

EARTHRISE

law center

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October 25, 2012

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Jeffrey Kukura
Business Unit President
Emerald Coal Resources, LP
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Waynesburg, Pennsylvania 15370

Kevin Crutchfield
Chairman and Chief Executive Officer
Alpha Natural Resources, LLC
Alpha Natural Resources, Inc.
One Alpha Place
P.O. Box 2345
Abingdon, VA 24212

Corporation Service Company
Registered Agent for Alpha Natural Resources, LLC
2704 Commerce Drive
Harrisburg, PA 17110

Dear Sirs:

This notice letter is written on behalf of the Center for Coalfield Justice and its members (collectively, "CCJ"). The Center for Coalfield Justice is a Pennsylvania-incorporated, not-for-profit organization with federal Internal Revenue Service §501(c)(3)-status recognition located at 184 S. Main Street, Washington, PA 15301. CCJ is a membership organization, with a mission to "improve policy and regulations for the oversight of fossil fuel extraction and use; to educate, empower and organize coalfield citizens; and to protect public and environmental health." CCJ consists of individual members and is governed by a volunteer Board of Directors. The Center for Coalfield Justice has more than five hundred members and supporters.

Emerald Coal Resources, LP and Alpha Natural Resources, LLC (collectively, "ANR") own and operate the Emerald Mine #1 coal mine in Waynesburg, Pennsylvania. As a result of ANR's operations at Emerald Mine #1, ANR releases a variety of pollutants into tributaries that feed the Monongahela River. Based on available information, CCJ believes that ANR has violated and will continue to violate the federal Clean Water Act, 33 U.S.C. § 1251, et seq., and ANR's National Pollutant Discharge Elimination System ("NPDES") Permit No. PA0213438 in operating Emerald Mine #1.

Dischargers of industrial wastewater must comply with NPDES permits issued under Section 402 of the Clean Water Act, 33 U.S.C. § 1342. A NPDES wastewater discharge permit contains limits on the amount of allowable pollutants and contains pollutant-monitoring requirements. The discharge of any pollutant in violation of a NPDES permit or the failure to conduct required monitoring for pollutant discharges are prohibited under Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a).

During the five years previous to the date of this letter, ANR has discharged various pollutants from its Emerald Mine #1 operations into tributaries that feed the Monongahela River in concentrations and amounts that exceed the discharge limits contained in its NPDES permit. ANR also has failed to conduct monitoring required by its NPDES permit.

More specifically, ANR's violations are as follows:

Table 1, attached, lists the dates, from December 2007, through June 2012 (the most recent month for which discharge information is publicly available), on which ANR has exceeded the parameters in its permit for various outfalls and/or failed to conduct required monitoring. Each exceedance or failure to monitor constitutes a violation of ANR's NPDES permit and the Clean Water Act. At a minimum, the lawsuit will involve violations on the days ANR was required to sample as reflected in the Discharge Monitoring Reports ("DMRs"). We also expect the lawsuit to include violations that occurred on days in between those required quarterly and monthly sampling events.

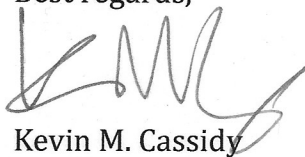
Table 2, attached, sets forth violations of monitoring frequency requirements from April 2008 through June 2012 (the most recent month for which discharge information is publicly available). We also note ANR's failure to monitor and/or report on all of its DMRs in the last five years the presence or absence of non-trace amounts of floating solids or visible foam as required by Part A for every Outfall covered by the NPDES permit. ("There shall be no discharge of floating solids or visible foam in other than trace amounts.") No reports documenting either visible foam or floating solids observations were found in any of the DMRs.

Additional information, including information in ANR's possession, may reveal additional violations, including monitoring, reporting and recordkeeping violations of the Clean Water Act at Emerald Mine #1. For example, this letter covers violations expected to have occurred during Quarter 3 of 2012 (July-Sept.), for which DMR data is not currently publicly available. This letter covers all such violations occurring within the five years immediately preceding the service of this notice letter to the full extent contemplated by the standard set forth in *Public Interest Research Group of New Jersey v. Hercules*, 50 F.3d 1239 (3d Cir. 1995).

Upon expiration of the 60-day notice period, CCJ intends to file a citizen suit against ANR in federal court to secure appropriate relief under federal law for these violations, and for any similar violations that occur after the date of this notice letter. In so doing, CCJ seeks to improve the water quality of the Monongahela River and its tributaries by securing long-term compliance with applicable law.

During the 60-day notice period, we would be willing to discuss effective remedies for the violations noticed in this letter and actions that might be taken to ensure future compliance with the Clean Water Act at Emerald Mine #1. Moreover, the 60-day notice period would be the appropriate time for ANR to inform CCJ of any steps it has already taken to remedy the violations discussed in this notice. However, if you wish to pursue such negotiations in the absence of litigation, we suggest that you initiate those discussions within the next 15 days so that they may be completed before the end of the 60-day notice period. We do not intend to delay the filing of a complaint in federal court if discussions are continuing when that period ends. If you are interested in such discussions, please contact me at: (781) 659-1696, or cassidy@lclark.edu.

Best regards,



Kevin M. Cassidy
Earthrise Law Center

Encl.

PERSONS GIVING NOTICE AND REPRESENTING ATTORNEYS

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Clean Water Act 60-Day Notice Letter
October 25, 2012
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Table 1
Clean Water Act Violations by Emerald Mine #1
(Sourced from DMRs for Clean Water Act Permit #PA0213438)

Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q2 2012	April, 2012	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	183	3.66
	May, 2012	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	189.5	3.79
	June, 2012	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	168.5	3.37
	April 5 and 17, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	194	1.94
	May 1 and 15, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	199	1.99
	June 6 and 19, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	170	1.70
Q1 2012	February, 2012	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	201.5	4.03
	March, 2012	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	195.5	3.91
	Jan. 4 and 25, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	181	1.81
	Feb. 8 and 15, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	206	2.06
	March 5 and 15, 2012	016	Osmotic Pressure	Max. Daily	mos/kg	100	199	1.99
Q4 2011	October, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	195	3.90
	November, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	181	3.62
	December, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	198.5	3.97
	October 2011 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	201	2.01
	November, 2011 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	183	1.83
	December, 2011 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	202	2.02
Q3 2011	July, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	198.5	3.97
	August, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	185.5	3.71
	September, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	196.5	3.93
	July 6 and 15, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	211	2.11
	Aug. 2 and 9, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	198	1.98
	Sept. 12, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	199	1.99
Q2 2011	April, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	166	3.32
	May, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	206.5	4.13
	June, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	200.5	4.01
	April 7 and 19, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	193	1.93
	May 3 and 12, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	214	2.14
	June 1 and 9, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	211	2.11
Q1 2011	January, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	211.5	4.23
	February, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	232	4.64
	March, 2011	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	201	4.02
	Jan. 4 and 13, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	227	2.27
	Feb. 8 and 15, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	234	2.34
	Mar. 15 and 22, 2011	016	Osmotic Pressure	Max. Daily	mos/kg	100	223	2.23
Q4 2010	October, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	212.5	4.25
	November, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	197	3.94
	December, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	184.5	3.69
	October, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	214	2.14
	November, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	219	2.19
	December, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	191	1.91
Q3 2010	July, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	168	3.36
	August, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	196	3.92
	September, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	201	4.02
Q3 2010	July 7 and 27, 2010	016	Osmotic Pressure	Max. Daily	mos/kg	100	211	2.11
	Aug. 3 and 12, 2010	016	Osmotic Pressure	Max. Daily	mos/kg	100	201	2.01
	Sept. 7 and 16, 2010	016	Osmotic Pressure	Max. Daily	mos/kg	100	202	2.02
Q2 2010	April, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	178	3.56
	May, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	212	4.24
	June, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	206	4.12
	April, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	198	1.98

Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q2 2010	May, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	222	2.22
	June, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	207	2.07
Q1 2010	January, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	213	4.26
	February, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	210.5	4.21
	March, 2010	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	187	3.74
	January, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	226	2.26
	February, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	211	2.11
	March, 2010 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	207	2.07
Q4 2009	October, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	153.5	3.07
	November, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	207.5	4.15
	December, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	218	4.36
	October, 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	166	1.66
	November, 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	210	2.10
	December, 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	218	2.18
Q3 2009	July, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	214.5	4.29
	August, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	209.5	4.19
	September, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	185.5	3.71
	July 8 and 15, 2009	016	Osmotic Pressure	Max. Daily	mos/kg	100	215	2.15
	Aug. 3 and 17, 2009	016	Osmotic Pressure	Max. Daily	mos/kg	100	223	2.23
	Sept. 3 and 11, 2009	016	Osmotic Pressure	Max. Daily	mos/kg	100	190	1.90
Q2 2009	April, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	151	3.02
	May, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	145	2.90
	June, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	209	4.18
	April, 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	172	1.72
	May, 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	197	1.97
	June 2009 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	227	2.27
Q1 2009	January, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	225	4.50
	February, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	112.5	2.25
	March, 2009	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	70	1.40
	January, 2009	016	Osmotic Pressure	Max. Daily	mos/kg	100	240	2.40
	Feb. 9 and 18, 2009	016	Osmotic Pressure	Max. Daily	mos/kg	100	120	1.20
Q4 2008	October, 2008	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	96	1.92
	November, 2008	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	147.5	2.95
	December, 2008	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	170.5	3.41
	November, 2008 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	185	1.85
	December, 2008 (2 violations)	016	Osmotic Pressure	Max. Daily	mos/kg	100	220	2.20
Q4 2007	December, 2007	016	Osmotic Pressure	Avg. Monthly	mos/kg	50	51.5	1.03
Q2 2012	April, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	114	2.28
	May, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	129.5	2.59
	June, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	127.5	2.55
	April 5 and 17, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	114	1.14
	May 1 and 15, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	141	1.41
	June 6 and 19, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	141	1.41
Q1 2012	January, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	120	2.40
	February, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	128	2.56
	March, 2012	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	109.5	2.19
	Jan. 4 and 25, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	132	1.32
	Feb. 8 and 15, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	136	1.36
	March 5 and 15, 2012	013	Osmotic Pressure	Max. Daily	mos/kg	100	114	1.14
Q4 2011	October, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	95.5	1.91
	November, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	63	1.26
	December, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	112	2.24
	Dec. 5 and 13, 2011	013	Osmotic Pressure	Max. Daily	mos/kg	100	112	1.12
Q3 2011	July, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	84	1.68
	August, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	67.5	1.35
	September, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	71	1.42

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Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q2 2011	June, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	83.5	1.67
Q1 2011	January, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	100.5	2.01
	February, 2011	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	87.5	1.75
	Jan. 13, 2011	013	Osmotic Pressure	Max. Daily	mos/kg	100	101	1.01
	Feb. 8, 2011	013	Osmotic Pressure	Max. Daily	mos/kg	100	111	1.11
Q4 2010	October, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	109	2.18
	November, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	109.5	2.19
	Oct. 7 and 26, 2010	013	Osmotic Pressure	Max. Daily	mos/kg	100	113	1.13
	Nov. 8 and 16, 2010	013	Osmotic Pressure	Max. Daily	mos/kg	100	112	1.12
Q3 2010	July, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	160	3.20
	August, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	134	2.68
	September, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	124	2.48
	July 7 and 27, 2010	013	Osmotic Pressure	Max. Daily	mos/kg	100	197	1.97
	Aug. 3 and 12, 2010	013	Osmotic Pressure	Max. Daily	mos/kg	100	135	1.35
	Sept. 7 and 16, 2010	013	Osmotic Pressure	Max. Daily	mos/kg	100	128	1.28
Q2 2010	April, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	114	2.28
	May, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	113	2.26
	June, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	116.5	2.33
	April, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	127	1.27
	May, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	121	1.21
	June, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	125	1.25
Q1 2010	January, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	114	2.28
	February, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	117.5	2.35
	March, 2010	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	133	2.66
	January, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	118	1.18
	February, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	118	1.18
	March, 2010 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	164	1.64
Q4 2009	October, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	107	2.14
	November, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	116	2.32
	December, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	110	2.20
	October, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	108	1.08
	November, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	117	1.17
	December, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	111	1.11
Q3 2009	July, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	128.5	2.57
	August, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	114	2.28
	September, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	112.5	2.25
	July 8 and 15, 2009	013	Osmotic Pressure	Max. Daily	mos/kg	100	133	1.33
	Aug. 3 and 17, 2009	013	Osmotic Pressure	Max. Daily	mos/kg	100	118	1.18
	Sept. 3 and 11, 2009	013	Osmotic Pressure	Max. Daily	mos/kg	100	119	1.19
Q2 2009	April, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	79.5	1.59
	May, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	125	2.50
	June, 2009	013	Osmotic Pressure	Avg. Monthly	mos/kg	50	121	2.42
	April, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	118	1.18
	May, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	170	1.70
	June, 2009 (2 violations)	013	Osmotic Pressure	Max. Daily	mos/kg	100	124	1.24
Q2 2012	April, 2012	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	98	1.40
Q3 2011	September, 2011	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	76	1.09
Q1 2011	January, 2011	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	90.5	1.29
	February, 2011	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	111	1.59
Q4 2010	November, 2011	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	102	1.46
Q1 2010	January, 2010	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	106	1.51
Q4 2009	October, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	76	1.09
	November, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	113	1.61
Q3 2009	August, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	78	1.11
Q2 2009	May, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	72	1.03
Q1 2009	March, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	93	1.33

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Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q1 2009	February, 2009	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	92	1.31
Q4 2008	October, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	91.5	1.31
	November, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	97	1.39
Q3 2008	August, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	79.5	1.14
	September, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	84.5	1.21
Q2 2008	April, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	73.5	1.05
	May, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	73.5	1.05
Q1 2008	February, 2008	002	Osmotic Pressure	Avg. Monthly	mos/kg	70	114	1.63
Q1 2009	March, 2009	017	Iron	Avg. Monthly	mg/l	1.5	1.8	1.20
	January, 2009	017	Iron	Max. Daily	mg/l	7	8.4	1.20
	Feb. 9, 2009	017	Iron	Max. Daily	mg/l	7	18.6	2.66
	March, 2009 (2 violations)	017	Iron	Max. Daily	mg/l	3	3.3	1.10
Q4 2011	October, 2011	016	Iron	Avg. Monthly	mg/l	1.5	2.2	1.47
	November, 2011	016	Iron	Avg. Monthly	mg/l	1.5	2.8	1.87
	December, 2011	016	Iron	Avg. Monthly	mg/l	1.5	5	3.33
	November, 2011	016	Iron	Max. Daily	mg/l	3	5.2	1.73
	December, 2011	016	Iron	Max. Daily	mg/l	3	6.6	2.20
Q2 2011	April, 2011	016	Iron	Avg. Monthly	mg/l	1.5	2.8	1.87
	May, 2011	016	Iron	Avg. Monthly	mg/l	1.5	2.8	1.87
	April 7, 2011	016	Iron	Max. Daily	mg/l	3	3.7	1.23
	May 3, 2011	016	Iron	Max. Daily	mg/l	3	3.2	1.07
Q1 2011	January, 2011	016	Iron	Avg. Monthly	mg/l	1.5	4.6	3.07
	February, 2011	016	Iron	Avg. Monthly	mg/l	1.5	1.8	1.20
	Jan. 13, 2011	016	Iron	Max. Daily	mg/l	3	6.4	2.13
	Feb. 15, 2011	016	Iron	Max. Daily	mg/l	3	3.2	1.07
Q4 2010	October, 2010	016	Iron	Avg. Monthly	mg/l	1.5	2.8	1.87
	December, 2010	016	Iron	Avg. Monthly	mg/l	1.5	10.2	6.80
	October, 2010 (2 violations)	016	Iron	Max. Daily	mg/l	3	4.8	1.60
	Deember, 2010 (2 violations)	016	Iron	Max. Daily	mg/l	3	13.2	4.40
Q1 2010	January, 2010	016	Iron	Avg. Monthly	mg/l	1.5	4.9	3.27
	March, 2010	016	Iron	Avg. Monthly	mg/l	1.5	1.8	1.20
	January, 2010 (2 violations)	016	Iron	Max. Daily	mg/l	3	7.3	2.43
Q4 2009	October, 2009	016	Iron	Avg. Monthly	mg/l	1.5	3.3	2.20
	December, 2009	016	Iron	Avg. Monthly	mg/l	1.5	4.7	3.13
	October, 2009 (2 violations)	016	Iron	Max. Daily	mg/l	3	3.7	1.23
	December, 2009 (2 violations)	016	Iron	Max. Daily	mg/l	3	4.9	1.63
Q3 2009	August, 2009	016	Iron	Avg. Monthly	mg/l	1.5	1.7	1.13
Q1 2009	January, 2009	016	Iron	Avg. Monthly	mg/l	1.5	1.8	1.20
Q2 2012	June, 2012	015	Iron	Avg. Monthly	mg/l	1.5	2.8	1.87
	June 6, 2012	015	Iron	Max. Daily	mg/l	3	3.7	1.23
Q1 2012	March, 2012	015	Iron	Avg. Monthly	mg/l	1.5	4.3	2.87
	March 5 and 15, 2012	015	Iron	Max. Daily	mg/l	3	7.1	2.37
Q2 2012	May, 2012	006	Iron	Avg. Monthly	mg/l	2.1	3.2	1.52
	June, 2012	006	Iron	Avg. Monthly	mg/l	2.1	6.5	3.10
	June 6, 2012	006	Iron	Max. Daily	mg/l	4.2	6.5	1.55
Q2 2012	May 15, 2012	004	Iron	Max. Daily	mg/l	7	10.2	1.46
Q1 2010	January, 2010	002	Iron	Avg. Monthly	mg/l	2	2.3	1.15
Q4 2009	October, 2009	002	Iron	Avg. Monthly	mg/l	2	2.4	1.20
Q1 2008	January, 2008	002	Iron	Avg. Monthly	mg/l	2	2.53	1.27
	January, 2008	002	Iron	Max. Daily	mg/l	4	4.73	1.18
Q3 2010	August, 2010	001	Iron	Avg. Monthly	mg/l	3	6.6	2.20
	Aug. 3, 2010	001	Iron	Max. Daily	mg/l	6	13.1	2.18
Q2 2008	June, 2008	001	Iron	Avg. Monthly	mg/l	3	10.6	3.53
	June, 2008 (2 violations)	001	Iron	Max. Daily	mg/l	6	20.6	3.43

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Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q1 2012	January, 2012	016	Manganese	Avg. Monthly	mg/l	1	1.8	1.80
	February, 2012	016	Manganese	Avg. Monthly	mg/l	1	2	2.00
	Jan. 4, 2012	016	Manganese	Max. Daily	mg/l	2	3.1	1.55
	Feb. 15, 2012	016	Manganese	Max. Daily	mg/l	2	2.6	1.30
Q4 2011	October, 2011	016	Manganese	Avg. Monthly	mg/l	1	3.2	3.20
	November, 2011	016	Manganese	Avg. Monthly	mg/l	1	2.2	2.20
	December, 2011	016	Manganese	Avg. Monthly	mg/l	1	3.2	3.20
	October, 2011 (2 violations)	016	Manganese	Max. Daily	mg/l	2	3.9	1.95
	November, 2011	016	Manganese	Max. Daily	mg/l	2	4.2	2.10
	December, 2011 (2 violations)	016	Manganese	Max. Daily	mg/l	2	3.6	1.80
Q3 2011	July, 2011	016	Manganese	Avg. Monthly	mg/l	1	1.8	1.80
	August, 2011	016	Manganese	Avg. Monthly	mg/l	1	1.3	1.30
	September, 2011	016	Manganese	Avg. Monthly	mg/l	1	1.9	1.90
	July 15, 2011	016	Manganese	Max. Daily	mg/l	2	3	1.50
	Aug. 2, 2011	016	Manganese	Max. Daily	mg/l	2	2.3	1.15
	Sept. 12, 2011	016	Manganese	Max. Daily	mg/l	2	2.5	1.25
Q2 2011	May, 2011	016	Manganese	Avg. Monthly	mg/l	1	2.5	2.50
	June, 2011	016	Manganese	Avg. Monthly	mg/l	1	1.4	1.40
	May 3 and 12, 2011	016	Manganese	Max. Daily	mg/l	2	2.9	1.45
Q1 2011	January, 2011	016	Manganese	Avg. Monthly	mg/l	1	2.6	2.60
	Jan. 4 and 13, 2011	016	Manganese	Max. Daily	mg/l	2	3	1.50
Q4 2010	October, 2010	016	Manganese	Avg. Monthly	mg/l	1	2.2	2.20
	December, 2010	016	Manganese	Avg. Monthly	mg/l	1	2.2	2.20
	October, 2010	016	Manganese	Max. Daily	mg/l	2	2.7	1.35
	December, 2010 (2 violations)	016	Manganese	Max. Daily	mg/l	2	2.3	1.15
Q3 2010	August, 2010	016	Manganese	Avg. Monthly	mg/l	1	1.8	1.80
	Aug. 3, 2010	016	Manganese	Max. Daily	mg/l	2	2.4	1.20
Q1 2010	January, 2010	016	Manganese	Avg. Monthly	mg/l	1	1.1	1.10
Q4 2008	October, 2008	016	Manganese	Avg. Monthly	mg/l	1	1.1	1.10
Q2 2012	June, 2012	015	Manganese	Avg. Monthly	mg/l	1	2.6	2.60
	June 6 and 19, 2012	015	Manganese	Max. Daily	mg/l	2	2.7	1.35
Q4 2010	November, 2010	015	Manganese	Avg. Monthly	mg/l	1	3	3.00
	Nov. 16, 2010	015	Manganese	Max. Daily	mg/l	2	3	1.50
Q2 2012	April, 2012	009	Manganese	Avg. Monthly	mg/l	1	1.4	1.40
	May, 2012	009	Manganese	Avg. Monthly	mg/l	1	1.4	1.40
Q2 2012	June, 2012	006	Manganese	Avg. Monthly	mg/l	1.5	6.3	4.20
	June 6, 2012	006	Manganese	Max. Daily	mg/l	3	6.3	2.10
Q4 2010	December, 2010	001	Manganese	Avg. Monthly	mg/l	2	2.2	1.10
Q2 2008	June, 2008	001	Manganese	Avg. Monthly	mg/l	2	2.3	1.15
	June, 2008 (2 violations)	001	Manganese	Max. Daily	mg/l	4	4.6	1.15
Q4 2011	December, 2011	016	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
	December, 2011 (2 violations)	016	Aluminum	Max. Daily	mg/l	1	1.1	1.10
Q2 2011	April, 2011	016	Aluminum	Avg. Monthly	mg/l	0.5	0.7	1.40
Q4 2010	December, 2010	016	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
Q3 2010	July, 2010	016	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
Q4 2009	December, 2009	016	Aluminum	Avg. Monthly	mg/l	0.5	1.7	3.40
	December, 2009 (2 violations)	016	Aluminum	Max. Daily	mg/l	1	3.3	3.30

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Quarter	DATE	Outfall	Parameter	Type of Limit	Units	Permit Limit	Reported Discharge	Exceedence to Limit Ratio
Q1 2012	January, 2012	015	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
	February, 2012	015	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
	March, 2012	015	Aluminum	Avg. Monthly	mg/l	0.5	3.4	6.80
	March 5 and 15, 2012	015	Aluminum	Max. Daily	mg/l	1	5.7	5.70
Q4 2011	November, 2011	015	Aluminum	Avg. Monthly	mg/l	0.5	0.8	1.60
	December, 2011	015	Aluminum	Avg. Monthly	mg/l	0.5	0.7	1.40
Q1 2008	January, 2008	014	Aluminum	Avg. Monthly	mg/l	1.7	1.91	1.12
Q4 2010	December, 2010	013	Aluminum	Avg. Monthly	mg/l	0.5	0.7	1.40
Q3 2010	August, 2010	013	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
Q2 2010	June, 2010	013	Aluminum	Avg. Monthly	mg/l	0.5	0.6	1.20
Q4 2007	December, 2007	007	Aluminum	Avg. Monthly	mg/l	0.5	0.57	1.14
Q2 2012	May, 2012	006	Aluminum	Avg. Monthly	mg/l	0.8	1.1	1.38
Q4 2010	December, 2010	002	Aluminum	Avg. Monthly	mg/l	0.7	1.1	1.57
Q1 2010	January, 2010	002	Aluminum	Avg. Monthly	mg/l	0.7	0.8	1.14
Q4 2009	October, 2009	002	Aluminum	Avg. Monthly	mg/l	0.7	1.9	2.71
	Oct. 5, 2009	002	Aluminum	Max. Daily	mg/l	1.4	1.9	1.36
Q1 2008	January, 2008	002	Aluminum	Avg. Monthly	mg/l	0.7	1.17	1.67
	January, 2008	002	Aluminum	Max. Daily	mg/l	1.4	2.16	1.54
Q2 2012	April, 2012	016	Total Suspended Solids	Avg. Monthly	mg/l	35	36	1.03
Q1 2011	February, 2011	016	Total Suspended Solids	Avg. Monthly	mg/l	35	50	1.43
Q4 2010	December, 2010	016	Total Suspended Solids	Avg. Monthly	mg/l	35	50	1.43
	November, 2010	016	Total Suspended Solids	Max. Daily	mg/l	35	40	1.14
Q1 2010	January, 2010	016	Total Suspended Solids	Avg. Monthly	mg/l	35	72	2.06
	February, 2010	016	Total Suspended Solids	Avg. Monthly	mg/l	35	40	1.14
	January, 2010 (2 violations)	016	Total Suspended Solids	Max. Daily	mg/l	70	102	1.46
	February, 2010 (2 violations)	016	Total Suspended Solids	Max. Daily	mg/l	70	78	1.11
Q4 2009	December, 2009	016	Total Suspended Solids	Avg. Monthly	mg/l	35	46	1.31
Q1 2012	March, 2012	015	Total Suspended Solids	Avg. Monthly	mg/l	35	82	2.34
	March 5 and 15, 2012	015	Total Suspended Solids	Max. Daily	mg/l	70	119	1.70
Q1 2008	January, 2008	014	Total Suspended Solids	Avg. Monthly	mg/l	35	41	1.17
	January, 2008	014	Total Suspended Solids	Max. Daily	mg/l	70	81	1.16
Q2 2012	May, 2012	006	Total Suspended Solids	Avg. Monthly	mg/l	35	110	3.14
	June, 2012	006	Total Suspended Solids	Avg. Monthly	mg/l	35	213	6.09
	May 1, 2012	006	Total Suspended Solids	Max. Daily	mg/l	70	189	2.70
	June 6, 2012	006	Total Suspended Solids	Max. Daily	mg/l	70	213	3.04
Q2 2011	April, 2011	006	Total Suspended Solids	Avg. Monthly	mg/l	35	52	1.49
Q4 2011	October, 2011	002	Total Suspended Solids	Avg. Monthly	mg/l	35	37	1.06
Q2 2011	April, 2011	002	Total Suspended Solids	Avg. Monthly	mg/l	35	58	1.66
	Apr. 19, 2011	002	Total Suspended Solids	Max. Daily	mg/l	70	76	1.09
Q1 2011	January, 2011	002	Total Suspended Solids	Avg. Monthly	mg/l	35	76	2.17
	February, 2011	002	Total Suspended Solids	Avg. Monthly	mg/l	35	76	2.17
	Jan. 13, 2011	002	Total Suspended Solids	Max. Daily	mg/l	70	84	1.20
	Feb. 8, 2011	002	Total Suspended Solids	Max. Daily	mg/l	70	76	1.09
Q4 2010	December, 2010	002	Total Suspended Solids	Avg. Monthly	mg/l	35	52	1.49
Q1 2010	January, 2010	002	Total Suspended Solids	Avg. Monthly	mg/l	35	44	1.26
Q1 2008	January, 2008	002	Total Suspended Solids	Avg. Monthly	mg/l	35	63.5	1.81
	February, 2008	002	Total Suspended Solids	Avg. Monthly	mg/l	35	56	1.60
Q4 2007	December, 2007	002	Total Suspended Solids	Avg. Monthly	mg/l	35	44	1.26
Q3 2010	August, 2010	001	Total Suspended Solids	Avg. Monthly	mg/l	35	77	2.20
	Aug. 3, 2010	001	Total Suspended Solids	Max. Daily	mg/l	70	152	2.17
Q1 2009	January, 2009	001	Total Suspended Solids	Avg. Monthly	mg/l	35	57	1.63
	January, 2009 (2 violations)	001	Total Suspended Solids	Max. Daily	mg/l	70	90	1.29

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Table 2
Monitoring Frequency Violations by Emerald Mine #1
(Sourced from DMRs for Clean Water Act Permit #PA0213438)

Quarter	DATE	Outfall	Parameter	Type of Limit	Req'd #	Permit Violation
Q2 2012	April, 2012	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	May, 2012	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	June, 2012	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q2 2009	April, 2009	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	April, 2009	017	Monitoring Freq., Alkalinity	Req'd # Measurements	at least 1x/mo.	Failed to monitor and/or report
Q1 2009	January, 2009	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	February, 2009	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q4 2008	December, 2008	017	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q2 2012	May, 2012	012	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q2 2012	April, 2012	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	May, 2012	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q3 2011	September, 2011	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q2 2009	April, 2009	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q1 2009	January, 2009	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	February, 2009	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	March, 2009	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
Q2 2008	April, 2008	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report
	June, 2008	004	Monitoring Freq., SS	Req'd # Measurements	1x/mo.	Failed to monitor and/or report