Mosher

Education	Eastern Illinois University		Charleston, Illinois				
	BS Environmental Biolo	y and Zoology 1977					
	MS Zoology	1979					
Professional	1988 - Present Illi	nois Environmental Protect	ion Agency				
experience	Supervisor, Water Quali	ly Standards Unit, Burea	au of Water				
	Supervision of 3-5 profession employees of the Unit, consisting of engineers, toxicologists and environmental biologists.						
	1. Implementation of wat	er quality standards.					
	Work extensively with Permit Section staff to incorporate water quality base effluent limits in NPDES permits for metals, ammonia, chlorine and othe parameters. Coordinate the Agency's whole effluent biomonitoring progra- including review of bioassays conducted by the Agency laboratory, prival consulting laboratories and permittees. Recommend permit actions related to whole effluent biomonitoring such as monitoring requirements and limit: Evaluate Illinois Pollution Control Board (IPCB) nondegradation standard for ner or expanding discharges, explore alternatives to increasing pollutant loa increases and work with municipal and industrial dischargers to seek less pollution solutions under the nondegradation regulation. Provide expert witness testimor at IPCB bearings and appeals related to NPDES permits.						
	2. Coordination of Specia	l Rulemakings.					
	Work with Division of dischargers to the IPCB Site-specific changes to unique needs. Recorr regulations and compa expert witness testimon	Legal Council staff conce . Review petitions for Adjus the water quality standard mend Agency position on ibility with protection of the y at IPCB hearings related to	ming petitions submitted by ted Standards, Variances and s from dischargers based on such relief based on federal waters of the state. Provide o special relief.				
	3. Development of water	quality standards regulation	DN8.				
	Develop water quality obtained from USEPA and the IPCB in the add Coordinate and particip and obtain public partii worker or primary mana Exemptions (1988), T Initiative (1997) Dissolv currently, Sulfate and hearings.	standards suitable for use and the scientific literature. option of these standards int ate in stakeholders workgrou- cipation in standards workgrou- cipation in standards withati ger of many standards ruler oxics Control (1990), Ami red Metals Update and Na Mixing Zones. Provide in	in Illinois using information Work with Agency legal staff o Illinois Administrative Code. ups to explain new standards ves. Participated as a lead nakings including Disinfection monia (1996), Great Lakes itrient Standards (2002) and expert witness testimony at				
	4. Other Duties.						
	Speak at three to five Environment Federatio programs. ORSANC member.	professional organization (n) each year on water qu D subcommittee member.	conferences (such as Water ality initiatives and Agency ASIWPCA subcommittee				

1985 - 1988 Illinois Environmental Protection Agency

Data Management Unit, Planning Section, Division of Water Pollution Control

Managed Ambient Water Quality Monitoring Network data through the USEPA STORET system. Lead worker in compilation of the <u>1988 Illinois Water Quality</u> <u>Report</u>. Performed quality assurance work for Agency water quality data.

1982 - 1985 Monsanto Company, St. Louis, Missouri

Contract Worker

Performed aquatic life bioassays in Monsanto's Environmental Sciences Center. Developed Standard Operating Procedures for several aquatic life bioassays. Traveled to Monsanto plant sites across the country collecting samples and conducting stream biosurveys. Used a mobile aquatic bioassay laboratory at some of these sites to perform whole effluent bioassays.

1981 - 1985 Belleville Area College, Belleville & Granite City, Illinois

instructor of Biology

Instructed Community College courses in introductory biology and human anatomy and physiology on a full to part time basis. Member of the Charter Staff at the Granite City Campus.

1980 - 1981 Environmental Science & Engineering, Inc., St. Louis MO

Aquatic Biologist

Performed surveys of fishes and macroinvertebrates in large rivers and small streams for power plant location feasibility studies.

- Community activities
- Tutor, Washington Street Mission, Springfield
- Coach, Boys Baseball and Girls Softball, Pleasant Plains Junior Athletic Association
- Deacon Board Member, Cherry Hills Baptist Church, Springfield

Awards received Illinois EPA Employee of the Month, February 1995

STATE OF ILLINOIS)) SS COUNTY OF SANGAMON)

PROOF OF SERVICE

l, the undersigned, on oath state that I have served the attached <u>written testimony of</u> <u>Robert Mosher and Brian Koch</u> upon the persons to whom it is directed, by placing a copy in an envelope addressed to:

> Dorothy Gunn, Clerk Pollution Control Board 100 West Randolph Street Suite 11-500 Chicago, Illinois 60601 (OVERNIGHT MAIL)

Mathew Dunn Illinois Attorney General's Office Environmental Control Division James R. Thompson Center 100 West Randolph Street Chicago, Illinois 60601 (OVERNIGHT MAIL) Marie E. Tipsord Hearing Officer Illinois Pollution Control Board 100 West Randolph, Suite 11-500 Chicago, Illinois 60601 (OVERNIGHT MAIL)

Jonathan Furr Illinois Department of Natural Resources One Natural Resources Way Springfield, Illinois 62702-1271

(OVERNIGHT MAIL)

ALSO SEE ATTACHED SERVICE LIST (FIRST CLASS)

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SUBSCRIBED AND SWORN BEFORE ME THIS 2nd DAY OF FEBRUARY 2007.

PRINTED ON RECYCLED PAPER

OFFICIAL SEAL BRENDA BOEHNER NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 11-3-2009

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Illinois Environmental Protection Agency

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601

ROD R. BLAGOJEVICH, GOVERNOR

Renee Cipriano, Director

618/993-7200

July 21, 2003

Freeman United Coal Mining Company 1480 East 1200th Street P.O. Box 260 Industry, IL 61440

Re: Freeman United Coal Mining Company Industry Mine NPDES Permit No. IL0061247 Final Modified Permit (Modified After Public Notice)

ų,

Gentlemen:

Attached is the final modified NPDES Permit for your discharge. The modified Permit as issued covers discharge limitations, monitoring, and reporting requirements. The failure of you to meet any portion of the modified Permit could result in civic and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the modified Permit as they relate specifically to your discharge.

Please be advised that the Permit attached hereto includes modifications made after the public notice to incorporate comments and/or address concerns received from the public during the public notice comment period. The Permit has been modified as follows:

- 1. Page 4 and 5 The second (2nd) paragraph in the footnotes was deleted and replaced with the appropriate requirements.
- 2. Page 24 Special Condition No. 11 was clarified to incorporate reference to the "area of allowed mixing."
- 3. Page 24 Special Condition No. 11 was modified to clarify that Sulfate and Chloride monitoring performed pursuant to this Condition shall be subject to compliance with the Permit limitations.

The modified Permit as issued is effective as of the date indicated on the first page of the modified Permit. You have the right to appeal any conditions of the modified Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

 Воскложе – 4302 North Main Street, Rockford, IL 61103 – (815) 987-2760
 Dts Planes – 9511 W. Harrison St., Des Plaines, IL 60016 – (847) 294-4000

 ELGN – 595 South State, Elgin, IL 60123 – (847) 608-3131
 РЕОКІА – 5415 N. University St., Peoria, IL 61614 – (309) 693-5463

 Викели ог Land - PEORIA – 7620 N. University St., Peoria, IL 61614 – (309) 693-5462
 - Снаменося – 2125 South First Street, Champaign, IL 61820 – (217) 278-5

 Викели ог Land - 4500 S. Sixth Street Rd, Springfield, IL 62706 – (213) 786-6892
 - Социнскице – 2009 Null Street, Collinsville, IL 62234 – (618) 346-5120

 Максон – 2309 W. Main St., Suite T16, Marion, IL 62959 – 16181 993-7200
 — 2309 W. Main St., Suite T16, Marion, IL 62959 – 7200

5021-03

NPDES Permit No. IL0061247

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue, East

P.O. Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Modified NPDES Permit

Expiration Date: February 28, 2004

Name and Address of Permittee:

Freeman United Coal Mining Company 1480 East 1200th Street P.O. Box 260 Industry, IL 61440

Discharge Number and Name:

002 – Acid Mine Drainage Discharge from Preparation Plant

003-Surface Acid Mine Drainage

018, 019, 020, 021-Surface Acid Mine Drainage

009, 024W, 026-Surface Acid Mine Drainage

022-Surface Acid Mine Drainage

029, 030-Alkaline Mine Drainage

031, 032, 033, 035-Alkaline Mine Drainage

004, 005, 006, 007, 008 010, 011 - Reclamation Area Drainage

027-Reclamation Area Drainage

017-Stormwater Discharge

Issue Date: April 2, 1999 Effective Date: April 2, 1999 Modification Date: March 9, 2000 Modification Date: December 11, 2000 Modification Date: July 21, 2003

Facility Name and Address:

Freeman United Coal Mining Company Industry Mine 5 miles southwest of Industry, Illinois (McDonough and Schuyler Counties)

Receiving waters

Unnamed tributary to Grindstone Creek

Grindstone Creek

Unnamed tributary to Grindstone Creek

Willow Creek

Unnamed tributary to Camp Creek

Unnamed tributary to Willow Creek

Grindstone Creek

Grindstone Creek

Willow Creek

Grindstone Creek

In compliance with the provisions of the Illinois Environmental Protection Act, Subtille C and/or Subtille D Rules and Regulations of the Illinois Pollution Control Board, and the Clean Water Act, the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Le.

Tob∮ Frevert, Manager Division of Water Pollution Control Bureau of Water

REM:LDC:jkb/2728c/03-31-03

۲,

Modification Date: July 21, 2003

NPDES Coal Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD	LOAD LIMITS		CONCENTRATION		
	lbs/	lbs/day		LIMITS mg/l		
	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
PARAMETER	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

From the effective date of this Permit until February 28, 2004 the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

	Outfalls*:	003, 009 (Acid Mine	Drainage)			
Flow (MGD)					Measure When Monitoring	
Total Suspended Solids		•	35.0	70.0		• Grab
fron (total)			3.5	7.0		Grab
рH	The pH shall n	ot be less than 6.0 no	r greater than 9	9.0	3/month	Grab
Alkalinity/ Acidity	Total acidity sh	all not exceed total al	kalinity		1/month	Grab
Sulfates				1100	***	Grab
Chlorides				500		Grab
Manganese (total)			2.0	4.0	***	Grab

*Outfalls permitted herein are also subject to the limitations and monitoring and reporting requirements of Special Condition No. 11.

*** There shall be a minimum of nine (9) samples collected during the quarter when the pond is discharging. Of these 9 samples, a minimum of one sample each month shall be taken during base flow conditions. A "no flow" situation is not considered to be a sample of the discharge. A grab sample of each discharge caused by the following precipitation event(s) shall be taken for the following parameters during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s). The remaining three (3) samples may be taken from either base flow or during precipitation event.

Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 2year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 HI, Adm. Code 406,106(b). The 2-year, 24-hour precipitation event for this area is considered to be 3.02 inches.

Pollutant or Pollutant Property
ron (total)
Settleable Solids
рH

Effluent Limitations 7.0 mg/l daily maximum 0.5 mi/l daily maximum 6.0 - 9.0 at all times

P.M

Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 2-year, 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III, Adm. Code 406.106(b).

Pollutant or Pollutant Property Settleable Solids pН

Effluent Limitations 0.5 ml/l daily maximum 6.0 - 9.0 at all times

In accordance with 35 III. Adm. Code 406.110(d), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 10-year, 24-hour precipitation event for this area is considered to be 4.45 inches.

Pollutant or Pollutant Property pН

Effluent Limitations 6.0 - 9.0 at all times

Modification Date. July 21, 2003

NPDES Coal Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD lbs/	LIMITS day	CONCENT LIMITS	CONCENTRATION LIMITS mg/l		
PARAMETER	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

From the effective date of this Permit until February 28, 2004 the effluent of the following discharge(s) shall be monitored and limited at all times as follows

Outfalls: 020, 021, 022, 024W, 026 (Acid Mine Drainage)

Flow (MGD)				Measure When Monitoring	I
Total Suspended Solids		35.0	70.0	***	Grab
Iron (total)		3.0	6.0	***	Grab
рН	The pH shall not be less th	an 6.0 nor greater th	an 9.0	3/month	Grab
Alkalinity/ Acidity	Total acidity shall not exce	ed total alkalinity		1/month	Grab
Sulfates			500	***	Grab
Chlorides			500	A* A	Grab
Manganese (total)		2.0	4.0	***	Grab

*** There shall be a minimum of nine (9) samples collected during the quarter when the pond is discharging. Of these 9 samples, a minimum of one sample each month shall be taken during base flow conditions. A "no flow" situation is not considered to be a sample of the discharge. A grab sample of each discharge caused by the following precipitation event(s) shall be taken for the following parameters during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s). The remaining three (3) samples may be taken from either base flow or during precipitation event.

Any discharge or increase in volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 2-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 2-year, 24-hour precipitation event for this area is considered to be 3.02 inches.

Pollutant or Pollutant Property	Effluent Limitations
Iron	6.0 mg/l daily maximum
Settleable Solids	0.5 ml/l daily maximum
pH	6.0 - 9.0 at all times

Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 2-year. 24-hour precipitation event, but less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b).

Pollutant or Pollutant Property	Effluent Limitations
Settleable Solids	0.5 ml/l daily maximum
рН	6.0 - 9.0 at all times

In accordance with 35 III. Adm. Code 406.110(d), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 10-year, 24-hour precipitation event for this area is considered to be 4.45 inches.

Pollutant or Pollutant Property pH Effluent Limitations 6.0 - 9.0 at all times

Modification Date. July 21, 2003

NPDES Coal Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD	LOAD LIMITS		TRATION		
	lbs/	day	LIMITS	S mg/l		
	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
PARAMETER	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

From the effective date of this Permit until February 28, 2004 the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfalls: 004, 008, 027 (Reclamation Area Drainage)

Flow (MGD)		Measure When Monitoring	1
Settleable Solids	0.5 ml/l	1/month	Grab
рH	The pH shall not be less than 6.0 nor greater than 9.0	1/month	Grab
Sulfates	500	1/month	Grab
Chlorides	500	1/month	Grab

In addition to the above base flow sampling requirements, a grab sample of each discharge caused by the following precipitation event(s) shall be taken (for the following parameters) during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s).

In accordance with 35 III. Adm. Code 406.109(c), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 10 year, 24 hour precipitation event for this area is considered to be <u>4.45 increase</u>.

Pollutant or Pollutant Property pH Effluent Limitations 6.0 - 9.0 at all times

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Modification Date: July 21, 2003

NPDES Coal Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD	LOAD LIMITS				
PARAMETER	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

From the effective date of this Permit until February 28, 2004 the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfalls*: 005, 007, 010, 011 (Reclamation Area Drainage)

Flow (MGD)			Measure When Monitoring	
Settleable Solids	•	0.5 ml/l	1/month	Grab ·
pН	The pH shall not be less than 6.0 nor greater than 9	0.0	1/month	Grab
Sulfates		1800	1/month	Grab
Chlorides		500	1/month	Grab

*Outfalls permitted herein are also subject to the limitations and monitoring and reporting requirements of Special Condition No. 11.

In addition to the above base flow sampling requirements, a grab sample of each discharge caused by the following precipitation event(s) shall be taken (for the following parameters) during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s).

In accordance with 35 III. Adm. Code 406.109(c), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 10 year, 24 hour precipitation event for this area is considered to be 4.45 inches.

Pollutant or Pollutant Property pH Effluent Limitations 6.0 - 9.0 at all times

Modification Date: July 21, 2003

NPDES Coat Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD	LOAD LIMITS		TRATION		
	·lbs/	day	LIMITS mg/l			
	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
PARAMETER	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

Upon completion of Special Condition No. 8 and approval from the Agency, the effluent of the following discharges shall be monitored and limited at all times as follows:

Outfails*: 002, 003, 009, 029, 030, 031, 032, 033, 035 (Reclamation Area Drainage)

Flow (MGD)			Measure When Monitoring	
Settleable Solids	•	0.5 ml/l	1/month	Grab
pН	The pH shall not be less than 6.0 nor greater than 9	9.0	1/month	Grab
Sulfates		1100	1/month	Grab
Chlorides		500	1/month	Grab

*Outfalls permitted herein are also subject to the limitations and monitoring and reporting requirements of Special Condition No. 11.

In addition to the above base flow sampling requirements, a grab sample of each discharge caused by the following precipitation event(s) shall be taken (for the following parameters) during at least 3 separate events each quarter. For quarters in which there are less than 3 such precipitation events resulting in discharges, a grab sample of the discharge shall be required whenever such precipitation event(s) occur(s).

In accordance with 35 III. Adm. Code 406.109(c), any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) shall comply with the following limitations instead of those in 35 III. Adm. Code 406.106(b). The 10 year, 24 hour precipitation event for this area is considered to be 4.45 inches.

Pollutant or Pollutant Property pH Effluent Limitations 6.0 - 9.0 at all times

Modification Date July 21, 2003

NPDES Coal Mine Permit

NPDES Permit No. IL0061247

Effluent Limitations and Monitoring

	LOAD L bs/d	.IMITS av	CONCENT LIMITS	RATION 5 mg/l		
PARAMETER	30 DAY	DAILY	30 DAY	DAILY	SAMPLE	SAMPLE
	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	FREQUENCY	TYPE

From the effective date of this Permit until February 28, 2004 the effluent of the following discharge shall be monitored and limited at all times as follows:

	Outfall:	017 (Stormwater Discharge)			
Settleable Solids		0.5 r	nl/I	1/Year	Grab
рН	The pH sha	H shall not be less than 6.0 nor greater*than 9.0		1/Year	Grab

Storm water discharge monitoring is subject to the following reporting requirements:

Analysis of samples must be submitted with second quarter Discharge Monitoring Reports.

If discharges can be shown to be similar, a plan may be submitted by November 1 of each year preceding sampling to propose grouping of similar discharges and/or updated previously submitted groupings. If updating of a previously submitted plan is not necessary, a written notification to the Agency, indicating such is required. Upon approval from the Agency, one representative sample for each group may be submitted.

Annual storm water monitoring is required for all discharges until Final SMCRA Bond is released and approval to cease such monitoring is obtained from the Agency.

Modification Date: July 21, 2003

NPDES Permit No. IL0061247

Construction Authorization No.: 0368-98

C.A. Date: January 13, 1999

Engineer: Craig Schoonover, P.E.

Authorization is hereby granted to the above designee to construct the mine and mine refuse area described as follows:

A surface coal mining operation consisting of 4548.0 acres located in Sections 23, 24, 25, 26, 27, 28, 33, 34, 35 and 36, T4N, R3W, and Sections 19 and 30 in T4N, R2W of McDonough County; and 474.5 acres in Section 2 and 3 in T3N, R3W. Schuyler County.

The operations consist of strip mining, coal processing, support facilities, refuse disposal areas, and surface drainage control facilities. Sediment pond and Outfall classifications are as follows:

<u>Discharge No.</u>	Classification	Receiving Waters
002	Acid Mine Drainage from Coal Refuse Piles	Grindstone Creek
003, 018, 019, 020, 021	Non-Controlled Acid Mine Drainage	Grindstone Creek
022	Non-Controlled Acid Mine Drainage	Camp Creek
009, 024W, 025, 026	Non-Controlled Acid Mine Drainage	Willow Creek
004, 005, 006, 007, 008, 010, 011	Reclamation Area Drainage	Grindstone Creek
017	Stormwater Discharge	Grindstone Creek

Grindstone Creek is tributary to Camp Creek, tributary to LaMoine River. Willow Creek is tributary to LaMoine River.

Pond 017 may be converted to a dry dam as proposed in Log No. 4061-94. The discharge will be classified as a stormwater discharge.

The preparation plant facilities are revised to include a blending conveyor and a 25-ton capacity truck hopper as described in Log No. 4286-94.

Outfall 019 is reclassified as acid mine drainage as proposed in Log No. 3259-95

An additional surface mining area, identified as IDNR/OMM Permit Area No. 305, is incorporated as proposed in Log No. 1099-97, 1099-97-A and 1099-97-B. This IDNR/OMM permit area contains 255.0 acres in Section 2, T3N, R3W, Schuyler County; however, due to overlapping OMM permit areas, only 104.5 acres is acded to this NPDES permit and is included in the above totals.

Drainage from disturbed areas in OMM Permit Area No. 305 will report to Ponds 009 and 024W, which are classified acid mine drainage and report to Willow Creek.

Three groundwater monitoring wells shall be installed around a coal combustion by-product beneficial use area as proposed in Log No. 1062-97 (OMM Permit No. 261, Insignificant Permit Revision (IPR) No. 10). These monitoring wells are for the Permittee's use and data collection only. Monitoring data from these wells is not required to be submitted to the Agency. Haul roads to the beneficial use area will be modified as proposed in Log No. 2300-96 (OMM Permit No. 261, IPR No. 7 and OMM Permit No. 16, IPR No. 36).

Two areas of 22 acres and 7 acres, previously designated as support areas, are incorporated into the mising area as proposed in Log Nos. 1230-97 (OMM Permit No. 261, IPR No. 13) and 1252-97 (OMM Permit 261, IPR No. 14), respectively.

Soda ash briquets may be used to neutralize acidic water in Pond 019 as proposed in Log No. 1394-97.

The operations plan is modified as proposed in Log No. 0006-98, identified as Revision No. 4 to OMM Permit No. 16, Revision No. 1 to OMM Permit No. 261. No additional area or Outfalls are added with these modifications.

Modification Date: July 21, 2003

NPDES Permit No. IL0061247

Construction Authorization No.: 0368-98

C.A. Date: January 13, 1999

- 9. A permittee has the obligation to add a settling aid if necessary to meet the suspended solids or settleable solids effluent standards. The selection of a settling aid and the application practice shall be in accordance with subsection a, or b, below.
 - Atum (Al₂(SO₄)₃), hydrated slime (Ca(OH)₂), soda ash (Na₂CO₃), alkaline pit pumpage, acetylene production by-product (tested for impurities), and ground limestone are acceptable settling aids and are hereby permitted for alkaline mine drainage sedimentation ponds.
 - b. Any other settling aids such as commercial flocculents and coagulants are permitted <u>only on prior approval from the Agency</u>. To obtain approval a permittee must demonstrate in writing to the Agency that such use will not cause a violation of the toxic substances standard of 35 III. Adm. Code 302.210 or of the appropriate effluent and water quality standards of 35 III. Adm. Code parts 302, 304, and 406.
- 10. A general plan for the nature and disposition of all liquids used to drill boreholes shall be filed with this Agency prior to any such operation. This plan should be filed at such time that the operator becomes aware of the need to drill unless the plan of operation was contained in a previously approved application. After settling, recirculation water which meets the requirements of 35 III. Adm. Code 406.106 and 406.202, may be discharged. The use of additives in the recirculation water which require treatment other than settling to comply with the Act will require a revised permit.
- 11. Any of the following shall be a violation of the provisions required under 35 III. Adm. Code 406.203(c):
 - A. It is demonstrated that an adverse effect on the environment in and around the receiving stream has occurred or is likely to occur.
 - B. It is demonstrated that the discharge has adversely affected or is likely to adversely affect any public water supply.
 - C. The Agency determines the permittee is not utilizing good mining practices as defined in 35 III. Adm. Code 406.204 which are applicable in order to minimize the discharge of total dissolved solids, chloride, sulfate, iron and mangarese.

Modification Date July 21, 2003

NPDES Permit No IL0061247

Supplemental Construction Authorization No. 0368-98-2

S.C.A. Date: December 1, 1999

Supplemental Authorization is hereby granted to the above designee to construct the mine and mine refuse area, which were previously approved under Authorization No. 0368-98 dated January 13, 1999 and Supplemental Construction Authorization No. 0368-98-1 dated October 18, 1999. These facilities have been revised as follows:

The addition of 131.0 acres, identified as OMM Permit No. 334 area, located in Sections 3 and 10, Township 3 North, Range 3 West, Schuyler County, for surface mining activities as proposed in IEPA Log Nos. 9162-99, 9162-99-A and 9162-99-B. This additional area includes 20.0 acres (OMM Permit No. 180, IBR No. 1) previously incorporated into this Permit under IEPA Log No. 9471-99 in Supplemental Construction Authorization No. 0368-98-1. Therefore, the total area permitted herein is increased by only 111.0 acres to 4,679.0 acres, of which 605.5 acres is located in Schuyler County.

Coal will be processed at the existing preparation facility. Fine refuse is disposed in slurry ponds with coarse refuse being returned to the active pit.

Drainage control is provided by temporary diversions and two (2) permanent impoundments (sedimentation ponds) with dischargesdesignated as Outfalls 026 and 027. The discharge designated as Outfall 027 is located at Latitude 40°15'54" North, Longitude 90°43'19" West, classified as alkaline mine drainage and reports to an unnamed tributary to Willow Creek, tributary to LaMoine River. Pond and Outfall 026 were previously approved.

A currently permitted area of 2.7 acres, previously designated as not to be disturbed, is hereby incorporated into the mining area as proposed in IEPA Log No. 9582-99 (OMM Permit No. 180, IPR No. 4). This area is included in the total permit area noted above.

The abandonment plan shall be executed and completed in accordance with 35 III. Adm. Code 405:109 as detailed in IEPA Log Nos. 9162-99, 9162-99-A and 9162-99-B.

All Conditions in the original Authorization to Construct are incorporated in this Supplemental Authorization unless specifically deleted or revised herein.

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Electronic Filing - Received, Clerk's Office, 06/06/2012

Modification Date July 21, 2003

NPDES Permit No IL0061247

Supplemental Construction Authorization No. 0368-98-4

S.C.A. Date: March 27, 2003

Steven M. Bishoff, P.E., Rapps Engineering and Applied Science

Supplemental Authorization is hereby granted to the above designee to construct the mine and mine refuse area, which were previously approved under Authorization No. 0368-98 dated January 13, 1999 and Supplemental Authorization Nos. 0368-99-1, 0368-99-2 and 0368-99-3 dated October 18, 1999, December 1, 1999 and July 25, 2000 respectively. These facilities have been revised as follows:

Total area covered by this permit is increased to 5651.3 acres of which 1064.7 acres are located in Schuyler County and 4886.6 acres are in McDonough County.

An area of 493.1 acres located in Sections 22, 23, 26 and 27, Township 4 North, Range 3 West, 4th P.m. McDonough County will be surface mined as proposed in Log Nos. 6244-02, 6244-02-A, 6244-02-B and 6244-02-D.

• Surface drainage will be controlled by diversions and four sediment ponds designated as Pond Nos. 031, 032, 033 and 035 with respectively numbered Outfalls. Outfall Nos. 031, 032, 033 and 035 all report to Grindstone Creek and are classified as alkaline mine drainage.

An area of 20 acres located in Section 27, Township 4 North, Range 3 West, 4th P.M., McDonough County will be added to the permit for construction of a haul road as proposed in Log No. 5132-03. This area is also identified as Incidental Boundary Revision (IBR) No. 6 to IDNR/OMM Permit No. 16.

Active surface mining will not be conducted in this area. Since this is a narrow strip of land for construction of a road, a sedimentation pond will be not required, however standard erosion controls will be. Construction will be completed in dry weather conditions and at a time when seeding will likely be most successful. This road will cross Grindstone Creek, where four (4) nine foot diameter culverts will be used to pass water under the road. The crossing will be constructed so that flow over the road from significant precipitation events will not endanger the crossing.

The abandonment plan for this area in accordance with Log No. 5132-03 consists of removing the read and crossing and returning the area to its current use, with minimal disturbance.

Outfall No. 027 is re-classified as reclamation area drainage as proposed in Log No. 5071-03.

The abandonment plan shall be executed and completed in accordance with 35 III. Adm. Code 405.109 as detailed in Log Nos. 6244-02, 6244-02-A and 6244-02-B.

All water remaining upon abandonment must meet the requirements of 35 III. Adm. Code 406.202. For the constituents not covered by Parts 302 or 303, all water remaining upon abandonment must meet the requirements of 35 III. Adm. Code 406.106.

Longitude and latitude co-ordinates for all Outfalls covered by this Permit are as follows:

Outfall	Latitude (North)	Longitude (West)
002	40°17'45.0"	90°43'07 0'
003	40° 18'00.0"	90°43'15 0'
004	40°18'24.0"	90°42'43 0"
005	40° 18' 40.0"	90°42'03 0"
006	40"18`30.0"	90°41'45.0"
007	40°18'39.0"	90°41'13 0"
008	40*18'30.0"	90°40'33 0"
009	40°16'22.0"	90°42`53 0°
010	40°18`16.0"	90°42'50.0"
011	40°18'19.0"	90°42'43 0"
017	40°18'41.0"	90°42'16 0"
018	40°17'40.0"	90°43'49.0"
019	40°17'55 0"	90°44'05 0"
020	40°17'45.0"	90°44`47.0"
021	40°17'43.0"	90°45'05 0"
022	40°17'17.0"	90°45'13 0'
024W	40'16'14.0"	90°42 55.0°
026	40*16'20.0"	90°43'03.0"
027	40°15'54.0"	90°43'19 0'

Modification Date. July 21, 2003

NPDES Permit No. IL0061247

Special Conditions

Special Condition No. 1: No effluent from any mine related facility area under this permit shall, alone or in combination with other sources, cause a violation of any applicable water quality standard as set out in the Illinois Pollution Control Board Rules and Regulations, Subtitle C: Water Pollution.

<u>Special Condition No. 2:</u> Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

Special Condition No. 3: The permittee shall record monitoring results on Discharge Monitoring Report Forms using one such form for each discharge each month. The Discharge Monitoring Report forms shall be submitted to the Agency in accordance with the schedule outlined in Special Condition No. 4 below.

Discharge Monitoring Reports shall be mailed to the IEPA at the following address:

Illinois Environmental Protection Agency Division of Water Pollution Control 1021 North Grand Ave., East P.O. Box 19276 Springfield, Illinois 62794-9276

Attn: Compliance Assurance Section

Special Condition No. 4: The completed Discharge Monitoring Report form shall be retained by the permittee for a period of three months and shall be mailed and received by the IEPA in accordance with the following schedule, unless otherwise specified by the permitting authority.

Period	Received by IEP.	
January Calendary March	A120	
January, February, March	April 28	
April, May, June	July 28	
July, August, September	October 28	
October, November, December	January 28	

<u>Special Condition No. 5</u>: If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

<u>Special Condition No. 6</u>: The permittee shall notify the Agency in writing by certified mail within thirty days of abandonment, cessation, or suspension of active mining for thirty days or more unless caused by a labor dispute. During cessation or suspension of active mining, whether caused by a labor dispute or not, the permittee shall provide whatever interim impoundment, drainage diversion, and wastewater treatment is necessary to avoid violations of the Act or Subtitle D.

<u>Special Condition No. 7</u>: Plans must be submitted to and approved by this Agency prior to construction of a sedimentation pond. At such time as runoff water is collected in the sedimentation pond, a sample shall be collected and analyzed for the parameters designated as 1M-15M under Part.5-C of Form 2C and the effluent parameters designated herein with the results sent to this Agency. Should additional treatment be necessary to meet these standards, a Supplemental Permit must also be obtained. Discharge from a pond is not allowed unless applicable effluent and water quality standards are met.

<u>Special Condition No. 8</u>: The special reclamation area effluent standards of 35 III. Adm. Code 406.109 apply only on approval from the Agency. To obtain approval, a request form and supporting documentation shall be submitted 45 days prior to the month that the permittee wishes the discharge be classified as a reclamation area discharge. The Agency will notify the permittee upon approval of the change.

<u>Special Condition No. 9</u>: The special stormwater effluent standards apply only on approval from the Agency. To obtain approval, a request with supporting documentation shall be submitted 45 days prior to the month that the permittee proposes the discharge to be classified as a stormwater discharge. The documentation supporting the request shall include analysis results indicating the discharge will consistently comply with reclamation area discharge effluent standards. The Agency will notify the permittee upon approval of the change.

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Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub, L 92-500, as amended, 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and relissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pratreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated os the average measurement of the pollutant care the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest-allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, celculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means achedules of activities, prohibitions of practices, mantenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, studge or waste disposal, or droinage from raw material storage.

Allquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomlyselacted time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 millikers, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period, period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 millilliters connected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the swaam flow at the time of sampting or the total stream flow since the collection of the previous aliquot.

- (1) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewel application. The permittee shall comply with affuont standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (2) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit ofter the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the that Agency datasion on the application has been made.
- (3) Need to halt or reduce activity not a datense. It shall not be a defense for a permittee is an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) Duty to milligate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) Proper operation and maintenance. The permittee chat at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operation staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit

- (5) Parmit actions. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.52. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) Property rights. This permit does not convey any property rights of any sort or any exclusive privilege.
- (8) Duty to provide information. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and relassing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency, upon request, copies of records required to be kept by this permit.
- (9) Inspection and entry. The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:
 - (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of Inis permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.
- (10) Monitoring and records.
 - (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chan recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, and records of all data used to complete the application for this permit, and records of all data used to complete the application for this permit, and records of all data used to complete the application for this permit, and records of all data used to complete the application. This period may be extended by request of the Agency at any time
 - (c) Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements:
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
 - (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other lest procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical insurmentation at Intervals to ensure accuracy of measurements.
- (11) Signatory requirement. All applications, reports or information, submitted to the Agency shall be signed and certified.
 - (a) Application, All permit applications shall be signed as follows:
 - (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
 - (b) Roports. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duty authorized representative of that person. A person is a duty authorized representative only if:
 - The authorization is made in writing by a person described in paragraph (a), and
 - (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originales, such as a plant manager, superintendent or person of equivalent responsibility, and

(3) The written authorization is submitted to the Agency.

FREEMAN

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Freeman United Coal Mining Company

P.O.Box 260 Industry, IL 61440 309/254-3333 Fax 309/254-3781

Certified Mail 7001 2510 0005 2397 8262

August 15, 2003

Mr. Larry Crislip, P.E. Manager, Permit Section Mine Pollution Control Program Illinois Environmental Protection Agency 2309 West Main Street Marion, Illinois 62959

> Re: Industry Mine NPDES Permit Renewal Permit No. IL0061247

Dear Mr. Crislip:

Enclosed are two (2) copies of the permit renewal application for Permit No. IL0061247.

If you have any questions or need additional information, please contact me.

Sincerely,

Craig Schoonover Engineer

		and the second	
G1C (SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION OF DEDVERY	
CAS/CS Copy: G. Arnett File: NPDESNI	 Complete items 1, 2, and 3. Also complete Item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature A. Signature A. Signature A. Addressee B. Received by (<i>Printed Name</i>) D. is delivery address different from item 17	
	Mr. Larry Cristip, P.E. Manager, Permit Sec., Mine Pollution IEPA, Bureau of Water 2309 West Main Street	If YES, enter delivery address below:	
	Marion IL 62959	3. Service Type 3. Certified Mail Express Mail Registered Esturn Receipt for Marchandise Insured Mail C.O.D.	
		4. Restricted Delivery? (Extra Fee) Yes	
	2. Article Number (Transfer from service label) 7001 2510 0	005 2397 8262	
-	PS Form 3811, August 2001 Domestic Rel	turn Receipt Exhibit 11	

Park	Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e., 12 ch.	rectert/inch).	Form Approved	. OMB No 2040-0085,	
Control of the second of		CENEDAL INTO	TECTION AGENCY	I. EPA J.D. NUMBER	
I. PACLUTY NAME Freeman United Coal Mining Co. I. PACLUTY Idao E 1200° St PO Box 260 Image: State Stat	GENERAL SEPA	GENERAL INFO Consolidated Permi Read the "General Instruction	RMATION	FIL00612	4 7
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	VI. FAGILITY	stry 1L 61440		Items I, III, V, and VI must be completed regard items if no label has been	except VI-8 which diesal. Complete all provided Beter to
III. FOLLUTANT CHARACTERISTICS INSTAUCTIONS: Complete A through 10 determine whether you need to submit any permit application forms to the EPA. If you answer "yet" to any unstaudinit file of and its properties following the unstaudinit file of and its properties following the uset of the use of the use of the uset of the u		/////		the instructions for deta tions and for the legal a which this data is collected.	illed item descrip- utharizations under
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G. Do you or will you inject at the facility any produced material or there this the facility of produces of the facility of the sector resource of of th	E. Does or will this facility treat, store, or hazardous wastes? (FORM 3)	dispose of X	F. Do you or will you inject municipal effluent below taining, within one qui underground sources of d	t at this facility industrial or the lowermost stratum con- arter mila of the well bore, finking water? (FORM 4)	X X
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FORM 2C		U.S. EN APPLICATION ING MANUFACTURING, C	VIRONMENTAL PROTECTION AGENCY I FOR PERMIT TO DISCHARGE WASTEWATER COMMERCIAL, MINING AND SILVICULT Consolidated Permits Program	URAL OPERATIONS
OUTF	ALL LOCATION			
OUT LOUT	ALL B. LATITUDE	C. LONGITUDE	5 seconds and the name of the receiving water.	
flist) I. DEG. 3. W(H. 3. CE	C. 1. DEG. 2. MIN. 3. 1	BC. D. RECEIVING HA	
			SEE ATTACHED LIST	
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	SOURCES OF POLITICAL AND	TREATMENT TECHNOLOGI	te	, ,
Attack and the flows pictor For e coolin on ad	h a line drawing showing the water reatment units labeled to correspond between intakes, operations, treatm rial description of the nature and amou ach outfall, provide a description of mg water, and storm water runoff; (2 ditional sheets if necessary.	flow through the facility. Indit to the more detailed descriptio ent units, and outfalls. If a wa unt of any sources of water and (; {1) All operations contributin) The average flow contributed	cate sources of intake water, operations contribu ns in item B, Construct a water balance on the l iter balance cannot be determined <i>le.g., for cert</i> any collection or trastment measures. In wastewater to the effluent, including process to by each operation; and (3) The treatment receiv	ting wastewater to the effluct Ine drawing by showing aver ain mining activities), provid vastewater, sanitary wastewa ed by the wastewater, Conti
OUT.	Z. OPERATION(S) C	ONTRIBUTING FLOW	3. TREATA	AENT
(list)	A. OPERATION (Ust)	D. AVERAGE (include uni	to a DESCRIPTION	D. LIST CODES F
	Surface Runoff	See Sch.	Suspended Solids	1
002	Pit Pumpage	ME	Settlement	4 A
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103				
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21	From Reclaimed Land	ME	Settlement	4 A
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J04 105			Conservation of Callinder	
006	Surface Runoff	See Sch.	Suspended Solids	
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A SPECIAL PROFESSION CONTRACT CONTRACT CONTRACT ON BET OF 1800-1807 1800-1800-1807 1800-1807 1800-1807 18		EPA I.G. NUMBER (copy from Item TI OOG 1947	1 of Form 1)	Form Approved. OMB No. 2000-0059
A, B, & C. See instructions befor proceeding — Comparison and of bables for each number. V1 Normal Section 2014 Comparison and the set of the section of the	UN TINUED FROM PAGE 2	ACTERISTICS		Approval expires 12-31-85
D. Use the space below to list any of the pollutents listed in Table 22-3 of the instruction, which you know of her reson to believe is discharged or many outfall. For every pollutent you list, below discrete the reson you ballive it to be present and report any easi/deal data in pollutant in the pollutent is any of the pollutents listed in Table 22-3 of the instruction, which you know of her reson to believe is discharged or many easi/deal data in pollutant is the pollutent is the pollutent is the pollutent is to be present and report any easi/deal data in pollutant is the pollutent is the pollutent is the pollutent is to be present and report any easi/deal data in pollutant is the pollutent is the pollutent is the pollutent is the pollutent is to be present and report any easi/deal data in pollutant is the pollutent is the pollutent is the pollutent is to be present and report any easi/deal data in pollutant is the pollutent below D. Use the pollutent is the pollutent below D. POLLUTANT E. POLLUTANT E. POLLUTANT E. SOURCE	, B, & C: See instructions before NOTE: Tables V-A, V-	proceeding — Complete one set of tables for B, and V-C are included on separate sheets	or each outfall — Annotate the out numbered V-1 through V-9.	tfall number in the space provided.
POLLUTANT 2. SOURCE POLLUTANT 2. SOURCE POLLUTANT 2. SOURCE	D. Use the space below to list any clischarged from any outfall. Fipossession.	of the pollutants listed in Table 2c-3 of to or every pollutant you list, briefly describ	the instructions, which you know the reasons you believe it to be	or have reason to believe is discharged or may a present and report any analytical data in ye
NORE EXPECTED TO BE RESERT IN ANALYZAS UNANITIES 1. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS 15 proj pallutan listed in listed in listed at the pollutance of a component of a substance which you currently use or manufacture as an intermediate or final product or byproduced U ves (first all such pollutance below) XX1 no (ro to item VEB)	1. POLLUTANT	2. SOURCE	1. POLLUTANT	2, SOURCE
1. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS	NONE EXPECTED TO BE PRESENT IN ANALYZABLE QUANITIES			
L POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS				
1. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS is any pollutant listed in Item V-C e substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?				
1. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS Is any pollutant listed in ItemV-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct? ves (list all auch pollutants below) XXI No (so to Item VI-B)				
is any politutent listed in item V-C a substance or a component of a substance which you currantly use or manufacture as an intermediate or line product or byproduct?	I. POTENTIAL DISCHARGES NOT	COVERED BY ANALYSIS		
∑ ves (list all such pollulanis below) X ino (so to Item VI-3)	is any pollutant listed in Item V-C a s byproduct?	ubstance or a component of a substance v	which you currently use or manufa	icture as an intermediate or linal product or
	Ü Y	ES (list all such pollularis below)	XIXI NO (8	o to Ilem VI-B)
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FREEMAN UNITED COAL MINING COMPANY

Permit #1L0061247

Outfall	Latitude	Longitude	Legal Descrip	otion
002	40-17-45	90-43-07	T4N-R3W Sec.	27 SE1/4, SE1/4, SE1/4
003	40-18-00	90-43-15	T4N-R3W Sec.	26 NE1/4, SW1/4
004	40-18-24	90-42-43	T4N-R3W Sec.	26 SE1/4, NW1/4, NW1/4
005	40-18-40	90-42-03	T4N-R3W Sec.	23 NW1/4, SE1/4, SE1\4
00 6	40-18-30	90-41-45	T4N-R3W Sec.	24 SW Corner
007	40-18-39	90-41-13	T4N-R3W Sec.	24 NW1/4, SW1/4, SE1/4
େଜ ନ	40-18-30	90-40-33	T4N-R2W Sec.	30 NW1/4, NW1/4, NW1/4
609	40-16-22	90-42-53	T3N-R3W Sec.	2 SW1/4, SW1/4, SW1/4
010	40-18-16	90-42-50	T4N-R3W Sec.	26 N1/2, SW1/4, SE1/4
Ø11	40-18-19	90-42-48	T4N-R3W Sec.	26 N1/2, SW1/4, SE1/4
017	40-18-41	90-42-18	T4N-R3W Sec.	23 SW1/4, SE1/4
018	40-17-40	90-43-49	T4N-R3W Sec.	34 NW1/4,NW1/4
019	40-17-55	90-44-06	T4N-R3W Sec.	27 SE1/4, SE1/4
020	40-17-45	90-44-47	T4N-R3W Sec.	27 SE1/4,SW1/4
021	40-17-43	90-45-06	T4N-R3W Sec.	33 NW1/4,NW1/4
0 22	40-17-17	90-45-13	T4N-R3W Sec.	33 NW1/4,SW1/4
024W	40-16-14	90-42-55	T3N-R3W Sec.	2 NW1/4,5W1/4
026	40-16-20	90-43-03	T3N-R3₩ Sec.	3 SE1/4, NE1/4
027	40-15-54	90-43-19	T3N-R3W Sec.	3 SW1/4,SE1/4
Ø29	40-16-22	90-45-08	T3N-R3W Sec.	4 SW1/4, NW1/4
030	40-16-16	90-44-51	T3N-R3W Sec.	4 NE1/4,5W1/4
031	40-18-11.5	90-43-33.6	T4N-R3W Sec.	27 SE1/4,NW1/4
032	40-18-11.5	90-43-10.6	T4N-R3W Sec.	27 SE1/4, NE1/4
Ø33	40-18-24.5	90-43-01.9	T4N-R3W Sec.	27 NE1/4, NE1/4
035	40-18-46.8	90-42-55.9	T4N-R3W Sec.	22 NE1/4, SE1/4

July 21, 2003 FILE: LATLONGI

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LEASE PRINT OR his information on s EE INSTRUCTION	TYPE IN THE reparate sheets / IS,	UNSHADED AR	EAS ONLY. You o	mby report some appleting these pa	e or all of ages.	EPA 1.0	IL 0061	247	of Form []	Form Approved OMB No. 2000 Approval expire	0059 s 12-31-85	
V. INTAKE AND	EFFLUENT CH	ARACTERISTIC	S Icontinued from	page 3 of Form	2-CI							002
PART A - You n	nust provide t	he results of at	least one analysi	s for every pu	llutant in this tab	le. Complete	one table for	r each outfail.	See instruc	tions for addition	al details.	
			2	EFFLUENT				3. UN	ITS	4. INT	AKE (optio	nal)
I. POLLUTANT	AUMIKAN A	A DAILY VALUE	b. MAXIMUM	lable) VALUE	C.LONG TERM	WRG. VALUE	d, NO, OF	(ipecity i)		AVERAGE	TERM	L NO. OF
	(I) CONCENTRATIO	(2) MASS	(I) CONCENTRATION	(2) MAS4	CONCENTRATION	(2) MASS	ANALYSES	TRATION	b, MASS	CONCENTRATION	(7) MASS	ANALYSES
a. Biochemical Oxygen Demand (BOD)												
b. Chemical Oxygen Demand (C(JD)								-				:
c. Total Organic Carbon (TUC)												
d, Total Suspended Solid: (755)	30				11		$\boldsymbol{arepsilon}$	mg/l				د
s, Ammonia (os N)						•.			2			
1, Flow	Z	20	VALUE		VALUE &	3	8	GPM		VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
h. Temperatura (summer)	VALUE		VALUE		VALUE			°C		VALUE		
й. рн	MINIMUM 7,26	7.96	MINIMUM	MAXIMUM		$\langle \rangle$	8	STANDAR	UNITS			

PART B • Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2 a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for thet pollutant. For other pollutants for which you mark column 2 a, you must provide guantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUT-	2. MA	NK 'X'			3.1	EFFLUENT				4. U	NITS	5. INT	AKE (uptions	4)
ANT AND	8. 110-	D. 84-	A. MAXIMUM	DAILY VALUE	b. MAXIMUM 3	ODAY VALUE	C.LONG TERM	Mable)	d NO. OF	A. LONCEN-	-	AVEHAG	E VALUE	5 NO. OF
(if available)	PHU- SENT	AN-	(I) CONCUNTRATION	(2) MASS	(I) CONCENTRATION	(2) MASS	CONCENTRATION		YSES	- PATION	1, 11, 11, 11, 13, 1	(1) CONCENTRATION	(2) MASS	VSES
s. Bromide (24959-67-9)		x									_			
b, Chlorine, Totel Hasiduel		X												
c. Color		х							_					
d. Fecal Cotilorm		x				•								
e, Fluoride (16984-48-8)		x		-										
I, Nitrato- Nitrite (nr N)		x												
EPA Form 35	10-2C	(Rev. :	2-85)				PAGE V-I					COM	ITINUE ON RE	VERSE

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	IL 0061247	002	Form Approved. OMB No. 2000-0059
INTINUED FROM PAGE 3 OF FORM 2-C			Approval expires 12-31-85

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater autfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollulant you know or have reason to believe is present. Mark "X" in column 2-c for each pollulant you know or have reason to believe is present. Mark "X" in column 2-c for each pollulant you know or have reason to believe is absent. If you mark column 2a for any pollulant, you must provide the results of at least one analysis for that pollulant you must provide the results of at least one analysis for that pollulant you must provide the results of at least one analysis for any pollulant, you must provide the results of at least one analysis for any pollulant, you must provide the results of at least one analysis for any pollulant, you must provide the results of at least one analysis for each of these pollulants which you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollulants which you know or have reasons to believe it will be discharged in concentrations of 100 ppb or greater. If you are reasons to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutant is expected to be discharged. Nore that there are 7 pages to this part; please review each carefully. Complete one table *fall 7 pages* for pach outfall, details and requirements.

POLLUTANT	2.	MARK	.х.			З,	EFFLUENT				4. UI	NITS	5, IN	AKE (optio	anal)
AND CAS Number	ATEST	D. n.e-	C 82-	. 8. MAXIMUM C	AILY VALUE	b. MAXIMUM 3	INADAY VALUE	C.LONG TERM	AVRG. VALUE	d NO.OF	A CONCEN-		AVERAG	TERM	A NO.OP
(if available)	401M-	SENT	SANT	CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MARK	(I) CONCENTRATION	[2] MASS	YSES	TRATION	O, MASS	IL CONCEN-	(3) MASS	VSES
ETALS, CYANID	E, AN	D TOTA	L PH	ENOLS											
4. Antimony, 2181 (7440-36-0)	Х			20.005						1	mg/l				
M. Arsenic, Total 440-38-21	x			20.025						1	mg/l				
VI. Baryilium, ptal, 7440-41-7)	x			20.001						1	mg∕l				
VI. Cadmium, otal (7440-43-9)	X			20.002						1	mg/l				
M. Chromium, ptal (7440-47-3)	X			20-010						1	mg/l				
V. Copper, Total 440-50-8}	X			0.026					_	1	mg/1				·
M. Lend, Totai '439-92-11	X			L0.00Z						1	mg/l				
M. Mercury, Tota 1430-97-6}	' X			20.0002	SAMP	LE DATE 8,	1/03			1	mg/l				
M. Nickel, Total 1440-02-0)	X			0.029						1	mg/1				-
OM, Setenium, otal (7782-49-2)	X			L.C. C 50						1	mg/l				
1M. Silver, Total 7440-22-4}	x			20.010						1	mg/l				
2M, Thallion, ptel (7440-28-0)	X			20.002	;					1	mg/1		Service A service		
3M. Zinc, Total ?440-66-0)	X			0.206						1	mg/l				
4M, Cyanide, 'otal (57-12-5)	X			20.007				•		1	mg/l				
6M, Phonais, Total	X									1	mg/l				
DIOXIN															
J.7.8. Tetra- htorodfbenzo-P. Jinkis (1764-01-6	.,	T	X	DESCHIBE RES	ULTS						_		_		

PA Form 3510-2C (Rev. 2-85)

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AND CAS	2. N	ARK '	×.			J.	EFFLUENT	TO LONG TERM	AVRG VALUE		4, UI	1175	5. IN1	TAKE (uptu	onal)
NUMBER	4.71.87 1894 4	D. HE-	G 88-	a, MAXIMUM E	AILY VALUE	(i) avi	illable	(if ava	flable)	ANAL	1, CONCEN-	L, MASS	AVEHAG	E VALUE	ANAL
C/MS FRACTION	- VOL	ATILE	COM	CONCENTRATION	(I] MARS	GONGENTRATION	[1] MA31	CONCENTRATION	[87 MASS	TSES		·····	THATIUN	(3) 4499	
2V. Methylene			v	1											1
hioride (75-09-2)			^												
0V. 1,1,2,2-Tetra- Norgethane 9-34-5)			X												
V. Tetrachloro- hylene (127-18-4)			X												
V. Toluene 08-88-3)			X			,						•			T
iV, 3,2-Trans- ichtoroethytene 56-60-5)			X												
IV. 1,1,1-Trl- Iloroethane 1-55-6)			X												
3V. 1,1,2-Tri- 10r0ethana 19-00-5)			x												
)V. Trichloro- hylane (79-01-5)			X					-	۰	·					
JV, Trichloro- upromethans (5-69-4)			X												
IV. Vinyi nioride (75-01-4)			X												
MS FRACTION	- ACI	D COM	POUN	DS											
A. 2-Chloropheno: 5-57-8}			x				í 					APPENDING STATE			
A. 2,4-Dichipro- senoi (120-83-7)			x												
A, 2,4-Dimethyl- aunol (105-67-9)			x												
4, 4,6-Diultro-O- resol (534-52-1)			X				-								•
A, 2 ,4-Dinitro- henol (51-28-5)			X											`	
4, 2-Nitrophanot 11-25 5}			x												•
4. 4·Nitrophenal 00-02·7)			X												
N, P-Chinro-M- resol (59-50-7)			X			:							\$		
A, Pentachioro- henot (87-86-5)			X								*				,
0A, Phenat (00-95-2)			X												
1A, 2,4,6-Tri- nlorophenol 11 06-2)			Х												
A Form 2510		2.85	' 1	1,			PAG	E V-5					CONT	INUE ON R	EVERSE

				1	Biechon	ic Fuing	- Receiv	cu, cien		, 00/	00/20		41 ADE 11		
CUNTINUED FROM	MPAG	E V-6				1L UU0124	1	00	2	1		Approval expi	res 12-31-85		
AND CAS	2. N	ARK	×.			3.	EFFLUENT				4. UP	ITS	5. IN1	AKE (optio	anal)
NUMBER (1/ available)	4 71- 11 1844 -	1 1	6	B. MAXIMUM	DAILY VALUE	D. MAXIMUM 2 (1) ava	(1) MALUE	CLONG TERM	(1) MALUE	L NO. OF ANAL- YSES	. CONCEN- TRATION	L MASS	AVENAG	C TERM C VALUE	0 NO.0
GC/MS FRACTION	- BAS	E/NEU	TRAI	L COMPOUNDS	(continued)										
228. 1,4-Dichloro- banzene (106-46-7)		ł	X												
238, 3,3'-Dichiaro- benzidine (91-94-1)			x						•						
248. Diethyl Phthelete (84-66-2)			x												
258, Dimethyl Phthalate (131-11-3)			x												
268, Di-N-Butyl Phthelete (84-74-2)			X											а.,	
278, 2,4-Dinitro- toluene (121-74-2)			X												
288, 2,6-Dinitro- toluene (806-20-2)			Х					•							
298, Di-N-Octyl Phthelate (317-84-0)			х		-										
108. 1,2-Diphenyi- iydrazina (a Azo- enzene) (122-66-7			X			l 									
318, Fluoranthena (205-44-0)			X												
328. Fluorens (86-73-7)			X									_			
3B. Hexachlorobenzeni (18-74-1)			X												l
348. Hexa- chlorobutadiene 87-68-33			X												
356, Hexachioro- ;yclopentadiona 77-47-4}			X												
16B. Hexachloro- thane (67-72-1)	ļ		X	-										-	
1,2,3-ed) Pyrene 193-39-6)			X												
78-59-7)			X												
98, Naphthalane 91-20-3)			X												
08. Nitrobenzen 38-95-3) 18. N-Nitro-			<u>x</u>		·										
adimothytemtno 32-75-9)			X			· · · · · · · · · · · · · · · · · · ·									
-Propylamina 521-64-7)			х												

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. POLLUTANT	Z.	MARK	·**			3, 1	EFFLUENT				4. UN	HTS	5. IN1	AKE (optio	onul)
AND CAS NUMBER		1), e K-	C	a, MAXIMUM D	ALLY VALUE	D. MAXIMUM 3	DAY VALUE	C.LONG TERM	AVRG. VALUE	L NO.DF	A. CONCEN-	5 MARE -	ALONG	TERM	B.NO.OF
(if available)	QUIR-	SENT	SANT	(1) CONCLATHATION	[1] MASS	(1) CONCENTRATION		(I) CONCEMENATION	[2] MALE	YSES	TRATION		(I) CUNCEN.		VSES
CAS FRACTION	- PES	STICIDI	ES (cor	atinue()	······································										
17P, Heptechlor Spoxide 1024-57-3)			x												
18P. PCB-1242 50469-21-9)			X												ŕ
9P. PCB-1254 11097-69-1}			X												
(0P. PC8-1221 11104-28-2)			x									.			
11141-16-5}			χ												
2P. PCB-1248 12672-29-6)			X					•							
3P. PCD-1260 11096-02-5)			X					_							
4P. PCB-1016 12674-11-2)			Х												
5P. Toxaphene 1001-35-21			X												

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PAGE V-9

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A Form 3510-2C (Rev. 2-85)

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LEASE PRINT O	R TY 1 sepa INS.	PE IN rate sh	THE UNSHADE	D AREAS (e format) in	ONLY, You nstead of c	u may report ompleting th	t some ur alt of ese pages.		IL 00	61247		, , , , , , , , , , , , , , , , , , ,	Form Approved. OMB No. 2000- Approval expire	0059 s 12-31-85	
V. INTAKE AND	EĿĿ	LUEN	T CHARACTER	ISTICS (co	ntinued fro	in page 3 of	Form 2-Cl							. (19761 NO.
PART A . You	must	prov	de the results (of at least	one analy	sis for ever	y pullutant in	this table. Con	nplete one table	for each	n outfall, S	ee instruct	ions for addition	al details.	
						2. EFFLU	ENT			1	3. UN17	rs	4, INT	AKE (optional)	
1. POLLUTANT	r a.	MAX	MUM DAILY V	ALUE D.	MAXIMUM	30 DAY VI	LUE CLONG	TERM AVRG. V	ALUE		(specify if b	lunk)	a. LONG	TERM	
		. (1)	12] M		(1) NGL 017 A TH	(1) M/		1 41 M	ANALYS	ES A.C	ONCEN-	b. MASS	11)	(2) MARE	NALYSES
8. Biochemical Oxygen Demand (BOD)													CONCENTRATION		
u. Chamical Oxygen Demand (CUD)															
c. Total Organic Carbon (TOC)											· · · · ·				
d. Total Suspende Solids (7%8)	d	42	2				. 16	,5	24	m	g/1				
e. Ammonis (as N	")							•.		1	,	A			
f. Flow	VA	LUE	320	VA	LUE		VALUE	147	24	- G	PM		VALUE		•
g. Temperature (winter)	VA	LUE		VA	LUE		VALUE				°C		VALUE		
h. Temperature (summer)	VA	LUE	1 18 - 22	VA	LUC		VALUE				°C		VALUE		
i, pH	7	1. 7.	3 8-3	7	IIMUM	MAXIMU	M	> <	24	ST	ANDARD	UNITS		><<	
PART B Mad whic colu	("X" i h is lin mn 2e	n colu nitod e , you n	mn 2-a (or each ither directly, or i hust provide qua	pollutant y ndirectly bu ntitative da	ou know or at expressly te or an exp	have reason , in an efflue planation of t	n to believe is pre nt límitations gui heir presence in	esent, Mark "X" i delina, you must j your discharge.	n column 2-b for e provide the results Complete orle tabl	ach pollu of at leas e for eac	utant you beli t one analysis h outfall. See	eve to be a for that po the instruc	bsent. If you mark c llutant. For other po ctions for additional	olumn 2a for am lutants for which details and requ	y pollutent h you mark virements.
1. POLLUT-		1K .X.	-			3. 1	EFFLUENT				4. U	NITS	5. IN	TAKE (options	<i>1</i>) –
ANTAND		b. u	a, MAXIMUM	DAILY VA	LUE D.N	AXIMUM 3	ODAY VALUE	CLONG TERM	AVRG. VALUE	1 NO. OF	- ONCEN	1	a. LON	G TERM	ANO. OF
(if available)		44-		· [7] MA	15 CON	(1)		(1) CONCENTRATION	[2] MASS	ANAL- YSES	- YATION	h, MASS	CONCENTRATION		ANAL-
a. Bromide (24959-67-9)		x													
h. Chlorine, Yotst Hestoust		X													
c. Color		X													
d, Fecel Colliarm		X								<u>.</u>					
4, Fluorida (16904-48-8)		X													
f. Nitrato- Nitrite (ar N)		. X													
		-						PAGE V-1						WEINE ON OF	UCDOC

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					IL 006124	17	00	9			For OM	n Approved. 8 No. 2000-005	9	
APAG	E3OF	FORM	2-C			·····				00/0454	Арр	voval expires †2	.31.85	
ite a pr all su water o e is abs east or phono ntratio charge	ch GC/ outfalls ient.11 y ne analy n. or 2- ns of 10 id. Note	ndustr MS Ira ou mai ysis for methyl DOppo that th	y and this outfail octions that apply onrequired GC/A rk column 2a for a that pollutant if -4, 6 dinitrophen or greater. Otherv here are 7 pages	contains proces r to your industr <i>MS (ractions)</i> , m inty pollulant, yo you know or ha ol, you must pr vise, for polluta to this part; play	is wastewater, re y and for ALL tor lark "X" in colum u must provide th we reason to beli ovide the results nts for which you ase review each	offer to table 2c- tic metals, cyani in 2-b for each p is results of at la eve it will be dis of at least one 1 mark column 2b carefully. Compl	Z in the instruction des, and total phi iollutant you know ast one enalysis scharged in conc analysis for each p, you must either lete one table <i>(a)</i>	ns to determine v enois, if you are n w or have reason for that pollutant, entrations of 10 p entrations of 10 p t these pollutar submit at least of 7 pages/ for eac	not require to believe If you mar opb or gre ts which he analysis th outfall.	na GC/MS that ed to mark col is present. Mi k column 2b fo ater. If you ma you know or h you know or h s or brielly des See instructio	ctions you m umn 2-a /se ark "X" in co or any polluta irk column 2 lave reason cribe the rea ons for addit	usi test for. Mi condary indus ilumn 2-c for e ilumn you must p b for acrolein, to believe that sons the pollut ional details al	ark "X" in co tries, nonpro ach pollutan rovide the re acrylonitrili you dischar lant is expect nd requirem	rumn xcoss isuits 3, 2,4 ige in ted to ents,
2.	MARK	.x.			3, 1	EFFLUENT				4. UM	ITS	5. INT	AKE (opti	onal)
ATEST	D. BE- LIKVED	C HE-	A. MAXIMUM D	AILY VALUE	b. MAXIMUM 3 fif ava	able)	C.LONG TERM	AVAG. VALUE	ANAL	A. CONCEN-	L MASS	AVERAG	TERM VALUE	ANAL-
E, ANI	D TOT	AL PHE	NOLS		CONCENTRATION		GONCENTRATION					THATION		
X			20.005	:					1	mg/l				
x			20.025						1	mg/l				
X			20.001			-	•		1	mg/l				
X			20.002						1	mg/l				
X			20.010						1	mg/1				
X			20.010						1	mg/l				
x			20.002						1	mg/l				
X			L0.000Z	SAMP	LE DATE B	1/03			1	mg/1				
X			20,010	· · · · · · · · ·					1	mg/l				
X			20-050						1	mġ/1				
_x.			20.010						1	mg/1				;
X			10.002						1	mg/1				
X			20.01						1	mg/l				
X			20.007				•		1	mg/l				
X									1	mg/l				
T		v	DESCHINE HES	ULTS				and the state of t						
	A PAG all su water ais absolution ais abso	A PAGE 3 OF Ite a primary in all such GC/ water outfalls bis absent. If y hand, or 2- hargod. Note 2. MARK A JET b. B. B. K. X. X. X. X. X. X. X. X. X. X	A PAGE 3 OF FORM Ite a primary industr all such GC/MS tra- aris absent. If you main asst one analysis for phanot, or 2-methy hardins of 100ppb chargod. Note that th 2. MARK 'X' A TEST D. BUT C. BUT A TEST D. BUT C. BUT A TEST D. BUT C. BUT X X X X X X X X X X X X X X X	A PAGE 3 OF FORM 2-C tre a primary industry and this outfall all such GC/MS tractions that apply water outfalls, and nonrequired GC/M eisabsent. If you mark column 2a for a sast one analysis for that pollutant if phonol, or 2-methyl-4, 6 dinitrophen intrations of 100ppb or greater. Others charged. Note that there are 7 pages 2. MARK 'X' a rest' a rest' a rest' b. a vice concellation a rest' x $\angle 0.005$ X $\angle 0.005$ X $\angle 0.002$ X $\angle 0.002$ X $\angle 0.002$ X $\angle 0.002$ X $\angle 0.007$ X $\angle 0.007$ X $\angle 0.007$ X	APAGE 3 OF FORM 2-C In a primary industry and this outfall contains process all such GC/MS fractions that apply to your industry asis absent. If you mark column 2a for any pollulant, yo phanol, or 2-methyl-4, 6 dinitrophenol, you must primations of 100 ppb or greater. Otherwise, for polluta artest ne analysis for that pollulant if you know or has phanol, or 2-methyl-4, 6 dinitrophenol, you must primations of 100 ppb or greater. Otherwise, for pollutant if you know or has part; place in this part; place in this part; place in this part; place in the primation of 100 ppb or greater. Otherwise, for pollutant if you know or has part; place in the prime interview. It is part; place in this part; place in the prime is absent. If you have a place in this part; place is absent. 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PAGE V-3

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23V. 1,1,2,2-Tetra- :hioroethane 79-34-5}			x												
24V. Tetrachioro- sthylone (127-18-4)			X												
25V_ Toluene 108-88-3)			X					-				•			
26V. 1,2-Trans- Dichloroethylene (156-60-5)			x												
27V, 1,1,1-Tri- chlorosthana (71-55-6)			x												
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248. Disthyl Phthsiste (84-65-2)			X												
258. Dimethyl Phthalate (131-11-3)			X							-					
268. Di-N-Butyl Phthalata (84-74-2)			X												
278. 2,4-Dinitro- toluene (121-14-2)			x											_	
288. 2,6-Dinitro- toluene (606-20-2)			x					•							
298. Di-N-Octyl Phthelete (117-84-0)			X												
30B. 1.2-Diphenyl- oydrazina (ar Azo- benzene) (122-66-7			X												
310. Fluoranthens (208-44-0)			x												
329. Fluorena (86-73-7)			x												
338. Hexachiorobenzen: (118-74-11			x												
348, Hexa- chlorobutadiene (87-68-3)			X												
358. Hexachloro- cyclopentadiena (77-47-4)			X					*							
368, Hexachioro- ethans [67-72-1]			X											1	
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			x												
388. Isophorona (78-59-1)	<u> </u>		X												
398, Naphthalene (91-20-3)			X												```
408. Nitrobenzen (98-95-3)		_	X												
41B. N-Nitro- sodimethylamina (62-75-9)			X												
428. N-Nitro sodi- N-Propylamine (621-64-7)			x												

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AND CAS NUMBER	A TEST	D		8. MAXIMUM	ALLY VALUE	b. MAXIML	IM 30 avail	able)	C.LONG TERM	AVAG. VALUE	L NO.OF	a, CONCEN-	IL MASS	AVERAG	S TERM	D. NO. OF
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18P. PC8-1242 (53469-21-9)			X			_										i i i
19P. PC8-1254 (11097-69-1)			x													
20P. PCB-1221 (11104-28-2)			X				·									
21P. PCB-1232 (11141-16-5)			X													
22P. PCB-1248 (12672-29-6)			Х													
23P. PC8-1260 (11096-82-5)			X						•							
24P, PC8-1016 (12674-11-2)			X													
25P. Toxaphene (8001-35-2)			Х													

:PA Form 3510-2C (Rev. 4-84)

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PA Form 3510-2C (Rev. 2-85)



Freeman United Coal Mining Company

Crown Mine III P.O. Box 259 Farmersville, IL 62533-0259 (217) 627-2161 Fax: (217) 627-3411

August 14, 2007

Mr. Ronald Morse Illinois Environmental Protection Agency 2309 West Main Street Marion, Illinois 62959

Re: NPDES Permit Transfer Industry Mine, Permit No. IL0061247

Dear Mr. Morse,

We are herein requesting transfer of the above listed permit from Freeman United Coal Mining Company to Springfield Coal Company, L.L.C, effective no sooner than September 1, 2007. Ownership and control information for the new permittee is attached.

Per your request, I am enclosing 2 copies of an ownership change map for the mine. Although a portion of the property will be transferring to another party, Springfield Coal Company, LLC will retain all permits and will continue to have access as required for reclamation of the properties. In addition, all surface and ground water monitoring will continue to be the responsibility of Springfield Coal Company, LLC.

Location names and contact information for all the former Freeman facilities will remain as they were previously. The Springfield office address will be P.O. Box 9320, Springfield, IL 62791-9320; its location will be 4440 Ash Grove, Suite A, Springfield, IL 62708.

Respectfully,

FREEMAN UNITED COAL MINING COMPANY

BY: Thomas Austin, V.P.

SPRINGFIEDD COAL COMPANY, L.L.C. BY:

Exhibit 12



Illinois Environmental Protection Agency.

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 – (217) 782-3397 James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR

618/993-7200

DOUGLAS P. SCOTT, DIRECTOR

April 12, 2007

Mr. Steven C. Phifer Freeman United Coal Mining Company P.O. Box 259 Farmersville, IL 62533-0259

Re: Freeman United Coal Mining Company - Industry Mine NPDES Permit No. IL0061247

Gentlemen:

Considering the pending Sulfate Water Quality Standards Regulations, additional water quality information will be required for NPDES Permit renewals and modifications. In preparation for the permit renewal and/or modification for your facility, the following additional monitoring information will be required.

Sulfate water quality standards and sulfate effluent limits will be based on hardness, chloride and sulfate concentrations in the effluent and receiving streams. Please provide a minimum of three (3) analyses of hardness, chloride and sulfate for the outfall discharge and the receiving stream upstream of the outfall location. In addition, flow estimates will be required for the outfalls and receiving streams. If possible, all monitoring should be performed at a time when flow exists both from the outfall and in the receiving stream.

The monitoring data required herein shall be submitted on or before July 20, 2007.

Should you have any questions or comments regarding the above, or need any additional information concerning Agency requirements, please contact me at the above telephone number or the Marion address listed below.

Sincerely,

Larry D. Crislip, P.E. Manager, Permit Section Mine Pollution Control Program Bureau of Water

LDC:gs/swqsr.doc/04-11-07

ROCKFORD - 4302 North Main Street, Rockford, IL 61103 - (815) 987-7760 • DES PLAINES - 9511 W. Harrison St., Des Plaines, IL 60016 - (847) 294-4000 ELGIN - 595 South State, Elgin, IL 60123 - (847) 608-3131 • PEORIA - 5415 N. University St., Peoria, IL 61614 - (309) 693-5463 BUREAU OF LAND - PEORIA - 7620 N. University St., Peoria, IL 61614 - (309) 693-5462 • CHAMPAICN - 2125 South First Street, Champaign, IL 61820 - (217) 278-5800 SPRINGFIELD - 4500 S. Sixth Street Rd., Springfield, IL 62706 - (217) 786-6892 • COLLINSVILLE - 2009 Mail Street, Collinsville, IL 62234 - (618) 346-5120 MARION - 2309 W. Main St., Suite 116, Marion, IL 62959 - (618) 993-7200

PRINTED ON RECYCLED PAPER

Exhibit 13

PRELIMINARY DRAFT

ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED FREEMAN UNITED COAL MINING COMPANY

INDUSTRY MINE SITE

June 19, 1979

Prepared by:

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC. Gainesville, Florida 32604

Project No. 78-023-120

ENVIRONMENTAL SETTING/SURFACE WATER

FREEMAN. 2/2-7.1 6/14/79

2.7 SURFACE WATER QUALITY

2.7.1 INTRODUCTION

Three small surface streams within the boundaries of the Freeman Coal property were sampled during 1978 to determine the quality of the water flowing through the proposed mining area (see Figure 2.7-1). Grindstone Creek, the largest stream, originates east of the property and flows through the Freeman Coal tract before intersecting the large LaMoine River. Samples from Grindstone Creek were collected at two locations, one on the eastern boundary and the other at the western boundary of the Freeman Coal tract (see Figure 2.7-1). Willow Creek originates within the Freeman Coal property and exits at the southwestern corner of the site. Sampling for this study was conducted at the southwestern corner. Horney Creek is located south of the property, but intersects the proposed haul road. Samples were collected from this intersection. Four sessonal sampling periods were included in the study, with samples collected on May 17, August 8, November 14, and December 19, 1978. Samples were collected during all four periods from the two locations on Grindstone Creek; however, no sample was collected from Willow Creek in August because the streambed was dry at the sampling time. The Horney Creek site was not initially included in the study; therefore only the fall and winter (November and December) samples were collected from the stream (see Table 2.7-1).

No past water quality data is available for the three streams sampled in this study. The closest regular water quality monitoring station is located on the LaMoine River into which the previously mentioned tributary streams flow.

2.7.2 PRESENT WATER QUALITY

Physical Parameters

Physical parameters measured included discharge, temperature, dissolved oxygen, pH, turbidity and dissolved, suspended, and total solids.

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	Upper Grindscone	Lover ^b Grindstone	Villow ² Creck	Honey Creek	Criceria
Necharge (afr)	£\$ 7	94 2	4 1	0.4	<u></u>
(Scharge (CIS)	60.7	70.2	6,4	0,4	
emperature (°C)	11.0 ^f	13.0	8.0	6.0	
	2.0-25.0	3.0-29.0	3.0-11.0	4.0-8.0	
н	7.8	7.9	8.0	7.7	6.5-9.0
· · · · · · · · · · · · · · · · · · ·	7.2-8.3	7.5-8.4	7.5-8.2	7.2-8.2	
TREETNED MILLEN	7.7	10.1	¥.¥	9.2 A. 6. 13 P	5.0
101272 17-7	1.0-10.4	3.8-11.7	6,0=12.0	4.0-;3.6	
issolved Solids	472	416	666	471	
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(mg/1)	5.0-59.0	6.0-46.0	1.0-21.0	<1-19.0	
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Lagir) Mensidita	17.0	923-329	291-1107	488-313	
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eidicy	8. 7	7.5	6.7	22.0	
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(mg/1 CaCO ₃)	160-302	158-282	26-94	160-254	
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(BERI CALUZ)	233-432	200-304	148	102-388	<200
(MPN/100 sl)	3-170	<10-920	24-150	22-107	-200
tal Phesphorus	0.79	0.08	0.06	<0.03	
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monis Microsen	<0.72	<0.20	<0.15	0.4	0,02
(ng/1 NH3-N)	<0.1-1.80	<0.1-0.40	<0.1-0.20		
organic Mitrogen	12.9	<10.7	<2.03	<1.10	
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ingl) C)	3 5_67 9	33.5	9+1 7 7-17 2	4 6-49 I	
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lmg/l re)	0.30-3.34	0.40-1.50	0.09-<0.10	0.13-0.16	0.3*
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(ug/1 Cr)	b			- 1 4	508
ipp+r	<100	<100	<100	<100	10004
Yegri Lui	3 63	0.98	10 046	D. 21	.058
(me/l Mn)	0.088-10.4	0.115-2.20	0.038-<0.05	0.176-0.240	
CUTY	<2.01	<2.0	<2.0	<2.0	0.05
(ug/1 Hg)					2.08
Ld	<5.0h	<5.0	<5.0	45.D	508
(ug/1 Pb)	h			-100	10004
	<100%	<100	<100	<100	20006
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sticides (us/1)1					
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Dieldrin	<0.01 <0.05	<0.01 <0.05	<0.01 <0.05	<0.05	0.003
Chiordane	<0.3-0.6	<0.03-0.3	<0.1-0.4	<0.3	0.01
0T	<0.01~<0,10	<0.01-<0.10	<0.010.10	<0.10	0.001
Endrin	<0.10 th	<0.10	<0.10	· <0.10	0,004
Lindane	<0.01-<0.05	<0.01-<0.05	<0.01=<0.05	<0.05	0.01
Septachio:	<0.01-<0.05	<0.01-<0.05	<0.01=<0.04 0.02=<0.04	<0.05	0.001
Epracator Trovide	<0.05-0.06	0,03~c0,03	0.02-<0.05	.0.03	
Spoxide	5			10.10	0.03

0.3 YIL DO FATA mandurend

Location of streams and sampling sites is illustrated in Figure Four seasonal samples were collected at these sites.

b

Three samples were collected at this site.

* Valess otherwise nuted, criteria are those racommended for the protection of fish and aduntic life. * Top humber is mean value, buttom numbers indicate range. * Criteria for domestic water supplies.

2.7-3

h all values less than the detection minimum limit. F Only the range of pesticide values is presented.





FREEMAN UNITED COAL MINING COMPANY

OD WEST WASHINGTON STREET : CHICAGO, ILLINDIS 50808 - 312/283-2800 PIELD OFFICE: BOX 570 - CANTON, ILLINDIS 51520 - 309/847-0855

1

July 9, 1979

Mr. Douglas Downing, Supervisor Land Reclamation Division Dept. of Mines & Minerals 227 South Seventh, Suite 204 Springfield, IL 62706

Dear Mr. Downing:

Freeman United Coal Mining Company is hereby applying for a Surface Disturbance Coal Mining Permit for the proposed Industry Mine. The Industry Mine is a new surface mine and the plans are to mine the Colchester No. 2 coal seam in McDonough and Schuyler Counties. After the mine becomes fully operational approximately 500,000 tons of coal is to be mined annually. The Industry Mine has a design life in excess of fifteen (15) years.

Freeman United Coal Mining Company began acquiring property for the Industry Mine in 1947 and most of the property has been owned for more than twenty (20) years. The Industry Mine has been in the planning stages for several years. The Company has retained the mining equipment (1050-B shovel, W-3 wheel excavator, and haulage trucks) from the Banner Mine which was closed in 1974. This equipment will be reconditioned and used in the Industry Mine. In addition, on June 14, 1977, Freeman United Coal Mining Company submitted a NPDES questionnaire to the U.S. EPA, Region V; Permit Branch in accordance with 40 CFR 6.900. Upon receipt of the questionnaire, the U.S. EPA and the U.S. Army Corps of Engineers (COE) determined that : (1) an Environmental Impact Statement (EIS) would be required; and (2) the COE would be the lead federal agency for the EIS under provisions of its Section -404 permit. Preparation of the EIS has been ongoing since that date.

On May 31, 1979, the Board of Trustees of Muscatine Power and Water approved a fifteen year contract, subject to legal approval for the purchase of 700,000 tons of coal annually from Freeman United Coal Mining Company. Two-thirds of the coal requirements are to be supplied by the Industry Mine and one-third is to be supplied from Freeman United's existing mines.

A SD-1 Permit Application for the Industry Mine is enclosed. Necessary road closing agreements are pending negotiation and all agreements will be submitted as soon as they are completed. In addition, the EIS for the Industry Mine is nearly complete, and as soon as this document is submitted to the COE, then a copy will be submitted to the Department.

The Department's consideration of this application request is greatly appreciated. If there are any questions please feel free to contact us.

Sincerely,

Ala F Walliam

DEW/jks Attachments

56

APPENDIX 8

HYDROLOGIC INFORMATION

6-a.

Willow and Grindstone Creeks are the two surface streams traversing the Freeman United Coal Mining Company's property. They are typical of Illinois dissected till plain streams, exhibiting their highest discharges in the spring and lowest flows in the late summer, when discharges may temporarily cease. During routine water quality sampling in 1978, the highest recorded discharges (at the sampling points shown on Map A (3)), for Willow and Grindstone Creeks were 6.4 and 96 cfs, respectively. No measurable flow was present during sampling in both August and November. Several small ephemeral channels intersect the two larger streams and these typically only have discharge in the spring or during major runoff events.

Both streams exhibit wide variations in water quality, and this may be directly related to discharge. During high flows, which are usually the result of runoff, suspended solids concentrations increase, carrying higher than normal concentrations of phosphorous, nitrogen, and organic detrital material. The highest phosphorous concentration measured was 2.24 mg/l; however, the average value was 0.35 mg/l. Suspended solids concentrations ranged from 12 to 59 mg/l and had a mean of 35 mg/l. Total dissolved solids concentrations are usually less than 500 mg/l, however a concentration of 1051 mg/l was measured in Willow Creek in low discharge in November, 1978. Dissolved solids concentrations generally increase with decreased discharge. Both creek are hardwater streams; average hardness was 361 mg/l; a value regarded as being very hard water. Sulfate values are normally less than 100 mg/l, but one concentration of 601 mg/l was recorded in Willow Creek in November.

Bacteriological quality is fair. The average fecal coliform concentration is 202 colonies per 100 ml. This compares to a standard of 200 colonies. The highest concentration recorded was 920 colonies per 100 ml.

Only two metallic constituents were measured in concentrations above state standards. Iron concentrations in Willow Creek were much below the 1.0 mg/l standard; however, six measurements in Grindstone Creek averaged 1.37 mg/l. Precipitation of dissolved iron may impair the viability of some sensitive aquatic species. Manganese concentrations should not exceed 1.0 mg/l (standard level) however, three of the six measurements in Grindstone Creek were above this level (2.46 mg/l average). Levels in Willow Creek were less than 0.05 mg/l.

Pesticide concentrations in the streams were usually below detection limits and below State criteria for water supplies. Small amounts of chlordane and heptachlor epoxide were detected in both streams, but should not pose a danger to either human or aquatic life.

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Page - 2 - Appendix 8 - Hydrologic Information Freeman United Coal Mining Company Industry Mine

(6-a. Cont.)

Physical characteristics of the streams may temporarily limit the productivity of the aquatic flora and fauna. The most obvious threat is lack of flow, and therefore habitat, during summer low or no flow periods. Water temperatures vary seasonally and range from 0° to 30° C. The higher temperatures usually coincide with summer low flows and this may temporarily depress dissolved oxygen levels below safe limits for aquatic fauna. Dissolved oxygen levels usually averaged above 8 mg/l at all sampling points, however significant diurnal variations occur. Early morning oxygen concentrations were often recorded below the 5 mg/l standard set for aquatic life. These temporary depressions appear not to harm the aquatic fauna as no fish kills were noted and fish were collected in these same stream segments during the sampling efforts in which the low measurements were recorded. Leaf litter and detrital deposits in the stream may be in part responsible for the low oxygen levels. Sedimentation of this material also influences the character of the bottom invertebrate fauna.

6-b.

The general land use of the watershed of Grindstone Creek is agricultural upstream from the proposed mining area. Willow Creek watershed begins within the proposed mining area and its' land usage is agricultural. The major potential pollution source on Grindstone Creek upstream from the proposed mining area would be surface runoff from the agricultural land.

6-c.

Public water supplies within ten miles of the proposed mining area are Colchester (7 miles) and Industry (3 miles).

6-d.

The mining operation should not have any effect on the public water supplies within ten miles. Both Colchester and Industry have wells which draw water from geologic units below the coal seam to be excavated. In addition, due to the attitude of bedrocks in the area and direction of surface flow, the flow of both surface and ground water in the vicinity of the proposed permit area is away from the Industry and Colchester wells. See Appendix 7, Hydrogeologic Information, for a more complete discussion about the groundwater in the area.

Appendix 9 and Map E, describe the biologic communities in the proposed mining area.

An archaeologic survey was conducted in 1978 on the property owned by Freeman United Coal Mining Company in McDonough and Schuyler Counties. This information will be included in the Environmental Impact Statement currently being prepared for the Army Corps of Engineer's 404 permit for the proposed mine.

The attached listing is a compilation of ponds and reservoirs contiguous to Freeman United Coal Mining Company's property.

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ANALYSIS OF A	CTUAL	FIELD S	AMPLE	E BY MO	NTH]
				MONT	H		
	1991			1992			
	Dec.	Jan,	Feb.	Mar.	Apr.	May	Jun.
FLOW (gpm)	250	500		300	500	175	45
SOURCE OF DISCHARGE	Surface	Surface		Surface	Surface	Surface	Surface
(e.g. pit pumpage, processing plant, circuit surface rution, etc.)	Runoff	Runoff	N	Runoff	Runoff	Runoff	Runoff
SAMPLING METHOD (24 hr. composite, grab, est, etc.)	Grab	Grab	0	Grab	Grab	Grab	Grab
ACIDITY	27	4	Т	< 2	4	< 2	8
ALKALINITY (mg/l)	82	76		85	75	104	125
LEAD (mg/l)		DID		NOT	L	SAMPLE	
IRON (mg/l)	< 0.25	0.019	S	0.043	0.384	9.39	0.138
MANGANESE (mg/l)	< 0.10	0.026	Α	0.011	0.101	13.1	0,104
pH (range)	6.9	7.74	М	8.21	7.79	8.34	7.52
ZINC (mg/l)	< 0.10	0.01	Р	0.030	0.032	0.212	0.016
FLUORIDE (mg/l)		DID		NOT		SAMPLE	J
TOTAL SUSPENDED SOLIDS (mg/l)	1	2	L	< 1	3	< 1	6
SULFATE (mg/l)	190	214	E	201	141	223	231
TOTAL DISSOLVED SOLIDS (mg/l)	370	477	D	449	323	439	520
CHLORIDE (mg(!)	6.0	8.0		6	< 5	< 5	5

ANALYSIS OF A	ACTUAL	FIELD S	SAMPLE	BY MO	NTH]			
				MONT	H					
	1991 1992									
FLOW (gpm)	<u> </u>	Jan. 15	Feb. 10	Mar. 8	Apr. 30	May NO FLOW	NO FLOW			
SOURCE OF DISCHARGE (e.g. pit pumpage, processing plant, circuit surface runoit, etc.)	Surface Runoff	Surfacc Runoff	Surface Runoff	Surface Runoff	Surface Runoff					
SAMPLING METHOD (24 hr. composite, grab, est, etc.)	. Grab	Grab	Grab	Grab	Grab					
ACIDITY	35	14	16	22	21		<u>ا</u>			
ALKALINITY (mg/l)	160	172	128	173	58					
LEAD (mg/l)		DID	1	NOT		SAMPLE				
IRON (mg/l)	4.94	0.059	0.076	0.038	0.688					
MANGANESE (mg/l)	0.15	0.254	0.966	0.476	1.74					
pH (range)	6.9	7.17	6.86	7.26	6.69					
ZINC (mg/l)	0.24	0.229	0.277	0.278	0.396					
FLUORIDE (mg/l)		DID	.I	NOT	·	SAMPLE				
TOTAL SUSPENDED SOLIDS (mg/l)	120	1	2	4	16					
SULFATE (mg/l)	130	193	247	242	206					
TOTAL DISSOLVED SOLIDS (ug/l)	1,300	587	607	588	424					
CHLORIDE (mg/l)	640	40	20	16	9					

standards in effect for existing impoundments at Industry Mine.

ANALYSIS OF A	ACTUAL I	FIELD S	SAMPLE	BY MO	NTH		
				MONT	н		
	1991			1992			
	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.
FLOW (gpm)	60		45	50	60		2
SOURCE OF DISCHARGE e.g. pit pumpage, processing plant,	Surface Runoff	N	Surface Runoff	Surface Runoff	Surface Runoff	N	Surface Runoff
SAMPLING METHOD 24 hr. composite, grab, est, etc.)	Grab	0	Grab	Grab	Grab	0	Grab
ACIDITY	19	Т	4	6	5	Т	8
ALKALINITY (mg/l)	41		42	52	43	1	113
LEAD (mg/l)		DID		NOT		SAMPLE	
IRON (mg/l)	1.13	S	0.11	0.032	0.579	S	0.152
MANGANESE (mg/l)	0.53	А	0.608	0.161	0.643	A	0:353
pH (range)	6.9	М	7.26	7.51	7.46	м	7.37
ZINC (mg/l)	< 0.10	Р	0.034	0.036	0.053	Р	0.02
FLUORIDE (mg/l)		DID		NOT		SAMPLE	
TOTAL SUSPENDED SOLIDS (mg/l)	19	L	2	< 1	2	L	2
SULFATE (ing/l)	500	Е	387	449	462	E	424
TOTAL DISSOLVED SOLIDS (mg/l)	810	D	789	955	254	D	929
CHLORIDE (mg/l)	6.0		5	< 5	< 5		7

ANALYSIS OF A	CTUAL	FIELD S	SAMPLE	BY MO	NTH		
				MONT	H		
	1991		1.00 Sec. 200 Sec. 20 Sec. 20	1992	1.00.000.000 2000 100000 0 40 1000		
	Dec.	Jan.	Feb.	Mar.	Apr.	Мау	Jun.
FLOW (gpm)	40	20	40	45	55		15
SOURCE OF DISCHARGE (e.g. pit pumpage, processing plant, circuit surface runoff, etc.)	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	N	Surface Runoff
SAMPLING METHOD 24 hr. composite, grab, est, etc.)	Grab	Grab	Grab	Grab	Grab	ο	Grab
ACIDITY	58	52	42	71	19	Т	92
ALKALINITY (mg/l)	< 1.0	< 2	<2	<2	<2		≤ 2
LEAD (mg/l)		DID		NOT		SAMPLE	1.1
IRON (mg/l)	4.38	4.17	3.79	5.75	0.771	S	7.46
MANGANESE (mg/l)	6.05	7.28	5.23	7.63	2.02	A	10.3
pH (range)	3.5	3.68	3.60	3.45	3.99	м	3.48
ZINC (mg/l)	0.39	0.388	0.288	0.382	0.147	Р	0.363
FLUORIDE (mg/l)		DID `		NOT		SAMPLE	,
TOTAL SUSPENDED SOLIDS (mg/l)	25	9	< 1	1	< 1	L	2
SULFATE (mg/l)	500	70	358	426	195	E	492
TOTAL DISSOLVED SOLIDS (mg/l)	680	719	616	879	325	D	1130
CHLORIDE (mg#)	3.0	< 5.0	< 5.0	6	< 5		. 7

ANALYSIS OF A	ACTUAL	FIELD S	SAMPLE	E BY MO	NTH		
				MONT	H		
	1991			1992			
FLOW (gpm)	20	12	10	15	25	мау	<u>3</u>
SOURCE OF DISCHARGE e.g. pit pumpage, processing plant, circuit surface runoit, etc.)	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	N	Surface Runof
SAMPLING METHOD 24 hr. composite, grab, est, etc.)	Grab	Grab	Grab	Grab	Grab	0	Grat
ACIDITY	50	14		45	12	Т	50
ALKALINITY (mg/l)	<1.0	5	14	3	41	-	
LEAD (mg/l)		DID	a source and the second	NOT	3	SAMPLE	3
IRON (mg/l)	7.20	11.5	8.36	8.01	2.12	S	2.46
MANGANESE (mg/l)	8.85	9.24	6.24	9.13	1.73	A	20.7
pH (range)	4:1	5,43	6.28	4.77	7.26	М	4.4)
ZINC (mg/l)	0.59 -	0.561	0.371	0.585	0.129	Р	0.674
FLUORIDE (mg/l)		DID	.L.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NOT		SAMPLI	3
TOTAL SUSPENDED SOLIDS (mg/l)	44	101	20	58	19	L	18
SULFATE (mg/l)	900	66	479	710	212	E	751
TOTAL DISSOLVED SOLIDS (mg/l)	1,200	1,310	834	1,380	374	D	1690
CHLORIDE (mg/l)	6.0	6.0 [.]	7.0	6	< 5		11

ANALYSIS C	OF ACT	UAL FI	ELD SA	MPLE B	Y MON	ГН	
				MONT	H		
	1991			1992	1992		
	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.
LOW (gpm)		20	30	20	45	15	NO FLOW
SOURCE OF DISCHARGE		Surface	Surface	Surface	Surface	Surface	
e.g. pit pumpage, processing plant, circuit surface runoff, etc.)		Runoff	Runoff	Runoff	Runoff	Runoff	
SAMPLING METHOD 24 hr. composite, grab, est, etc.)		Grab	Grab	Grab	Grab	Grab	
ACIDITY		22.	48	61	43	50	
LKALINITY (ug/l)		5	≤ 2	<2	< 2	<2	
_EAD (mg/l)		DID		NOT		SAMPLE	1
RON (mg/l)		15.6	7.15	4.32	6.57	5.27	
MANGANESE (mg/l)		5.43	3.81	5.43	2.32	6,49	
oH (range)		5.08	3.93	3,99	4.33	3.89	
ZINC (mg/l)		0.463	0.489	0.572	0.297	0.540	·
LUORIDE (mg/l)		DID		NOT		SAMPLE	
TOTAL SUSPENDED SOLIDS (ug/l)	,	65	15	10	16	16	
SULFATE (mg/l)		533	424	541	273	471	
TOTAL DISSOLVED SOLIDS (mg/l)		1010	708	1000	502	963	
CHLORIDE (mg/)		6	< 5	7	5	< 5	

ANALYSIS OF	FACT	UAL FI	ELD SA	MPLE B	Y MON'I	Г <mark>Н</mark>	·			
				MONT	H					
27.0	1991 Dec	See Can Star	1992							
FLOW (gpm)	<i>D80.</i>	100	80	mar. 75	<u>Арг.</u> 110	мау 40	18			
SOURCE OF DISCHARGE (e.g. pit pumpage, processing plant, circuit surface runott, etc.)		Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff	Surface Runoff			
SAMPLING METHOD (24 hr. composite, grab, est, etc.)		Grab	Grab	Grab	Grab	Grab	Grab			
ACIDITY		24	19	37	20	б	46			
ALKALINITY (mg/l)		14	10	21	12	22	58			
LEAD (mg/l)		DID	<u>1,450,860,07,000,00,866,866,666,</u>	NOT	<u> 11237455112.2.2.9512665164848</u>	SAMPLE	<u>.</u>			
IRON (mg/l)		12.7	6.68	11.1	2.79	0.028	15.0			
MANGANESE (mg/l)		11.0	7.63	12.5	3.90	0.016	17.6			
pH (range)		5.87	6.07	6.40	6.50	6.36	6.42			
ZINC (mg/l)		0.281	0.323	0.390	0.189	0.036	0.05			
FLUORIDE (mg/l)		DID		NOT	I	SAMPLE	I			
TOTAL SUSPENDED SOLIDS (mg/l)	*****	28	16	30	5	5	30			
SULFATE (mg/l)		319	310	319	240	327	306			
TOTAL DISSOLVED SOLIDS (mg/l)		628	602	720	443	701	778			
CHLORIDE (mg/[)		12	10	7	- 12	6	6			

standards in effect for existing impoundments at industry Mine.









Manganese Case Study Freeman Mine – Industry, Illinois

Introduction

Retention pond 19 located southwest of the intersection of County roads 125 North and 900 East in McDonough County has been testing above acceptable levels for Manganese (Mn) concentration.

Soil Scientists with Key Agricultural Services Inc. were digging soil pits to an approximate depth of 50 inches and noted that Mn concretions are common throughout the soil profile below the surface horizon. The presence of the Mn accumulations in the shallow depths of the soil profile raises the question as to whether the Mn levels found in the pond water are elevated due to acid rock drainage, or to the natural Mn concentrations associated with the parent material and soil forming factors of the undisturbed soils common to the region.

The dominant soil types originally located in the area of the mine that now drain into the pond are Rozetta and Keomah. The NRCS soil profile descriptions for the Rozetta and Keomah soil series note the presence of Mn accumulations beginning at 26 inches and the soil surface, respectively. Due to the natural occurrence of accumulated Mn in the undisturbed soil profiles it is possible that the concentration of Mn in the water of the pond is originating from the inherent concentrations of Mn and not that of acid rock drainage.

Methods

Six sample sites were selected in an undisturbed area adjacent to the mine location. Three of those sites were located in Rozetta and three in Keomah soils. Six corresponding sites were chosen from the reclaimed fields that drain into the pond. Three of the reclaimed sites represent the topographic-position of a Rozetta and three represent that of a Keomah soil.

Six inch soil samples were taken to a depth of 72 inches at each of the 12 locations. Each sample was analyzed in the laboratory for pH and Mn concentration.

The data obtained was then plotted by depth and comparisons were made between the values found in the undisturbed sites versus that of the reclaimed sites. Statistical significance was determined within each sample depth and calculated at 95% confidence.



Summary of Results

<u>pH</u>

The pH levels found in the reclaimed soils ranged from 4.91 to 7.02. The pH levels found in the undisturbed soils ranged from 4.42 to 6.87.

The average pH of the undisturbed samples in each six inch sample range as well as over the entire profile was lower than that of the reclaimed soils (Table 1). The lowest pH readings obtained in each depth increment were all found in the undisturbed samples with the exception of the 60-66 inch range where both the reclaimed and undisturbed soils had a low pH of 5.39.

The lowest pH level found at each sample depth in the reclaimed soil profiles were never lower than the lowest pH level found at the same sample depth of the undisturbed soils (Graph 1).

In the surface 12 inches of all profiles, 3 of the 4 (75.0%) pH levels that were significantly lower were from the undisturbed soil profiles. In the upper 36 inches 15 of the 16 (93.75%) samples with significantly lower pH were from the undisturbed soils. From 36 to 72 inches 10 of the 16 (62.5%) samples with significantly lower pH levels were from the undisturbed soil profiles.

In the 12 sample depths tested, 2 (16.67%) depths had more reclaimed samples with significantly lower pH levels than undisturbed samples and the remaining 10 (83.33%) sample depths had more undisturbed samples with significantly lower pH levels than reclaimed samples (Graph 1).

A total of 72 samples were collected and analyzed for each of the reclaimed and undisturbed soils. 7 (9.72%) reclaimed samples and 25 (34.72%) undisturbed samples had significantly lower pH levels than the other samples collected at those depths.

Manganese

In all but one of the 12 soil profiles collected the Mn concentrations decreased from the surface sample down to 18 inches. The Mn content in most samples remained at relatively minimal levels from 12 to 72 inches, ranging from 8.9 to 67.8 ppm. At each sample depth one to five samples were found to be significantly higher in Mn than the rest of the samples at that same depth (Graph 2).

The reclaimed soil profiles contain less total Mn than the undisturbed soils both on average and in total from 0-12 inches, 30-72 inches, and through the entire 72 inch profile. The reclaimed soils contained more Mn than the undisturbed soils only through the 12-30 inch range (Table 2).

In the surface 12 inches of all profiles, 6 of the 7 (85.71%) Mn levels that were significantly higher were from the undisturbed soil profiles. In the upper 36 inches 10 of the 18 (55.56%) samples with significantly higher Mn concentrations were from the undisturbed soils. From 36 to 72 inches 11 of the 14 (73.33%) samples with significantly greater Mn concentrations were from the undisturbed soil profiles.

In the 12 sample depths tested, 2 (16.67%) depths had more reclaimed samples with significantly high Mn levels than undisturbed samples, 2 (16.67%) depths had equal incidences of



significantly high Mn levels between the undisturbed and reclaimed samples, and 8 (66.67%) had more undisturbed samples with significantly high Mn concentrations than reclaimed samples (Graph 2).

A total of 72 samples were collected and analyzed for each of the reclaimed and undisturbed soils. 12 (16.67%) reclaimed samples and 21 (29.17%) undisturbed samples had significantly higher Mn concentrations than the other samples collected at those depths.

Conclusions

Although all twelve soil profiles tested have lower pH levels than typically recommended for the row crops planted in the region, the pH of the reclaimed soils is higher than that of the undisturbed soils indicating there is not increased acidity due to acid rock. This data also shows the Mn levels found in both the surface and sub-surface of the undisturbed soil profiles are higher than those found in the reclaimed soils and the undisturbed samples have far more incidences of significantly high Mn concentration than the reclaimed soils. Therefore, the Mn levels found in the water of retention pond 19 are most likely due to the naturally occurring Mn levels of the soil material in the region and not due to acid rock drainage.



Comparison of pH Data

Table 1	Undisturb	ed Samples	Reclaimed Sample				
Sample Depth (inches)	Average pH	Lowest pH	Average pH	Lowest pH			
0-6	5.75	5.23	6.19	5.31			
6-12	5.28	4.52	5,95	5.04			
12-18	4.83	4.59	5,55	4.98			
18-24	4.75	4.42	5.49	5.01			
24-30	4.80	4.47	5.67	4.91			
30-36	4.96	4.49	5.60	4.97			
36-42	5,16	4.65	5.61	4.99			
42-48	5.14	4.73	5.78	5.02			
48-54	5.39	4.92	6.06	5.08			
54-60	5.63	5.20	6.10	5.38			
60-66	5.79	5.39	5.96	5.39			
66-72	5.87	5.29	5.83	5.40			

= the lowest value for that depth when comparing Undisturbed and Reclaimed sites.

Comparison of Mn Data

Table 2	Undisturbe	ed Samples	Reclaimed Samples				
Sample Depth (inches)	Average Mn	Highest Mn	Average Mn	Highest Mn			
0-6	128.52	188.50	86.22	106.10			
6-12	76.75	132.10	65.58	115.10			
12-18	43.35	81.50	53.38	124.80			
18-24	25.73	36.90	54.98	139.40			
24-30	28.03	38.70	54.08	130.40			
30-36	59.85	90.80	52.30	128.60			
36-42	78.02	216.30	46.65	150.20			
42-48	68.90	140.20	41.55	103.10			
48-54	65.28	115.50	45.47	96.20			
54-60	74.60	197.40	36.07	73.20			
60-66	65.82	111.20	31.32	45.80			
66-72	47.82	60.80	37.70	56.30			

= the highest value for that depth when comparing Undisturbed and Reclaimed sites.





TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

Laboratory Results

CLIENT: WorkOrder: Lab ID: Report Date:	Freeman Unite 0307525 0307525-03 29-Jul-03	ed Coal Mining			Client Pro Client San Collection Matrix:	ject: In- aple ID: St Date: 7/. SL	dustry ream # 18/03 JRFAC	Mine Stream Sample 1200 CE WATER	8
Analyses		Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
EPA/600 4.1.4. 200.	7 TOTAL	NELAR	0.020		22.5	ma/l	1	7/29/03 10:22:08 4M	SAM
Manganese		NELAP	0.020		1 60	mg/L	1	7/24/03 7:22:31 PM	IMW
Zinc		NELAP	0.010		0.085	ma/L	1	7/24/03 7:22:31 PM	JMW
EPA/600 METHOD	150.1								
pH		NELAP	1.00	н	7.06		1	7/22/03 10:45:00 AM	SAO
EPA/600 METHOD	160.1								
Total Dissolved Solids		NELAP	20		184	mg/L	1	7/24/03	JNS
EPA/600 METHOD 1	60.2								
Total Suspended Solids	5	NELAP	6		1900	mg/L	1	7/23/03	DLY
EPA/600 METHOD 1	60.5								
Solids, Settleable		NELAP	0.1	н	1.2	mVL	1	7/22/03 2:33:00 PM	SAO
EPA/600 METHOD 3	05.1							7/00/00	DIV
Acidity, Total (as CaCO	(3)	NELAP	0		-49	mg/L	1	//23/03	ULY
EPA/600 METHOD 3	10.1 		0		86	mail	1	7/23/03	
EPA/RAA METHOD 3	25.3	NECAF	v		00	ngre	'	1120100	DCI
Chloride	A VIN	NELAP	1		15	mg/L	1	7/29/03	JAE
EPA/600 METHOD 3	75.4								
Sulfate, Turbidimetric		NELAP	5		16	mg/L	1	7/28/03	JAE

IL ELAP and NELAP Accredited - Accreditation #100226

IDPH Registry #17584

Page 5 of 6

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLUNSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

Laboratory Results

CLIENT: WorkOrder: Lab ID: Report Date:	Freeman Unite 04030301 04030301-013 23-Mar-04	ed Coal Mining			Client Pro Client San Collection Matrix:	iject: In nple ID: N Date: 3/ Si	dustry GS120 5/04 URFAC	Mine Pond 0 CE WATER	
Analyses		Certification	RL	Qua]	Result	Units	DF	Date Analyzed	Analyst
EPA/600 4.1.4. 200 Iron Manganese EPA/600 METHOD	0.7 TOTAL	NELAP NELAP	0.020 0.005		4.77 0.176	mg/L mg/L	1	3/12/04 5:09:16 PM 3/12/04 5:09:16 PM	JMM TMM
pH	1.1.1.1.1.1	NELAP	1.00	н	7.44		1	3/11/04 11:28:00 AM	EAW
EPA/600 METHOD Total Suspended Soli	<u>160.2</u> ds	NELAP	6		153	mg/L	1	3/11/04	DLY
Solids, Settleable		NELAP	0.2	н	< 0.2	ml/L	2	3/22/04 1:12:00 PM	SAO
EPA/600 METHOD Acidity, Total (as CaC	305.1 03)	NELAP	0		-127	mg/L	1	3/12/04	DLY
Alkalinity, Total (as C	aCO3)	NELAP	٥		138	mg/L	1	3/12/04	DLY
EPA/600 METHOD Chloride	325.2		2		36	mg/L	2	3/15/04 12:15:22 PM	SMR
EPA/600 METHOD Sulfate, Turbidimetric	375.4	NELAP	10		39	mg/L	2	3/19/04	ADH

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TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Coal Company				Client Project: Industry Mine Pond						
WorkOrder: 09041022				Client Samp	le ID: 12	00 road				
Lab ID: 09041022-0	02			Collection	Date: 4/2	2/2009	11:25:00 AM			
Report Date: 05-May-09			М	atrix: AQ	UEOUS					
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	Inalyst		
EPA 600 375.2 REV 2.0 1993 (TOT	<u>AL)</u>									
Sullate	NELAP	50		53	mg/L	1	4/30/2009 11:54:00 A	M DLW		
EPA 600 4.1.4. 200.7R4.4, METAL	<u>S BY ICP (TOTAL</u>	1								
Iran	NELAP	0.0200		2.30	mg/L	1	4/29/2009 7:00:00 PM	⊿ JMW		
Manganese	NELAP	0.0050		0.0849	mg/L	1	5/1/2009 10:59:57 AM	WML N		
STANDARD METHOD 18TH ED.	4500-H_B. LABOR	ATORY	ANALYZI	<u>ED</u>						
Lab pH	NELAP	1.00		7.87		1	4/28/2009 3:21:00 PM	M NJM		
STANDARD METHODS 18TH EE). 2310 B									
Acidity, Total (as CaCO3)	NELAP	0		-162	mg/L	1	4/29/2009 12:10:00 P	м мк		
STANDARD METHODS 18TH ED) <u>, 2320 B</u>									
Alkalinity, Total (as CaCO3)	NELAP	0		174	mg/∟	1	4/29/2009 12:10:00 P	M MK		
STANDARD METHODS 18TH ED	<u>), 2340 C</u>									
Hardness, as (CaCO3)	NELAP	5		280	mg/L	1	4/29/2009 10:00:00 A	м мк		
STANDARD METHODS 18TH ED	<u>), 2540 C (TOTAL)</u>									
Total Dissolved Solids	NELAP	20	н	302	mg/L	1	4/30/2009 5:30:00 PM	и мав		
STANDARD METHODS 18TH ED	<u>, 2540 D</u>									
Total Suspended Solids	NELAP	6	н	63	mg/L,	1	4/29/2009 12:40:00 P	м мав		
STANDARD METHODS 18TH ED	<u>. 2540 F</u>									
Solids, Settleable	NELAP	0.2	н	<0.1	mi/L	1	5/1/2009 10:50:00 AM	A NJM		
STANDARD METHODS 18TH ED	. 4500-CL E (TOTA	L)					4 10 0 10 0 0 0 4 4 . C + 00 +			
Chloride	NELAP	1		28	mg/L	r	4/30/2009 11:54:00 A			

Sample Narrative

Standard Methods 18th Ed. 2540 C (Total)

Sample analysis did not meet hold time requirements.

IL ELAP and NELAP Accredited - Accreditation #100226

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Coa	Company			Client Pr	oject: Inc	lustry Mi	ine Stream Samples	
WorkOrder: 09110091			C	lient Samp	le ID: 12	00 Road		
Lab ID: 09110091-001				Collection	Date: 10.	30/2009	€ 12:20:00 PM	
Report Date: 09-Nov-09				М	atrix: AQ	UEOUS		
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	nalyst
EPA 600 375.2 REV 2.0 1993 (TOTAL)	1							
Sulfate	NELAP	5		16	mg/L	1	11/6/2009 1:59:00 PM	DLW
EPA 600 4.1.4. 200.7R4.4. METALS B	Y ICP (TOTAL)	È China an Anna						
Iron	NELAP	0.0200		12.4	mg/L	1	11/4/2009 12:43:42 PM	1 JMW
Manganese	NELAP	0.0050		0.341	mg/L	1	11/4/2009 12:43:42 PM	1 JMW
STANDARD METHOD 18TH ED. 450	0-H B, LABOR	ATORY	ANALYZED					
Lab pH	NELAP	1.00		7.49		1	11/4/2009 1:32:00 PM	LDG
STANDARD METHODS (8TH ED. 23	10 B							
Acidity, Total (as CaCO3)	NELAP	0		-46.7	mg/L	1	11/5/2009 1:20:00 PM	MK
STANDARD METHODS 18TH ED. 23	20 B							
Alkalinity, Total (as CaCO3)	NELAP	0		71	mg/L	1	11/5/2009 1:20:00 PM	MK
STANDARD METHODS 18TH ED. 23	<u>40 C</u>							
Hardness, as (CaCO3)	NELAP	5		80	mg/L	1	11/4/2009 12:30:00 PN	і МК
STANDARD METHODS 18TH ED. 25	<u>40 C (TOTAL)</u>							
Total Dissolved Solids	NELAP	20		204	mg/L	1	11/4/2009 3:55:00 PM	JMT
STANDARD METHODS 18TH ED. 25	<u>40 I)</u>							
Total Suspended Solids	NELAP	6		83	mg/L	1	11/3/2009 2:30:00 PM	нмн
STANDARD METHODS 18TH ED. 45 Chloride	00-CLE(TOTA NELAP	<u>(L)</u> 1		17	mg/L	1	11/4/2009 3:54:00 PM	DLW

Sample Narrative

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE. ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Coa	I Company			Client Pr	roject: Inc	lustry Mi	ine Stream Samples	
WorkOrder: 09120082				Client Samp	le ID: 12	00 Road		
Lab ID: 09120082-002				Collection	Date: 11	/30/2009	9 5:00:00 PM	
Report Date: 08-Dec-09				M	latrix: AQ	UEOUS		
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	nalyst
EPA 600 375.2 REV 2.0 1993 (TOTAL)							
Sulfate	NELAP	50	S	57	mg/L	1	12/4/2009 11:40:00 A	M DLW
EPA 600 4.1.4, 200.7R4.4, METALS B	<u>v icp (total</u>)	2						
Iron	NELAP	0.0200		0.562	mg/L	1	12/3/2009 6:08:28 PM	I JMW
Manganese	NELAP	0.0050		0.137	mg/L	1	12/7/2009 10:23:21 A	WML N
STANDARD METHOD 18TH ED. 450	00-H B. LABOR	ATORY	<u>ANALYZE</u>	<u>.D</u>				
Lab pH	NELAP	1.00		8.08		1	12/2/2009 2:14:00 PM	i NJM
STANDARD METHODS 18TH ED. 2	310 B							
Acidity, Total (as CaCO3)	NELAP	0		-202	mg/L	1	12/2/2009 1:30:00 PM	I MK
STANDARD METHODS 18TH ED. 2.	<u>320 B</u>							
Alkatinity, Total (as CaCO3)	NELAP	0		212	mg/L	1	12/2/2009 1:30:00 PM	і мк
STANDARD METHODS 18TH ED, 23	34 <u>0 C</u>							
Hardness, as (CaCO3)	NELAP	5		280	mg/L	1	12/4/2009 12:00:00 P	M MK
STANDARD METHODS 18TH ED. 25	540 C (TOTAL)							
Total Dissolved Solids	NELAP	20		336	mg/L	1	12/3/2009 9:00:00 PM	1 JMT
STANDARD METHODS 18TH ED. 25	540 D							
Total Suspended Solids	NELAP	6		167	mg/L	1	12/2/2009 4:50:00 PM	I HMH
STANDARD METHODS 18TH ED. 4 Chloride	500-CLE(TOTA NELAP	<u>\L)</u> 1	s	24	mg/L	1	12/7/2009 1:57:00 PM	DLW

Sample Narrative

Standard Methods 18th Ed. 4500-C1 E (Total)

Matrix spike recovery was outside QC limits due to matrix interference.

EPA 600 375.2 Rev 2.0 1993 (Total)

Matrix spike did not recover within control limits due to matrix interference.
TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield C WorkOrder: 10010980 Lab ID: 10010980-00 Report Date: 04-Feb-10	C	Client Project: Industry Mine Stream Sample Client Sample ID: 1200 Road Collection Date: 1/24/2010 4:00:00 PM Matrix: AQUEOUS						
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed A	nalyst
EPA 600 375.2 REV 2.0 1993 (TOTA	<u>AL.)</u>							
Sulfate	NELAP	5		29	mg/L	٦	2/2/2010 9:14:12 AM	MVS
EPA 600 4.1.4, 200.7R4.4, METALS	SBY ICP (TOTAL)	1						
Managanaga	NELAP	0.0200		2.86	mg/L	1	2/1/2010 7:09:45 PM	JMW
Manganese	NELAP	0.0050	• • • • • • • • • • • • • •	0.116	mg/L	1	2/2/2010 4:20:32 PM	AMM
STANDARD METHOD 18111 ED. 4	NELAD	1.00	ANALYZEU	7.00		1	1/20/2010 A-21-00 DM	
STANDADD METHODS ISCHED	7310 8	1.00		7.30			(725)2010 4.2 1.00 PW	MOM
Acidity, Total (as CaCO3)	NELAP	D		-170	mo/L	1	2/2/2010 11:15:00 AM	МК
STANDARD METHODS 18TH FD.	2320 B	-						
Alkalinity, Total (as CaCO3)	NELAP	0		178	mg/L	1	2/2/2010 11:15:00 AM	MK
STANDARD METHODS 18TH ED.	2340 C				•			
Hardness, as (CaCO3)	NELAP	5		240	mg/L	1	1/29/2010 10:00:00 AM	MK MK
STANDARD METHODS 18TH ED.	2540 C (TOTAL)							
Total Dissolved Solids	NELAP	20		356	mg/L	1	1/29/2010 4:30:00 PM	TML
STANDARD METHODS 18TH ED.	25401)							
Total Suspended Solids	NELAP	6		66	mg/L	1	1/30/2010 3:40:00 PM	JMT
STANDARD METHODS 18TH ED. Chloride	4500-CL E (TOTA NELAP	1 1		23	mg/L	1	1/29/2010 3:55:19 PM	DLW

Sample Narrative

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Co	oal Company			Client Pr	oject: Ind	lustry Mi	ne Stream Sample	s
WorkOrder: 10030573				Client Samp	le ID: 12	00 Road		
Lab ID: 10030573-00	2			Collection	Date: 3/1	1/2010	5:50:00 PM	
Report Date: 22-Mar-10				М	atrix: AQ	UEOUS		
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
STANDARD METHODS 18TH ED.	2310 B							
Acidity, Total (as CaCO3)	NELAP	0		-135	mg/L	1	3/16/2010 8:10:00 A	M MK
STANDARD METHODS 18TH ED.	2320 B							
Alkalinity, Total (as CaCO3)	NELAP	0		143	mg/L	1	3/16/2010 8:10:00 A	M MK
STANDARD METHODS 18TH ED.	2340 C							
Hardness, as (CaCO3)	NELAP	5		180	mg/L	1	3/16/2010 11:30:00	AM MK
STANDARD METHODS 18TH ED.	2540 C (TOTAL)							
Total Dissolved Solids	NELAP	20		270	mg/L	1	3/15/2010 4:30:00 F	TML M
STANDARD METHODS 18TH ED.	2540 D							
Total Suspended Solids	NELAP	6		203	mg/L	1	3/17/2010 1:00:00 F	PM JMT
<u>SW-846 3005A, 6010B, METALS BY</u>	(ICP (TOTAL)							
iron	NELAP	0.0200		4.86	mg/L	1	3/17/2010 6:12:24 F	°M JM₩
Manganese	NELAP	0.0050		0.164	mg/L	1	3/17/2010 6:12:24 F	WML M
<u>SW-846 9036 (TOTAL)</u>								
Sulfate	NELAP	10		30	mg/L	2	3/19/2010 2:25:00 P	M DLW
SW-846 9040B, LABORATORY AN	ALYZED							
Lab pH	NELAP	0		7.72		1	3/15/2010 2:42:00 P	M NJM
<u>5W-846 9251 (TOTAL)</u>								
Chloride	NELAP	1		24	mg/L	1	3/15/2010 3:13:00 P	M DLW

Sample Narrative

TEKLAB, INC.

5445 HORSESHOE LAKE ROAD COLLINSVILLE, ILLINOIS 62234

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Springfield Coal Company WorkOrder: 10070918 Lab ID: 10070918-002 Report Date: 29-Jul-10				Client Project: Industry Mine Stream Samples Client Sample ID: 1200 Road Collection Date: 7/21/2010 4:00:00 PM Matrix: AQUEOUS							
Analyses	Certification	RL	Quat	Result	Units	DF	Date Analyzed Ar	alyst			
EPA 600 375.2 REV 2.0 1993 (TOTA Sulfate	L) NELAP	5		16	mg/L	1	7/29/2010 10:33:00 AM	DLW			
EPA 600 4.1.4, 200.784.4, METALS Iron Manganese	NELAP NELAP	0.0200 0.0050		18.3 0.475	mg/L mg/L	1 1	7/27/2010 12:28:57 PM 7/27/2010 12:28:57 PM	LAL LAL			
STANDARD METHOD 18TH ED. 4 Lab pH	500-H B, LABOR NELAP	ATORY 1.00	ANALYZEI	<u>)</u> 7.66		1	7/26/2010 2:14:00 PM	CS			
STANDARD METHODS 18TH ED. 2 Acidity, Total (as CaCO3)	2310 B NELAP	0		-113	mg/L	1	7/27/2010 10:45:00 AM	мк			
STANDARD METHODS 18TH ED. 2 Alkalinity, Total (as CaCO3)	NELAP	0		123	mg/L	1	7/27/2010 10:45:00 AM	МК			
Hardness, as (CaCO3) STANDARD METHODS 18TH ED. 2	NELAP 2540 C (TOTAL)	5		160	mg/L	1	7/26/2010 10:40:00 AM	МК			
Total Dissolved Solids	NELAP	20		218	mg/L	1	7/26/2010 12:30:00 PM	МК			
Total Suspended Solids	NELAP	6		387	mg/L	1	7/26/2010 5:30:00 PM	BSJ			
Chloride	NELAP	1		15	mg/L	1	7/27/2010 2:57:00 PM	DLW			

Sample Narrative

IL ELAP and NELAP Accredited - Accreditation #100226

Environmental La	DC, boratory	Labor	atory	Results			http://www.teklal	binc.com/
Client: Springfield C	coal Company					W	ork Order: 110300)76
Client Project: Industry Min	e Stream Samples					Re	nort Date: 08-Mar	-11
L ====================================	o onoom aompiou			Client Some	J. ID. 420	10 Pood	P	
Lab 1D: 11030076-00	JZ			Chem Sainp	ne 1D: 120	N Ruau		
Matrix: AQUEOUS			P	Collection	Date: 02/	28/2011	13:10	
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 375.2 REV 2.0 1993	(TOTAL)							
Sulfate	NELAP	10		34	mg/L	2	03/07/2011 14:39	R146588
STANDARD METHOD 18TH	ED. 4500-H B, LABOR	ATORY AN	ALYZED)				
Lаб рН	NELAP	1.00		7.71		1	03/03/2011 14:45	R146430
STANDARD METHODS 18TH	1 ED. 2310 B							
Acidity, Total (as CaCO3)	NELAP	0		-84	mg/L	1	03/03/2011 8:20	R146402
STANDARD METHODS 18T	I ED. 2320 B							
Alkalinity, Total (as CaCO3)	NELAP	0		101	mg/L	1	03/03/2011 8:20	R146400
STANDARD METHODS 18TH	1 ED. 2340 C							
Hardness, as (CaCO3)	NELAP	5		140	mg/L	1	03/02/2011 9:30	R146327
STANDARD METHODS 18TH	HED. 2540 C (TOTAL)							
Total Dissolved Solids	NELAP	20		276	mg/L	1	03/02/2011 13:00	R146347
STANDARD METHODS 18TH	1 ED. 2540 D							
Total Suspended Solids	NELAP	6		114	mg/L	1	03/03/2011 9:30	R146401
STANDARD METHODS 18TH	I ED. 2540 F							
Solids, Settleable	NELAP	0.2	н	1.0	ml/L	1	03/02/2011 14:55	R146419
Sample analysis did not meet hole	t time requirements.					-	·····	
STANDARD METHODS 18TH	I ED. 4500-CL E (TOT)	AL)						
Chloride	NELAP	1		64	mg/L	1	03/04/2011 11:56	R146516
EPA 600 4.1.4, 200.7R4.4, MI	ETALS BY ICP (TOTA)	_)						
Iron	NELAP	0.0200		19,6	mg/L	1	03/04/2011 19:13	66350
Manganese	NELAP	0.0050		0.505	mg/L	1	03/04/2011 19:13	66350

	NC.	Labor	atory l	Results		;	http://www.tekłal	binc.com	/
Client: Springfield (Coal Company					We	ork Order: 110411	150	
Client Project: Industry Mir	ne Stream Samples					Re	nort Date: 02-May	v-11	
Lab ID: 11041150.0	nno 2			Client Same	ale ID+ 12f	in Road			
				Chem Danig					
Matrix: AQUEOUS				Collection	Date: 04/	25/2011	16:00		,
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch	
EPA 600 375.2 REV 2.0 199	3 (TOTAL)								
Sulfate	NELAP	5		33	mg/L	1	04/28/2011 11:42	R148750	
STANDARD METHOD 18TH	ED. 4500-H B, LABOR	ATORY AN	ALYZED						
Lab pH	NELAP	1.00		6.08		1	04/27/2011 17:59	R148709	
STANDARD METHODS 18T	H ED. 2310 B								
Acidity, Total (as CaCO3)	NELAP	0		-182	mg/L	1	04/28/2011 9:15	R148746	
STANDARD METHODS 18T	H ED. 2320 B								
Alkalinity, Total (as CaCO3)	NELAP	0		189	mg/L	1	04/28/2011 9:15	R148745	
STANDARD METHODS 18T	H ED. 2340 C								
Hardness, as (CaCO3)	NELAP	5		280	mg/L	1	04/29/2011 9:30	R148792	
STANDARD METHODS 18T	H ED. 2540 C (TOTAL)								
Total Dissolved Solids	NELAP	20		310	mg/L	1	04/28/2011 15:25	R148/64	
STANDARD METHODS 18T	H ED. 2540 D	~		70			04/20/2014 0:00	5440770	
		Ø		75	ing/L	1	04/29/2011 9:00	R140770	
STANDARD METHODS 181	HEU. 2540 F	0.0			mili		04/27/2014 12:45	0149699	
	NELAF	0,2		~ U.Z	1102	J	04/2//2011 12.43	R140000	
STANDARD METHODS 181	NELAD	1		76	mall	1	04/27/2011 10:29	R148726	
		、 ·		2.3	ngre	•	040202011 10:23	11140120	
EFA 000 4.1.4, 200.7 K4.4, M	NELAP	0.0200		1 81	ma/l.	1	04/29/2011 21:32	67770	
Manganese	NELAP	0.0050		0.132	mg/L	1	04/29/2011 21:32	67770	
Manganese	NELAP	0.0050		0.132	mg/L	1	04/29/2011 21:32	0///0	



Laboratory Results

Environmental	aboratory					ł	ttp://www.tekla	binc.com/
Client: Springfield	Client: Springfield Coal Company					Wo	rk Order: 11051	330
Client Project: Industry Mir	Client Project: Industry Mine Stream Samples					Re	port Date: 06-Jun	i-11
Lab ID: 11051330-0	102			Client Samula ID: 1280 Road				
							15 50	
Marns: AQUEOUS				Collection	Date: U5/	25/2011	15:50	
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 375.2 REV 2.0 199	3 (TOTAL)							
Sulfate	NELAP	50		86	mg/L	1	05/31/2011 13:23	R150152
STANDARD METHOD 18TH	ED. 4500-H B, LABOR	RATORY AN	ALYZED					
Lab pH	NELAP	1.00		7.28		1	05/31/2011 16:07	R150121
STANDARD METHODS 18T	H ED. 2310 B							
Acidity, Total (as CaCO3)	NELAP	0		-5.5	mg/L	1	06/02/2011 7:40	R150204
STANDARD METHODS 18T	H ED. 2320 B							
Alkalinity, Total (as CaCO3)	NELAP	0		46	mg/L	1	06/02/2011 7:40	R150203
STANDARD METHODS 18T	H ED, 2340 C							
Hardness, as (CaCO3)	NELAP	5		100	mg/L	1	06/01/2011 8:30	R150148
STANDARD METHODS 18T	H ED. 2540 C (TOTAL)							
Total Dissolved Solids	NELAP	20		196	mg/L	1	05/31/2011 13:00	R150101
STANDARD METHODS 18T	H ED. 2540 D							
Total Suspended Solids	NELAP	6		76D	mg/L	1	05/31/2011 9:10	R150095
STANDARD METHODS 18T	H ED. 2540 F							
Solids, Settleable	NELAP	0.2	н	0.2	ml/L	1	05/31/2011 8:30	R150075
STANDARD METHODS 18T	H ED. 4500-CL E (TOT	AL)						
Chloride	NELAP	10	Ĵ	6	mg/L	10	06/03/2011 13:17	R150307
Elevated reporting limit due to ma	atrix interference.			*			in and a state of the state of	
EPA 600 4.1.4, 200.7R4.4, M	ETALS BY ICP (TOTA	L)					06/01/2011 22-26	69550
Iron	NELAP	0.0200		36.2 0 946	mgy L mg/L	1	06/01/2011 22:25	68550
manganese	NELAP	0.0050		0.645	my/L		00/01/2011 22:23	00333

Springfield Coal Co.

Springfield Coal Company, LLC

Crown Mine III P.O. Box 259 Farmersville, IL 62533-0259 (217) 627-2161 Fax: (217) 627-3411

April 21, 2010

Chad Kruse Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276 1-217-782-2829

Re: Violation W-2009-00306

Dear Mr. Kruse.

Mr. Larry Crislip suggested that we send this letter to you to clarify an issue arising around Violation W-2009-00306. Title 35. Subtitle D, 406.106 b) 2) provides in pertinent part: "The manganese effluent limitation is applicable only to discharges from facilities where chemical addition is required to used the iron or pH effluent limitations. The upper limit of pH shall be 10 for any such facility that is unable to comply with the manganese limit at pH 9." As described in the letter we submitted to you dated February 18, 2010, chemical treatment is to be utilized at Pond 18 and Pond 19 to comply with the upper limit of pH is 9 in the NPDES permit for facility # 11.0061247. As a result, although the upper limit of pH is 9 in the NPDES permit, a pH greater than 9 yet less than 10 should not be an excursion. Please confirm. On March 11, 2010 a NPDES sample at Pond 19 outfall had a pH of 9.04.

If you should have any questions regarding this request or require further information, please contact me at your convenience.

Sincerely, Springfield Coal Company, LLC

Andrew R. Ditch Environmental Engineer 1,217.627.2161 ext 229