2014-00657200607

U.E.P.A.
S.E.D.O.
2013 DEC 20 AM 10:40

# Individual NPDES Application

## Form 1

## Form 2C

2014-00657200607

Check ID#: 641998
Document#: 18356
Org/Place/Person: 104263
Revenue ID#: 948213

*Please type. Do not complete by hand.*

FORM 1 GENERAL

# EPA

| LABEL ITEMS | |
|---|---|
| I. EPA I.D. NUMBER | |
| III. FACILITY NAME | |
| V. FACILITY MAILING ADDRESS | |
| VI. FACILITY LOCATION | |

OIL00163

**I. EPA I.D. NUMBER**

OH0144720

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

## II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through G to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms.**

| SPECIFIC QUESTIONS | MARK 'X' YES | MARK 'X' NO | MARK 'X' FORM ATTACHED | SPECIFIC QUESTIONS | MARK 'X' YES | MARK 'X' NO | MARK 'X' FORM ATTACHED |
|---|---|---|---|---|---|---|---|
| A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.?** (FORM 2A) | | X | | B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.?** (FORM 2B) | | X | |
| C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C) | X | | X | D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.?** (FORM 2D) | | X | |
| E. Is this a facility which does not discharge process **wastewater?** (FORM 2E) | | X | | F. Is this a facility which discharges stormwater associated with industrial activity? (FORM 2F) | | X | |
| G. Do you generate **sewage sludge** that is ultimately regulated by Part 503? Do you generate **sewage sludge** that is sent to another **facility** for treatment or blending? Do you process or derive material from **sewage sludge** that is disposed in a manner subject to Part 503? (FORM 2S) | | X | | | | | |

## III. NAME OF FACILITY

Vail South

## IV. FACILITY CONTACT

| A. NAME & TTILE *(last, first, title)* | B. PHONE *(area code & no.)* |
|---|---|
| Barry Alexin | (330) 627 - 1400 |

## V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: 95 North Lisbon Street

| B. CITY OR TOWN | C. STATE | D. ZIP CODE |
|---|---|---|
| Carrollton | Ohio | 44615 |

## VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: Section 22, T-11-N R-7-W, Freeport Township, Harrison Co.; Section21, T-11-N R-7-W, Londonderry Township, Guernsey Co.

B. COUNTY NAME: Harrison; Guernsey

| C. CITY OR TOWN | D. STATE | E. ZIP CODE | F. COUNTY CODE *(if known)* |
|---|---|---|---|
| Freeport | Ohio | 43973 | |

RECEIVED AUG 01 2013 Ohio Environmental Protection Agency Southeast District

PAID Amount 200.00 Date 9/6/13 Check# 253131 Date 8/30/13

EPA Form 3510-1 (Rev. for Ohio EPA use 2/06)

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2014-00657200607

*Please type. Do not complete by hand.*

FORM 1 GENERAL

# EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

## GENERAL INFORMATION

*Consolidated Permits Program*
*(Read the "General Instructions" before starting)*

**I. EPA I.D. NUMBER**

| LABEL ITEMS | |
|---|---|
| I. EPA I.D. NUMBER | Ohio EPA does not provide labels. Enter this information in items I, III, V and VI. |
| III. FACILITY NAME | |
| V. FACILITY MAILING ADDRESS | |
| VI. FACILITY LOCATION | |

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If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

**II. POLLUTANT CHARACTERISTICS**

INSTRUCTIONS: Complete A through G to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms.**

| SPECIFIC QUESTIONS | MARK 'X' YES | MARK 'X' NO | MARK 'X' FORM ATTACHED | SPECIFIC QUESTIONS | MARK 'X' YES | MARK 'X' NO | MARK 'X' FORM ATTACHED |
|---|---|---|---|---|---|---|---|
| A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.?** (FORM 2A) | | X | | B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.?** (FORM 2B) | | X | |
| C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C) | X | | X | D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.?** (FORM 2D) | | X | |
| E. Is this a facility which does not discharge process **wastewater?** (FORM 2E) | | X | | F. Is this a facility which discharges stormwater associated with industrial activity? (FORM 2F) | | X | |
| G. Do you generate **sewage sludge** that is ultimately regulated by Part 503? Do you generate **sewage sludge** that is sent to another **facility** for treatment or blending? Do you process or derive material from **sewage sludge** that is disposed in a manner subject to Part 503? (FORM 2S) | | X | | | | | |

**III. NAME OF FACILITY**

Vail South

**IV. FACILITY CONTACT**

| A. NAME & TTILE *(last, first, title)* | B. PHONE *(area code & no.)* |
|---|---|
| Barry Alexin | (330) 627 – 1400 |

**V. FACILITY MAILING ADDRESS**

| A. STREET OR P.O. BOX | | | |
|---|---|---|---|
| 95 North Lisbon Street | | | |
| **B. CITY OR TOWN** | **C. STATE** | **D. ZIP CODE** | |
| Carrollton | Ohio | 44615 | |

**VI. FACILITY LOCATION**

| A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER | | | |
|---|---|---|---|
| Section 22, T-11-N R-7-W, Freeport Township, Harrison Co.; Section21, T-11-N R-7-W, Londonderry Township, Guernsey Co. | | | |
| **B. COUNTY NAME** | | | |
| Harrison; Guernsey | | | |
| **C. CITY OR TOWN** | **D. STATE** | **E. ZIP CODE** | **F. COUNTY CODE** *(if known)* |
| Freeport | Ohio | 43973 | |



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Click to clear all entered information (on both pages of this form) CLEAR

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**VII. SIC CODES** *(4-digit, in order of priority)*

| A. FIRST | | B. SECOND | |
|---|---|---|---|
| | *(specify)* | | *(specify)* |
| **C. THIRD** | | **D. FOURTH** | |
| | *(specify)* | | *(specify)* |

**VIII. OPERATOR INFORMATION**

| A. NAME | B. Is the name listed in Item VIII-A also the owner? |
|---|---|
| Rosebud Mining Company | ☒ Yes ☐ No |

| C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other", specify.)* | | | D. PHONE *(area code & no.)* |
|---|---|---|---|
| F = FEDERAL<br>S = STATE<br>P = PRIVATE | M = PUBLIC *(other than federal or state)*<br>O = OTHER *(specify)* | P | *(specify)* | (330) 627 - 1400 |

| E. STREET OR P.O. BOX |
|---|
| 95 North Lisbon Street |

| F. CITY OR TOWN | G. STATE | H. ZIP CODE | IX. INDIAN LAND |
|---|---|---|---|
| Carrollton | Ohio | 44615 | Is this facility located on Indian lands? ☐ Yes ☒ No |

**X. EXISTING ENVIRONMENTAL PERMITS**

| A. NPDES *(Discharges to surface water)* | D. PSD *(Air emissions from proposed sources)* | |
|---|---|---|
| | | |
| B. UIC *(Underground injection of fluids)* | E. OTHER *(specify)* | |
| | | *(specify)* |
| C. RCRA *(Hazardous waste)* | F. OTHER *(specify)* | |
| | | *(specify)* |

**XI. MAP**

Attach to this application a topographical map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

**XII. NATURE OF BUSINESS** ***(provide a brief description)***

Coal Waste Disposal Facility

**XIII. CERTIFICATION** *(see instructions)*

*I certify under penatly of law that I have personally examined and am famimliar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I belive that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

| A. NAME & OFFICIAL TITLE *(type or print)* | B. SIGNATURE | C. DATE SIGNED |
|---|---|---|
| Barry J. Alexin, Engineer | Barry J. Alexin | 12-16-2013 |

**COMMENTS FOR OFFICIAL USE ONLY**

2014-00657200607

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

Please print or type in the unshaded areas only.

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

O.E.P.A.
S.E.U.O.
2013 DEC 20 AM 10:40

FORM **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
**EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**
*Consolidated Permits Program*

## I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

| A. OUTFALL NUMBER (*list*) | B. LATITUDE | | | C. LONGITUDE | | | D. RECEIVING WATER (*name*) |
|---|---|---|---|---|---|---|---|
| | 1. DEG. | 2. MIN. | 3. SEC. | 1. DEG. | 2. MIN. | 3. SEC. | |
| 002 | | | | | | | Unnamed tributary to Skull Fork Creek |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

| 1. OUTFALL NO. (*list*) | 2. OPERATION(S) CONTRIBUTING FLOW | | 3. TREATMENT | | |
|---|---|---|---|---|---|
| | a. OPERATION (*list*) | b. AVERAGE FLOW (*include units*) | a. DESCRIPTION | b. LIST CODES FROM TABLE 2C-1 | |
| 002 | Storm Water Runoff | 0 gpm | Sedimentation | 1-U | |
| | | | Discharge to surface water | 4-A | |
| | | | | | |
| | | | | | |
| | | | |

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C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☑ NO (*go to Section III*)

| 1. OUTFALL NUMBER (*list*) | 2. OPERATION(s) CONTRIBUTING FLOW (*list*) | 3. FREQUENCY | | 4. FLOW | | | | |
|---|---|---|---|---|---|---|---|---|
| | | a. DAYS PER WEEK (*specify average*) | b. MONTHS PER YEAR (*specify average*) | a. FLOW RATE (*in mgd*) | | B. TOTAL VOLUME (*specify with units*) | | C. DURATION (*in days*) |
| | | | | 1. LONG TERM AVERAGE | 2. MAXIMUM DAILY | 1. LONG TERM AVERAGE | 2. MAXIMUM DAILY | |
| | | | | | | | | |

## III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☑ YES (*complete Item III-C*) ☐ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

| 1. AVERAGE DAILY PRODUCTION | | | 2. AFFECTED OUTFALLS (*list outfall numbers*) |
|---|---|---|---|
| a. QUANTITY PER DAY | b. UNITS OF MEASURE | c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*) | |
| | | | |

## IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

| 1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC. | 2. AFFECTED OUTFALLS | | 3. BRIEF DESCRIPTION OF PROJECT | 4. FINAL COMPLIANCE DATE | |
|---|---|---|---|---|---|
| | a. NO. | b. SOURCE OF DISCHARGE | | a. REQUIRED | b. PROJECTED |
| | | | | | |

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

 CONTINUE ON PAGE 3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

CONTINUED FROM PAGE 2

## V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

| 1. POLLUTANT | 2. SOURCE | 1. POLLUTANT | 2. SOURCE |
|---|---|---|---|
| | | | |

## VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

## VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

## VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☑ NO (*go to Section IX*)

| A. NAME | B. ADDRESS | C. TELEPHONE (*area code & no.*) | D. POLLUTANTS ANALYZED (*list*) |
|---|---|---|---|
| | | | |

## IX. CERTIFICATION

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

| A. NAME & OFFICIAL TITLE (*type or print*) | B. PHONE NO. (*area code & no.*) |
|---|---|
| Barry J. Alexin, Engineer | (330) 627-1400 |
| **C. SIGNATURE** | **D. DATE SIGNED** |
| Barry J. Alexin | 12-16-2013 |

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

| 1. POLLUTANT | 2. EFFLUENT | | | | | | | 3. UNITS (*specify if blank*) | | 4. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| a. Biochemical Oxygen Demand (*BOD*) | | | | | | | | | | | | |
| b. Chemical Oxygen Demand (*COD*) | | | | | | | | | | | | |
| c. Total Organic Carbon (*TOC*) | | | | | | | | | | | | |
| d. Total Suspended Solids (*TSS*) | | | | | | | | | | | | |
| e. Ammonia (*as N*) | | | | | | | | | | | | |
| f. Flow | VALUE | | VALUE | | VALUE | | | | | VALUE | | |
| g. Temperature (*winter*) | VALUE | | VALUE | | VALUE | | | °C | | VALUE | | |
| h. Temperature (*summer*) | VALUE | | VALUE | | VALUE | | | °C | | VALUE | | |
| i. pH | MINIMUM | MAXIMUM | MINIMUM | MAXIMUM | | | | STANDARD 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 2a 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 that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative 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. POLLUTANT AND CAS NO. (*if available*) | 2. MARK "X" | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. BELIEVED PRESENT | b. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| a. Bromide (24959-67-9) | | X | | | | | | | | | | | | |
| b. Chlorine, Total Residual | | X | | | | | | | | | | | | |
| c. Color | | X | | | | | | | | | | | | |
| d. Fecal Coliform | | X | | | | | | | | | | | | |
| e. Fluoride (16984-48-8) | | X | | | | | | | | | | | | |
| f. Nitrate-Nitrite (*as N*) | | X | | | | | | | | | | | | |

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ITEM V-B CONTINUED FROM FRONT

| 1. POLLUTANT AND CAS NO. (*if available*) | 2. MARK "X" | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. BELIEVED PRESENT | b. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| g. Nitrogen, Total Organic (*as N*) | | X | | | | | | | | | | | | |
| h. Oil and Grease | | X | | | | | | | | | | | | |
| i. Phosphorus (as P), Total (7723-14-0) | | X | | | | | | | | | | | | |
| j. Radioactivity | | | | | | | | | | | | | | |
| (1) Alpha, Total | | X | | | | | | | | | | | | |
| (2) Beta, Total | | X | | | | | | | | | | | | |
| (3) Radium, Total | | X | | | | | | | | | | | | |
| (4) Radium 226, Total | | X | | | | | | | | | | | | |
| k. Sulfate (*as $SO_4$*) (14808-79-8) | | X | | | | | | | | | | | | |
| l. Sulfide (*as S*) | | X | | | | | | | | | | | | |
| m. Sulfite (*as $SO_3$*) (14265-45-3) | | X | | | | | | | | | | | | |
| n. Surfactants | | X | | | | | | | | | | | | |
| o. Aluminum, Total (7429-90-5) | | X | | | | | | | | | | | | |
| p. Barium, Total (7440-39-3) | | X | | | | | | | | | | | | |
| q. Boron, Total (7440-42-8) | | X | | | | | | | | | | | | |
| r. Cobalt, Total (7440-48-4) | | X | | | | | | | | | | | | |
| s. Iron, Total (7439-89-6) | | X | | | | | | | | | | | | |
| t. Magnesium, Total (7439-95-4) | | X | | | | | | | | | | | | |
| u. Molybdenum, Total (7439-98-7) | | X | | | | | | | | | | | | |
| v. Manganese, Total (7439-96-5) | | X | | | | | | | | | | | | |
| w. Tin, Total (7440-31-5) | | X | | | | | | | | | | | | |
| x. Titanium, Total (7440-32-6) | | X | | | | | | | | | | | | |

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2014-00657200607

| EPA I.D. NUMBER (*copy from Item 1 of Form 1*) | OUTFALL NUMBER |
|---|---|
| | 002 |

CONTINUED FROM PAGE 3 OF FORM 2-C

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 outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if 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 pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| METALS, CYANIDE, AND TOTAL PHENOLS | | | | | | | | | | | | | | | |
| 1M. Antimony, Total (7440-36-0) | | | X | | | | | | | | | | | | |
| 2M. Arsenic, Total (7440-38-2) | | | X | | | | | | | | | | | | |
| 3M. Beryllium, Total (7440-41-7) | | | X | | | | | | | | | | | | |
| 4M. Cadmium, Total (7440-43-9) | | | X | | | | | | | | | | | | |
| 5M. Chromium, Total (7440-47-3) | | | X | | | | | | | | | | | | |
| 6M. Copper, Total (7440-50-8) | | | X | | | | | | | | | | | | |
| 7M. Lead, Total (7439-92-1) | | | X | | | | | | | | | | | | |
| 8M. Mercury, Total (7439-97-6) | | | X | | | | | | | | | | | | |
| 9M. Nickel, Total (7440-02-0) | | | X | | | | | | | | | | | | |
| 10M. Selenium, Total (7782-49-2) | | | X | | | | | | | | | | | | |
| 11M. Silver, Total (7440-22-4) | | | X | | | | | | | | | | | | |
| 12M. Thallium, Total (7440-28-0) | | | X | | | | | | | | | | | | |
| 13M. Zinc, Total (7440-66-6) | | | X | | | | | | | | | | | | |
| 14M. Cyanide, Total (57-12-5) | | | X | | | | | | | | | | | | |
| 15M. Phenols, Total | | | X | | | | | | | | | | | | |
| DIOXIN | | | | | | | | | | | | | | | |
| 2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6) | | | X | DESCRIBE RESULTS | | | | | | | | | | | |



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CONTINUED FROM THE FRONT

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – VOLATILE COMPOUNDS | | | | | | | | | | | | | | | |
| 1V. Accrolein (107-02-8) | | | X | | | | | | | | | | | | |
| 2V. Acrylonitrile (107-13-1) | | | X | | | | | | | | | | | | |
| 3V. Benzene (71-43-2) | | | X | | | | | | | | | | | | |
| 4V. Bis (*Chloro-methyl*) Ether (542-88-1) | | | X | | | | | | | | | | | | |
| 5V. Bromoform (75-25-2) | | | X | | | | | | | | | | | | |
| 6V. Carbon Tetrachloride (56-23-5) | | | X | | | | | | | | | | | | |
| 7V. Chlorobenzene (108-90-7) | | | X | | | | | | | | | | | | |
| 8V. Chlorodi-bromomethane (124-48-1) | | | X | | | | | | | | | | | | |
| 9V. Chloroethane (75-00-3) | | | X | | | | | | | | | | | | |
| 10V. 2-Chloro-ethylvinyl Ether (110-75-8) | | | X | | | | | | | | | | | | |
| 11V. Chloroform (67-66-3) | | | X | | | | | | | | | | | | |
| 12V. Dichloro-bromomethane (75-27-4) | | | X | | | | | | | | | | | | |
| 13V. Dichloro-difluoromethane (75-71-8) | | | X | | | | | | | | | | | | |
| 14V. 1,1-Dichloro-ethane (75-34-3) | | | X | | | | | | | | | | | | |
| 15V. 1,2-Dichloro-ethane (107-06-2) | | | X | | | | | | | | | | | | |
| 16V. 1,1-Dichloro-ethylene (75-35-4) | | | X | | | | | | | | | | | | |
| 17V. 1,2-Dichloro-propane (78-87-5) | | | X | | | | | | | | | | | | |
| 18V. 1,3-Dichloro-propylene (542-75-6) | | | X | | | | | | | | | | | | |
| 19V. Ethylbenzene (100-41-4) | | | X | | | | | | | | | | | | |
| 20V. Methyl Bromide (74-83-9) | | | X | | | | | | | | | | | | |
| 21V. Methyl Chloride (74-87-3) | | | X | | | | | | | | | | | | |

 CONTINUE ON PAGE V-5

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CONTINUED FROM PAGE V-4

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*) | | | | | | | | | | | | | | | |
| 22V. Methylene Chloride (75-09-2) | | | X | | | | | | | | | | | | |
| 23V. 1,1,2,2-Tetrachloroethane (79-34-5) | | | X | | | | | | | | | | | | |
| 24V. Tetrachloro-ethylene (127-18-4) | | | X | | | | | | | | | | | | |
| 25V. Toluene (108-88-3) | | | X | | | | | | | | | | | | |
| 26V. 1,2-Trans-Dichloroethylene (156-60-5) | | | X | | | | | | | | | | | | |
| 27V. 1,1,1-Trichloro-ethane (71-55-6) | | | X | | | | | | | | | | | | |
| 28V. 1,1,2-Trichloro-ethane (79-00-5) | | | X | | | | | | | | | | | | |
| 29V Trichloro-ethylene (79-01-6) | | | X | | | | | | | | | | | | |
| 30V. Trichloro-fluoromethane (75-69-4) | | | X | | | | | | | | | | | | |
| 31V. Vinyl Chloride (75-01-4) | | | X | | | | | | | | | | | | |
| GC/MS FRACTION – ACID COMPOUNDS | | | | | | | | | | | | | | | |
| 1A. 2-Chlorophenol (95-57-8) | | | X | | | | | | | | | | | | |
| 2A. 2,4-Dichloro-phenol (120-83-2) | | | X | | | | | | | | | | | | |
| 3A. 2,4-Dimethyl-phenol (105-67-9) | | | X | | | | | | | | | | | | |
| 4A. 4,6-Dinitro-O-Cresol (534-52-1) | | | X | | | | | | | | | | | | |
| 5A. 2,4-Dinitro-phenol (51-28-5) | | | X | | | | | | | | | | | | |
| 6A. 2-Nitrophenol (88-75-5) | | | X | | | | | | | | | | | | |
| 7A. 4-Nitrophenol (100-02-7) | | | X | | | | | | | | | | | | |
| 8A. P-Chloro-M-Cresol (59-50-7) | | | X | | | | | | | | | | | | |
| 9A. Pentachloro-phenol (87-86-5) | | | X | | | | | | | | | | | | |
| 10A. Phenol (108-95-2) | | | X | | | | | | | | | | | | |
| 11A. 2,4,6-Trichloro-phenol (88-05-2) | | | X | | | | | | | | | | | | |

 CONTINUE ON REVERSE

2014-00657200607

CONTINUED FROM THE FRONT

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS | | | | | | | | | | | | | | | |
| 1B. Acenaphthene (83-32-9) | | | X | | | | | | | | | | | | |
| 2B. Acenaphtylene (208-96-8) | | | X | | | | | | | | | | | | |
| 3B. Anthracene (120-12-7) | | | X | | | | | | | | | | | | |
| 4B. Benzidine (92-87-5) | | | X | | | | | | | | | | | | |
| 5B. Benzo (*a*) Anthracene (56-55-3) | | | X | | | | | | | | | | | | |
| 6B. Benzo (*a*) Pyrene (50-32-8) | | | X | | | | | | | | | | | | |
| 7B. 3,4-Benzo-fluoranthene (205-99-2) | | | X | | | | | | | | | | | | |
| 8B. Benzo (*ghi*) Perylene (191-24-2) | | | X | | | | | | | | | | | | |
| 9B. Benzo (*k*) Fluoranthene (207-08-9) | | | X | | | | | | | | | | | | |
| 10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1) | | | X | | | | | | | | | | | | |
| 11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4) | | | X | | | | | | | | | | | | |
| 12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1) | | | X | | | | | | | | | | | | |
| 13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7) | | | X | | | | | | | | | | | | |
| 14B. 4-Bromophenyl Phenyl Ether (101-55-3) | | | X | | | | | | | | | | | | |
| 15B. Butyl Benzyl Phthalate (85-68-7) | | | X | | | | | | | | | | | | |
| 16B. 2-Chloro-naphthalene (91-58-7) | | | X | | | | | | | | | | | | |
| 17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3) | | | X | | | | | | | | | | | | |
| 18B. Chrysene (218-01-9) | | | X | | | | | | | | | | | | |
| 19B. Dibenzo (*a,h*) Anthracene (53-70-3) | | | X | | | | | | | | | | | | |
| 20B. 1,2-Dichloro-benzene (95-50-1) | | | X | | | | | | | | | | | | |
| 21B. 1,3-Di-chloro-benzene (541-73-1) | | | X | | | | | | | | | | | | |



CONTINUE ON PAGE V-7

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CONTINUED FROM PAGE V-6

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*) | | | | | | | | | | | | | | | |
| 22B. 1,4-Dichloro-benzene (106-46-7) | | | X | | | | | | | | | | | | |
| 23B. 3,3-Dichloro-benzidine (91-94-1) | | | X | | | | | | | | | | | | |
| 24B. Diethyl Phthalate (84-66-2) | | | X | | | | | | | | | | | | |
| 25B. Dimethyl Phthalate (131 -11-3) | | | X | | | | | | | | | | | | |
| 26B. Di-N-Butyl Phthalate (84-74-2) | | | X | | | | | | | | | | | | |
| 27B. 2,4-Dinitro-toluene (121-14-2) | | | X | | | | | | | | | | | | |
| 28B. 2,6-Dinitro-toluene (606-20-2) | | | X | | | | | | | | | | | | |
| 29B. Di-N-Octyl Phthalate (117-84-0) | | | X | | | | | | | | | | | | |
| 30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7) | | | X | | | | | | | | | | | | |
| 31B. Fluoranthene (206-44-0) | | | X | | | | | | | | | | | | |
| 32B. Fluorene (86-73-7) | | | X | | | | | | | | | | | | |
| 33B. Hexachloro-benzene (118-74-1) | | | X | | | | | | | | | | | | |
| 34B. Hexachloro-butadiene (87-68-3) | | | X | | | | | | | | | | | | |
| 35B. Hexachloro-cyclopentadiene (77-47-4) | | | X | | | | | | | | | | | | |
| 36B Hexachloro-ethane (67-72-1) | | | X | | | | | | | | | | | | |
| 37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5) | | | X | | | | | | | | | | | | |
| 38B. Isophorone (78-59-1) | | | X | | | | | | | | | | | | |
| 39B. Naphthalene (91-20-3) | | | X | | | | | | | | | | | | |
| 40B. Nitrobenzene (98-95-3) | | | X | | | | | | | | | | | | |
| 41B. N-Nitro-sodimethylamine (62-75-9) | | | X | | | | | | | | | | | | |
| 42B. N-Nitrosodi-N-Propylamine (621-64-7) | | | X | | | | | | | | | | | | |



CONTINUE ON REVERSE

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CONTINUED FROM THE FRONT

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*) | | | | | | | | | | | | | | | |
| 43B. N-Nitro-sodiphenylamine (86-30-6) | | | X | | | | | | | | | | | | |
| 44B. Phenanthrene (85-01-8) | | | X | | | | | | | | | | | | |
| 45B. Pyrene (129-00-0) | | | X | | | | | | | | | | | | |
| 46B. 1,2,4-Tri-chlorobenzene (120-82-1) | | | X | | | | | | | | | | | | |
| GC/MS FRACTION – PESTICIDES | | | | | | | | | | | | | | | |
| 1P. Aldrin (309-00-2) | | | X | | | | | | | | | | | | |
| 2P. α-BHC (319-84-6) | | | X | | | | | | | | | | | | |
| 3P. β-BHC (319-85-7) | | | X | | | | | | | | | | | | |
| 4P. γ-BHC (58-89-9) | | | X | | | | | | | | | | | | |
| 5P. δ-BHC (319-86-8) | | | X | | | | | | | | | | | | |
| 6P. Chlordane (57-74-9) | | | X | | | | | | | | | | | | |
| 7P. 4,4'-DDT (50-29-3) | | | X | | | | | | | | | | | | |
| 8P. 4,4'-DDE (72-55-9) | | | X | | | | | | | | | | | | |
| 9P. 4,4'-DDD (72-54-8) | | | X | | | | | | | | | | | | |
| 10P. Dieldrin (60-57-1) | | | X | | | | | | | | | | | | |
| 11P. α-Enosulfan (115-29-7) | | | X | | | | | | | | | | | | |
| 12P. β-Endosulfan (115-29-7) | | | X | | | | | | | | | | | | |
| 13P. Endosulfan Sulfate (1031-07-8) | | | X | | | | | | | | | | | | |
| 14P. Endrin (72-20-8) | | | X | | | | | | | | | | | | |
| 15P. Endrin Aldehyde (7421-93-4) | | | X | | | | | | | | | | | | |
| 16P. Heptachlor (76-44-8) | | | X | | | | | | | | | | | | |

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2014-00657200607

| EPA I.D. NUMBER (*copy from Item 1 of Form 1*) | OUTFALL NUMBER |
|---|---|
| | 002 |

CONTINUED FROM PAGE V-8

| 1. POLLUTANT AND CAS NUMBER (*if available*) | 2. MARK "X" | | | 3. EFFLUENT | | | | | | | 4. UNITS | | 5. INTAKE (*optional*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | a. TESTING REQUIRED | b. BELIEVED PRESENT | c. BELIEVED ABSENT | a. MAXIMUM DAILY VALUE | | b. MAXIMUM 30 DAY VALUE (*if available*) | | c. LONG TERM AVRG. VALUE (*if available*) | | d. NO. OF ANALYSES | a. CONCEN-TRATION | b. MASS | a. LONG TERM AVERAGE VALUE | | b. NO. OF ANALYSES |
| | | | | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | (1) CONCENTRATION | (2) MASS | | | | (1) CONCENTRATION | (2) MASS | |
| GC/MS FRACTION – PESTICIDES (*continued*) | | | | | | | | | | | | | | | |
| 17P. Heptachlor Epoxide (1024-57-3) | | | X | | | | | | | | | | | | |
| 18P. PCB-1242 (53469-21-9) | | | X | | | | | | | | | | | | |
| 19P. PCB-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) | | | X | | | | | | | | | | | | |
| 23P. PCB-1260 (11096-82-5) | | | X | | | | | | | | | | | | |
| 24P. PCB-1016 (12674-11-2) | | | X | | | | | | | | | | | | |
| 25P. Toxaphene (8001-35-2) | | | X | | | | | | | | | | | | |



2014-00657200607

2014-00657200607

D.E.P.A.
S.E.D.C.
2013 DEC 20 AM 10: 40

# Antidegradation Addendum

# Public Notification Form
## Receipt of Application for Antidegradation Project

District Contact: Tim Fulks Date: 12/26/13

Name of Project: Vail South Refuse Disposal Area

Mailing Address: Barry Alexin
95 North Libson Street
Carrollton, Ohio 44615

Location: 73888 Skullfork Road
Freeport, OH, 43973

Township and County where the project is located: Freeport Township, Harrison County, & Londonberry Twp. Guernsey County.

**Type of permit application (check all that apply):**

**NPDES Permit No.:** 0IL00163

_____ Renewal
_____ Modification
_____ Initial (existing discharger)
__X__ Initial (new discharger)

**PTI Permit No.:** 968812

__X__ New source (no existing plant)
_____ Modification of exist. treatment (expansion)
Sewerage system (i.e., sewers, pump stations, etc.) in or near stream bed

**Date complete Antidegradation application received (submit copy of addendum with form):** 12/20/13

Stream or water body affected and subsequent network (include river basin and indicate if subsequent stream is within two – five miles of discharge point):

Discharge to an unnamed tributary of Skull Fork, Skull Fork is less than two miles downstream of the discharge point. The discharge is in the Tuscarawas River Basin - 05040001.

**Stream categorization:**

__X__ Limited quality water
_____ General high quality water
_____ Superior high quality water *
_____ Outstanding state water *
_____ Outstanding national resource water*
_____ Lake Erie

* Hearing Required

**Stream use designation (per the WQS):**

_____ LRW _____ MWH _____ CWH
__X__ WWH _____ EWH _____ SSH

Do any exclusions apply or did they request a waiver? _____ Yes __X__ No
Please specify which exclusion applies or waiver requested:

Any known controversy or public concerns with the project? Known interested parties? (Supply addresses if so). Please explain:

No known controversy with this project

Project Description:

Installation of a coal refuse disposal facility for disposal of course and fine refuse primarily from Rosebud's Vail Mine.

State of Ohio Environmental Protection Agency

O.E.P.A.
S.E.D.O
2013 DEC 20 AM 10:40



**DIVISION OF SURFACE WATER**

# Antidegradation Addendum

In accordance with Ohio Administrative Code 3745-1-05 (Antidegradation), additional information may be required to complete your application for a permit to install or NPDES permit. For any application that may result in an increase in the level of pollutants being discharged (NPDES and/or PTI)or for which there might be activity taking place within a stream bed, the processing of the permit(s) may be required to go through procedures as outlined in the antidegradation rule. The rule outlines procedures for public notification and participation as well as procedures pertaining to the levels of review necessary. The levels of review necessary depend on the degradation being considered/requested. The rule also outlines exclusions from portions of the application and review requirements and waivers that the Director may grant as specified in Section 3745-1-05(D) of the rule. Please complete the following questions. The answers provided will allow the Ohio EPA to determine if additional information is needed. **All projects that require both an NPDES and PTI should submit both applications simultaneously to avoid going through the antidegradation process separately for each permit**.

A. **Applicant:** Rosebud Mining Company

**Facility Owner:** Rosebud Mining Comapny

**Facility Location (city and county):** Freeport; Harrison/Guernsey Counties

**Application or Plans Prepared By:** Bair, Goodie and Associates, Inc.

**Project Name:** Vail South Coal Waste Disposal Facility

**NPDES Permit Number (if applicable):** _____

B. **Antidegradation Applicability**

**Is the application for? (check as many as apply):**

_____ Application with no direct surface water discharge (Projects that do not meet the applicability section of 3745-1-05(B)1, i.e., on-site disposal, extensions of sanitary sewers, spray irrigation, indirect discharger to POTW, etc.). (Complete Section E)

_____ Renewal NPDES application or PTI application with no requested increase in loading of currently permitted pollutants. (Complete Section E, Do not complete Sections C or D).

_____ PTI and NPDES application for a new wastewater treatment works that will discharge to a surface water. (Complete Sections C and E)

_____ An expansion/modification of an existing wastewater treatment works discharging to a surface water that will result in any of the following (PTI and NPDES):(Complete Sections C and E)

- addition of any pollutant not currently in the discharge, or
- an increase in mass or concentration of any pollutant currently in the discharge, or
- an increase in any current pollutant limitation in terms of mass or concentration.

Click to clear all entered information (on all 4 pages of this form) CLEAR

_____ PTI that involves placement of fill or installation of any portion of a sewerage system (i.e., sanitary sewers, pump stations, WWTP, etc.) within 150 feet of a stream bed. Please provide information requested on the stream evaluation addendum (i.e., number of stream crossings, fill placement, etc.) and complete Section E.

__X__ Initial NPDES permit for an existing treatment works with a wastewater discharge prior to October 1, 1996. (Complete Sections D and E)

_____ Renewal NPDES permit or modification to an effective NPDES permit that will result in any of the following: (Complete Sections C and E)

- a new permit limitation for a pollutant that previously had no limitation, or
- an increase in any mass or concentration limitation of any pollutant that currently has a limitation.

**C. Antidegradation Information**

1. Does the PTI and/or NPDES permit application meet an exclusion as outlined by OAC 3745-1-05(D)(1) of the Antidegradation rule?

   _____ Yes (Complete Question C.2)

   _____ No (Complete Questions C.3 and C.4)

2. For projects that would be eligible for exclusions provide the following information:

   a. Provide justification for the exclusion.

   b. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

   c. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

3. Are you requesting a waiver as outlined by OAC 3745-1-05(D)(2-7) of the Antidegradation rule?

   _____ No

   _____ Yes

   If you wish to pursue one of the waivers, please identify the waiver and submit the necessary information to support the request. Depending on the waiver requested, the information required under question C.4 may be required to complete the application.

4. For all projects that do **not** qualify for an exclusion a report must accompany this application evaluating the preferred design alternative, non-degradation alternatives, minimal degradation alternatives, and mitigative techniques/measures for the design and operation of the activity. The information outlined below should be addressed in this report. If a waiver is requested, this section is still required.

   a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for

sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.

b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.

c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs. (If additional space is needed please attach additional sheets to the end of this addendum).

Preferred design alternative:

Non-degradation alternative(s):

Minimal degradation alternative(s):

Mitigative technique/measure(s):

At a minimum, the following information must be included in the report for each alternative evaluated.

d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.

e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.

f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.

g. Describe any impacts to human health and the overall quality and value of the water resource.

h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.

i. Describe environmental benefits to be realized through this proposed project.

j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.

k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.

l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.

m. Provide any other information that may be useful in evaluating this application.

**D. Discharge Information**

1. For treatment/disposal systems constructed pursuant to a previously issued Ohio EPA PTI, provide the following information:

PTI Number _____
PTI Issuance Date _____
Initial Date of Discharge _____

2. Has the appropriate NPDES permit application form been submitted including representative effluent data?

_____ Yes (go to E)

_____ No (see below)

**If no**, submit the information as applicable under **a OR b** as follows:

a. For entities discharging process wastewater attach a completed 2C form.

b. For entities discharging wastewater of domestic origin attach the results of at least one chemical analysis of the wastestream for all pollutants for which authorization to discharge is being requested and a measurement of the daily volume (gallons per day) of wastewaters being discharged.

**E.** Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete.

**This section must be signed by the same responsible person who signed the accompanying permit application or certification as per 40 CFR 122.22.**

**Signature** [signature]

**Date** 12-16-2013

h:revised.adm
June 30, 1997

Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Antidegradation Addendum
November 26, 2013

U.E.P.A.
S.E.D.O.
2013 DEC 20 AM 10:40

Rosebud Mining Company's (Rosebud) Vail South Coal Waste Disposal Facility (Vail South) is Located in Freeport Township and Londonderry Township of Harrison County and Guernsey County respectively. The proposed facility is an approximately 96.0 acre site that will be used for placement of coal waste. The proposed facility will have one (1) outfall that will discharge to an Unnamed Tributary to Skull Fork Creek.

This report addresses Section C Item 4 of the Antidegradation Addendum, which is required in accordance with Ohio Administrative Code 3745-1-05. The following sections respond to questions C.4.a through C.4.m of the Antidegradation Addendum to the NPDES Permit Application, and provide information and analysis on the Preferred Design Alternative, Non-Degradation Alternative, Minimal Degradation Alternative and Mitigation Techniques for the Vail South Facility.

The applicant is prepared to start work with the most economically and technically feasible alternative, which is the Minimal Alternative.

**4.a. Describe the availability, cost effectiveness and technical feasibility of connecting to existing central or regional sewage collection and treatment facilities, including long range plans for sewer service outlined in state or local water quality management planning documents and applicable facility planning documents.**
There is no public sewage collection facility in the Vail South facility site area. The nearest public sewage treatment facilities (POTW) are Freeport and/or Cambridge. The distance to either of these facilities would be cost prohibitive for the pipeline that would be required to transport the effluent to the POTW.

There are no known long range plans to provide sewer service to the area of the Vail South facility.

**4.b. List and describe all government and/or privately sponsored conservation projects that may have been or will be specifically targeted to improve water quality or enhance recreational opportunities on the affected water resource.**
There are no known conservation projects or groups, either private or government, that will target this facility to improve water quality or enhance recreational opportunities.

**4.c. Provide a brief description below of all treatment/disposal alternatives evaluated for this application and their respective operational and maintenance needs.**
<u>Preferred Design Alternative</u>
GOB/Slurry Disposal – Traditional Means of Refuse Disposal
Dam constructed using coarse coal refuse.
Slurry pumped in behind dam.

Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Antidegradation Addendum
November 26, 2013

Minimal Degradation Alternative
Dry Stack/Side Fill – Non-Traditional Means of Refuse Disposal
Discharge surface water runoff.
Discharge to Skull Fork Tributary to Stillwater Creek.
Water treated prior to discharge.

Non-Degradation Alternative
Underground Disposal
No discharge.

**PREFERRED DESIGN ALTERNATIVE**

**4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.**

GOB/Slurry Disposal method consists of constructing a dam using coarse coal refuse and pumping a slurry of fine coal refuse behind the constructed dam. Neither the coarse or fine coal refuse would be de-watered at the Coal Preparation Plant.

The refuse facility will be constructed, prior to coal refuse placement, utilizing a two (2) foot thick compacted clay liner. Once the liner is in place, the coal refuse will be placed in small segments to keep the disturbed area to a minimum aerial extent. Once the fill achieves design elevation, the refuse material will be covered with a clay liner and resoiling materials.

Costs of Water Pollution Controls

| Water Pollution Control | Preferred Alternative | Minimal Alternative | Non-Degradation Alternative |
|---|---|---|---|
| Sumps (@ $1,000 each) | $2,000 | $2,000 | $0 |
| Diversion Ditches @ $8.00/linear foot | $103,344 | $103,344 | $0 |
| Sediment Ponds @ $10,000 each) | $20,000 | $20,000 | $0 |
| Reclamation of 96.0 acres @ $2,500/acres | $240,000 | $240,000 | $0 |
| Straw bales/silt fence (Lump Sum of $5,000) | $5,000 | $5,000 | $0 |
| Total Cost | $370,344 | $370,344 | $0 |

This is not a viable method due to the lack of space, no land owner consent and it is environmentally un-friendly.

**4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.**
The discharge from this facility will be similar to that of the Rosebud Mining Company D-2177 facility. One time samples were taken at the D-2177 facility. The results from that sampling are provided as an attachment.

**4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.**
The reliability of all of the systems included in the Preferred Design Alternative is anticipated to be high.

The control of surface water runoff will be accomplished through the runoff being diverted to sediment ponds by use of diversion ditches. Once in the sediment ponds, the runoff will flow through the ponds, which will be in series, and may include curtains in the ponds, if necessary, to slow the flow of water to allow for a longer settling time. The runoff will also be treated, if necessary, before release to the surface water system.

Intermediate caps will also be put in place to minimize the exposure of the coal refuse to the elements.

Reclamation will be done contemporaneously to minimize the acreage of exposed coal refuse. The contemporaneous reclamation will reduce the exposure of runoff to the coal refuse.

All of these measures will contribute to the effective operation of the facility and minimize the degradation of the discharge.

**4.g. Describe any impacts to human health and the overall quality and value of the water resource.**
No adverse impacts to human health are anticipated.

The discharged water will meet applicable water quality standards protective of human health and aquatic life. Through the use of sediment ponds and chemical treatment, if necessary, the water discharged will have minimal impact on the receiving stream, streambed and aquatic life.

**4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.**
The economic benefits to be realized by the permitting of this facility are very significant. Higher paying jobs will be provided for an extended period of time, directly and indirectly. The

direct jobs will create additional jobs in ancillary businesses within the local area. The financial health of Rosebud Mining Company will also be enhanced by continual permitting and mining.

The revenue generated by this coal waste disposal facility will be directly invested in the local and state economies for salaries, fuel, equipment, equipment maintenance and materials. In addition the employees employed at this facility will invest in local restaurants, gas stations, mechanics shops, hardware stores, grocery stores, car dealerships, and housing.

The social benefits of this project will also be significant. The increased tax revenues as a result of the coal waste disposal facility relate to better schools, roads, quality of life, etc. Maintaining and increasing the use of coal as the fuel of choice will provide the lowest possible energy cost to consumers and decrease our dependence on foreign sources of fuel. For the reasons stated above, coal is essential as a component to any national energy policy and this operation should be given a high priority for permit issuance.

**Table 1: Social and Economical Benefits**

| Taxes paid by Rosebud Mining Company | Preferred Degradation | Minimal Degradation | Non-Degradation |
|---|---|---|---|
| Coal Value | $1.2 Billion | $1.2 Billion | $0 |
| $ 0.55/ton Federal Excise Taxes (black lung and other federal programs) | $15,400,000 | $15,400,000 | $0 |
| $0.35/ton Abandoned Mine Lands Fund | $9,800,000 | $9,800,000 | $0 |
| $0.25/ton State of Ohio Taxes for Various programs | $7,000,000 | $7,000,000 | $0 |
| Total Taxes Paid | $32,200,000 | $32,200,000 | $0 |

In addition to the jobs at the coal waste disposal facility, it will also support many other jobs such as, coal miners, welders, mechanics, truck drivers, local businesses, engineers, and consultants. In 2010 the average annual wage of a mine worker was $73,000 compared to the average median household income in Harrison County of $30,308 (city-data.com). Currently the mining industry makes up approximately 4% of Harrison County jobs. This percentage will increase with the opening of this facility. By opening this facility in Guernsey and Harrison Counties, not only will the quality of life for the workers improve, but the workers associated with the mining industry will also greatly benefit.

**4.i. Describe environmental benefits to be realized through this proposed project.**
Generally, the project will be neutral with regard to environmental benefits. However, an anticipated environmental benefit realized through this project will be the reclamation of an existing area of pre-law coal waste disposal. The reclamation of this existing area will help to improve the water quality of the area that receives runoff from this area.

**4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.**
No commercial, recreational, or other uses of the water will be gained or lost as a result of the completion of this project. No permanent impacts on aesthetics and or other human use and enjoyment will be the result of the completion of the project under the Preferred Design Alternative.

**4.k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.**
Under the Preferred Design Alternative the coal waste disposal would consist of disposing of the coal waste in a slurry form. This alternative would include permanent loss of some wetlands and stream channel. The stream channel lost would be replaced through the reclamation plan. Also, temporary loss of food and shelter for wildlife, as removal of vegetation occurs during construction of diversions and excavation of clay.

**4.l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.**
The impacts will be minimal. Ponds 001 and 002 will be cleaned out and used as the sediment ponds for the facility. Pond 001 will discharge into Pond 002 which will discharge to an unnamed tributary to Skull Fork Creek. The cleaning out of Ponds 001 and 002 will impact Wetlands W-H, W-J, W-K and W-L. All water discharged from the site will meet all NPDES Effluent Limitations outlined in the permit. Stream S-18 will be filled with the placement of coal waste. Wetlands W-R, W-S and W-T will be impacted by the placement of coal waste also.

**4.m. Provide any other information that may be useful in evaluating this application.**
No additional relevant information is available for this alternative.

## MINIMAL DEGRADATION ALTERNATIVE

**4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.**
Dry Stack/Side Fill uses dry refuse material. This dry refuse material will be the result of fine coal refuse being de-watered within the Coal Preparation Plant using filter presses or other equivalent means. Coarse coal refuse will also be de-watered at the plant site.

The dry refuse material will be transported to the coal refuse site where it will be placed in the refuse facility.

The refuse facility will be constructed, prior to coal refuse placement, utilizing a two (2) foot

thick compacted clay liner. Once the liner is in place, the coal refuse will be placed in lifts that are two (2) feet thick and immediately compacted. Refuse will be placed in small segments to keep the disturbed area to a minimum aerial extent. Once the fill achieves design elevation, the refuse material will be covered with a clay liner and resoiling materials.

Costs of Water Pollution Controls

| Water Pollution Control | Preferred Alternative | Minimal Alternative | Non-Degradation Alternative |
|---|---|---|---|
| Sumps (@ $1,000 each) | $2,000 | $2,000 | $0 |
| Diversion Ditches @ $8.00/linear foot | $103,344 | $103,344 | $0 |
| Sediment Ponds @ $10,000 each) | $20,000 | $20,000 | $0 |
| Reclamation of 96.0 acres @ $2,500/acres | $240,000 | $240,000 | $0 |
| Straw bales/silt fence (Lump Sum of $5,000) | $5,000 | $5,000 | $0 |
| Total Cost | $370,344 | $370,344 | $0 |

**4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.**
The discharge from this facility will be similar to that of the Rosebud Mining Company D-2177 facility. One time samples were taken at the D-2177 facility. The results from that sampling are provided as an attachment.

**4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.**
The reliability of all of the systems included in the Minimal Degradation Alternative is anticipated to be high.

The treatment of surface water runoff will be accomplished through the runoff being diverted to sediment ponds by use of diversion ditches. Once in the sediment ponds, the runoff will flow through the ponds, which will be in series, and may include curtains in the ponds, if necessary, to slow the flow of water to allow for a longer settling time. The runoff will also be treated, if necessary, before release to the surface water system.

Intermediate caps will be put in place to minimize the exposure of the coal refuse to the elements.

Reclamation will be done contemporaneously to minimize the acreage of exposed coal refuse. The contemporaneous reclamation will also reduce the exposure of runoff to the coal refuse.

All of these measures will contribute to the effective operation of the facility and minimize the degradation of the discharge.

**4.g. Describe any impacts to human health and the overall quality and value of the water resource.**
No adverse impacts to human health are anticipated.

The discharged water will meet applicable water quality standards protective of human health and aquatic life. Through the use of sediment ponds and chemical treatment, if necessary, the water discharged will have minimal impact on the receiving stream, streambed and aquatic life.

**4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.**
The economic benefits to be realized by the permitting of this facility are very significant. Higher paying jobs will be provided for an extended period of time, directly and indirectly. The direct jobs will create additional jobs in ancillary businesses within the local area. The financial health of Rosebud Mining Company will also be enhanced by continual permitting and mining.

The revenue generated by this coal waste disposal facility will be directly invested in the local and state economies for salaries, fuel, equipment, equipment maintenance and materials. In addition the employees employed at this facility will invest in local restaurants, gas stations, mechanics shops, hardware stores, grocery stores, car dealerships, and housing.

The social benefits of this project will also be significant. The increased tax revenues as a result of the coal waste disposal facility relate to better schools, roads, quality of life, etc. Maintaining and increasing the use of coal as the fuel of choice will provide the lowest possible energy cost to consumers and decrease our dependence on foreign sources of fuel. For the reasons stated above, coal is essential as a component to any national energy policy and this operation should be given a high priority for permit issuance.

**Table 1: Social and Economical Benefits**

| Taxes paid by Rosebud Mining Company | Preferred Degradation | Minimal Degradation | Non-Degradation |
|---|---|---|---|
| Coal Value | $1.2 Billion | $1.2 Billion | $0 |
| $ 0.55/ton Federal Excise Taxes (black lung and other federal programs) | $15,400,000 | $15,400,000 | $0 |
| $0.35/ton Abandoned Mine Lands Fund | $9,800,000 | $9,800,000 | $0 |
| $0.25/ton State of Ohio Taxes for Various programs | $7,000,000 | $7,000,000 | $0 |
| Total Taxes Paid | $32,200,000 | $32,200,000 | $0 |

In addition to the jobs at the coal waste disposal facility, it will also support many other jobs such as, coal miners, welders, mechanics, truck drivers, local businesses, engineers, and consultants. In 2010 the average annual wage of a mine worker was $73,000 compared to the average median household income in Harrison County of $30,308 (city-data.com). Currently the mining industry makes up approximately 4% of Harrison County jobs. This percentage will increase with the opening of this facility. By opening this facility in Guernsey and Harrison Counties, not only will the quality of life for the workers improve, but the workers associated with the mining industry will also greatly benefit.

**4.i. Describe environmental benefits to be realized through this proposed project.**
Generally, the project will be neutral with regard to environmental benefits. However, an anticipated environmental benefit realized through this project will be the reclamation of an existing area of pre-law coal waste disposal. The reclamation of this existing area will help to improve the water quality of the area that receives runoff from this area.

**4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.**
No commercial, recreational, or other uses of the water will be gained or lost as a result of the completion of this project. No permanent impacts on aesthetics and or other human use and enjoyment will be the result of the completion of the project under the Minimal Degradation Alternative.

**4.k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.**
Under the Minimal Degradation Alternative the coal waste disposal would follow the plan laid out in the ODNR-DMRM application. This alternative would include permanent loss of some wetlands and stream channel. The stream channel lost would be replaced through the reclamation plan. Also, temporary loss of food and shelter for wildlife, as removal of vegetation occurs

during construction of diversions and excavation of clay.

**4.l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.**
The impacts will be minimal. Ponds 001 and 002 will be cleaned out and used as the sediment ponds for the facility. Pond 001 will discharge into Pond 002 which will discharge to an unnamed tributary to Skull Fork Creek. The cleaning out of Ponds 001 and 002 will impact Wetlands W-H, W-J, W-K and W-L. All water discharged from the site will meet all NPDES Effluent Limitations outlined in the permit. Stream S-18 will be filled with the placement of coal waste. Wetlands W-R, W-S and W-T will be impacted by the placement of coal waste also.

**4.m. Provide any other information that may be useful in evaluating this application.**
The Coal Waste Disposal Plan that is part of the Ohio Department of Natural Resources Application, describes the plan and techniques that will be used at this facility.

**NON-DEGRADATION ALTERNATIVE**

**4.d. Outline of the treatment/disposal system evaluated, including the costs associated with the equipment, installation, and continued operation and maintenance.**
Underground Disposal method consists of placing coarse and fine coal refuse in underground works that have been completely mined. This is not a viable option as there are MSHA Safety constraints and there are no underground works available.

Costs of Water Pollution Controls

| Water Pollution Control | Preferred Alternative | Minimal Alternative | Non-Degradation Alternative |
|---|---|---|---|
| Sumps (@ $1,000 each) | $2,000 | $2,000 | $0 |
| Diversion Ditches @ $8.00/linear foot | $103,344 | $103,344 | $0 |
| Sediment Ponds @ $10,000 each) | $20,000 | $20,000 | $0 |
| Reclamation of 96.0 acres @ $2,500/acres | $240,000 | $240,000 | $0 |
| Straw bales/silt fence (Lump Sum of $5,000) | $5,000 | $5,000 | $0 |
| Total Cost | $370,344 | $370,344 | $0 |

**4.e. Identify the substances to be discharged, including the amount of regulated pollutants to be discharged in terms of mass and concentration.**
This alternative will not have a discharge associated with it.

**4.f. Describe the reliability of the treatment/disposal system, including but not limited to the possibility of recurring operation and maintenance difficulties that would lead to increased degradation.**
The reliability, operation and maintenance of the systems included in this alternative generally would be similar to the Minimal Degradation. However, Rosebud treatment ponds would not be necessary as there would be no discharges from this alternative.

**4.g. Describe any impacts to human health and the overall quality and value of the water resource.**
Impacts to human health will be minimal with this alternative. The quality and value of water resources will not be impacted either.

**4.h. Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues generated.**
The social and economic benefits realized through this alternative would essentially be the same as those realized through the Minimal Degradation.

**4.i. Describe environmental benefits to be realized through this proposed project.**
This alternative would not have a discharge. This would benefit the streams in the area as they would not be receiving the discharge from a sediment pond(s). By not receiving a discharge, the streams would not see a degradation of water quality that could potentially impact wildlife.

**4.j. Describe and provide an estimate of the social and economic benefits that may be lost as a result of this project. Include the impacts on commercial and recreational use of the water resource.**
By using this alternative there should be no loss of economic or social benefits to the area.

**4.k. Describe the environmental benefits lost as a result of this project. Include the impact on the aquatic life, wildlife, threatened or endangered species.**
There would be no loss of environmental benefits or impacts on aquatic life, wildlife, threatened or endangered species with the non-degradation alternative.

**4.l. A description of any construction work, fill or other structures to occur or be placed in or near a stream bed.**
The non-degradation alternative involves the disposal of coal waste underground. This method would not involve any construction work, fill or other work or structures to occur or be placed in or near any stream beds.

**4.m. Provide any other information that may be useful in evaluating this application.**
The old disposal area will not be reclaimed as part of the Non-Degradation Alternative.

## MITIGATIVE TECHNIQUES AND MEASURES

The mine operator will reclaim the project area using the best management practices available. By doing this the project will be an asset to the Stillwater Creek Watershed.

**Proposed Construction Techniques** —The stream reconstruction will be achieved by leaving the diversion ditch that will run along the west side of the disposal area. This diversion will be used to divert runoff to the sediment ponds during the life of the permit. Once the facility is reclaimed the diversion ditch will remain in place to replace the stream that will be filled in.

After permanent vegetation is established on the reclaimed areas, sediment loads on runoff should approximate pre-coal waste disposal levels, which would result in satisfactory water quality that is equal to or better than pre-coal waste disposal water quality. Therefore, post-coal waste disposal surface water quantity should approximate quantities that existed prior to the placement of coal waste in the area.

**Planting** – Planting will take place in the first growing season following topsoil and subsoil replacement. Disturbed areas, such as side slopes, will be seeded with rapidly germinating annual cover mixture to provide erosion control and prevent the establishment of undesirable species. Value to wildlife was also considered when preparing the plant species list.
Trees will not be planted on the area of coal waste disposal during reclamation. If any trees are planted, they will be planted along the perimeter of the permit area. This will ensure that the capping system will not be damaged by tree roots. This will maintain the integrity of the capping and liner system of the disposal facility. If trees are planted along the perimeter of the permit area, at least four (4) tree species will be re-established. The species planted will be dependant on what is available from the nurseries at the time of planting.

## CONCLUSION

A permit requesting to temporarily lower the water quality on a coal waste disposal facility project has been prepared by Bair, Goodie, and Associates, Inc. on behalf of Rosebud Mining Company. This document provides information to address requirements under the Antidegradation Rule from the Ohio EPA.

Three alternatives were proposed for this project. The **Preferred and Minimal Alternatives** will both allow for the greatest amount of coal waste that is disposed of, but the **Minimal Degradation** option will result in less impacts to the waters of the U.S. The **Non-Degradation Alternative** option will result in the abandonment of the project because of the high costs associated with this alternative.

The applicant is prepared to start work with the most economically and technically feasible alternative, which is the **Minimal Alternative.**

The Minimal Alternative will allow the applicant to maximize the amount of coal refuse that can be placed in the facility over the life of the permit. This will allow the applicant to maintain the facility in a manner that will be optimal for the protection of the environment at a cost that is not prohibitive to the applicant. This will also help maintain the integrity of the current land use of surrounding land, water quality, habitat of wildlife and future land uses. The future land uses will be consistent with the existing land uses that surround the site. This will ensure that the wishes of the property owner will be acknowledged and met.

**Ream and Haager Laboratory, Inc.**
**P.O. Box 706, 179 West Broadway**
**Dover, OH 44622**
**TEL: (330) 343-3711 FAX: (330) 343-9858**
**Email: rhlab@rhlab.us**
Ohio EPA Chemical Certification # 4162
Ohio EPA Bacteria Certification # 893

O.E.P.A.
S.E.D.O.
2013 DEC 20 AM 10:40

## - Certificate of Analysis -
for

**ROSEBUD MINING CO.**
**95 NORTH LISBON STREET**
**CARROLLTON, OH 44615**

**Final Report**
**Report Date:** 9/18/2013
**Report Number:** 14087-0
**Chain of Custody #:** 132320
**Project Name:** D-2177

**Lab ID:** 13091333
**Sample Type:** Wastewater
**Your Sample ID:** D-15

**Date Sampled:** 9/16/2013 8:00:00AM
**Date Received:** 9/16/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | <0.02 | mg/L | 0.02 | 9/16/13 | CC |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 9/17/13 | WG |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 9/17/13 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 157 | mg/L | 1 | 9/18/13 | WG |
| EPA_200.7 | Aluminum | 1.29 | mg/L | 0.01 | 9/17/13 | CC |
| | Antimony | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Calcium | 25.4 | mg/L | 0.01 | 9/17/13 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Copper | 0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Nickel | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Potassium | 12.0 | mg/L | 0.01 | 9/17/13 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 9/17/13 | CC |
| | Sodium | 213 | mg/L | 0.01 | 9/17/13 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Zinc | <0.01 | mg/L | 0.01 | 9/17/13 | CC |

**Client:** ROSEBUD MINING CO.

Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Attachment to Antidegradation Addendum December 9, 2013

**Final Report**

**Report Date:** 9/18/2013

**Report Number:** 14087-0

**Lab ID:** 13091334 **Date Sampled:** 9/16/2013 9:00:00AM

**Sample Type:** Wastewater **Date Received:** 9/16/2013

**Your Sample ID:** D-16 **Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | 0.03 | mg/L | 0.02 | 9/16/13 | CC |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 9/17/13 | WG |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 9/17/13 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 156 | mg/L | 1 | 9/18/13 | WG |
| EPA_200.7 | Aluminum | 0.08 | mg/L | 0.01 | 9/17/13 | CC |
| | Antimony | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Calcium | 43.1 | mg/L | 0.01 | 9/17/13 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Copper | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Nickel | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Potassium | 3.29 | mg/L | 0.01 | 9/17/13 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 9/17/13 | CC |
| | Sodium | 15.1 | mg/L | 0.01 | 9/17/13 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Zinc | <0.01 | mg/L | 0.01 | 9/17/13 | CC |

**Lab ID:** 13091335 **Date Sampled:** 9/16/2013 10:00:00AM

**Sample Type:** Wastewater **Date Received:** 9/16/2013

**Your Sample ID:** CULVERT **Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | 0.02 | mg/L | 0.02 | 9/16/13 | CC |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 9/17/13 | WG |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 9/17/13 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 254 | mg/L | 1 | 9/18/13 | WG |
| EPA_200.7 | Aluminum | 0.22 | mg/L | 0.01 | 9/17/13 | CC |

Client: ROSEBUD MINING CO.
Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Attachment to Antidegradation Addendum December 9, 2013

**Final Report**
**Report Date:** 9/18/2013
**Report Number:** 14087-0

**Lab ID:** 13091335
**Sample Type:** Wastewater
**Your Sample ID:** CULVERT

**Date Sampled:** 9/16/2013 10:00:00AM
**Date Received:** 9/16/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA_200.7 | Antimony | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Calcium | 66.2 | mg/L | 0.01 | 9/17/13 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Copper | 0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Nickel | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Potassium | 7.34 | mg/L | 0.01 | 9/17/13 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 9/17/13 | CC |
| | Sodium | 86.9 | mg/L | 0.01 | 9/17/13 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Zinc | <0.01 | mg/L | 0.01 | 9/17/13 | CC |

**Lab ID:** 13091336
**Sample Type:** Wastewater
**Your Sample ID:** U-15

**Date Sampled:** 9/16/2013 11:00:00AM
**Date Received:** 9/16/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | 0.02 | mg/L | 0.02 | 9/16/13 | CC |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 9/17/13 | WG |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 9/17/13 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 83 | mg/L | 1 | 9/18/13 | WG |
| EPA_200.7 | Aluminum | 0.84 | mg/L | 0.01 | 9/17/13 | CC |
| | Antimony | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Calcium | 16.8 | mg/L | 0.01 | 9/17/13 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Copper | 0.01 | mg/L | 0.01 | 9/17/13 | CC |

Client: ROSEBUD MINING CO.
Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Attachment to Antidegradation Addendum December 9, 2013

**Final Report**
**Report Date:** 9/18/2013
**Report Number:** 14087-0

**Lab ID:** 13091336
**Sample Type:** Wastewater
**Your Sample ID:** U-15

**Date Sampled:** 9/16/2013 11:00:00AM
**Date Received:** 9/16/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA_200.7 | Nickel | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Potassium | 16.0 | mg/L | 0.01 | 9/17/13 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 9/17/13 | CC |
| | Sodium | 2.15 | mg/L | 0.01 | 9/17/13 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 9/17/13 | CC |
| | Zinc | <0.01 | mg/L | 0.01 | 9/17/13 | CC |

QA/QC Manager

Results relate only to items tested. Samples tested as received. This report may not be reproduced except in full with the approval of Ream and Haager Laboratory, Inc.

**Ream and Haager Laboratory, Inc.**
**P.O. Box 706, 179 West Broadway**
**Dover, OH 44622**
**TEL: (330) 343-3711 FAX: (330) 343-9858**
**Email: rhlab@rhlab.us**
Ohio EPA Chemical Certification # 4162
Ohio EPA Bacteria Certification # 893

## - Certificate of Analysis -
**for**

**ROSEBUD MINING CO.**
**95 NORTH LISBON STREET**
**CARROLLTON, OH 44615**

**Final Report**
**Report Date:** 10/18/2013
**Report Number:** 14842-0
**Chain of Custody #:** 132321
**Project Name:** D-2177

**Project Comments:** BAIR GOODIE AND ASSOC.

**Lab ID:** 13092665
**Sample Type:** Wastewater
**Your Sample ID:** 001

**Date Sampled:** 9/30/2013 8:15:00AM
**Date Received:** 9/30/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | <0.02 | mg/L | 0.02 | 100113 | CC |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 10.1.2013 | WG |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 10.4.2013 | WG |
| SM20th_2540D | Total Suspended Solids | 4 | mg/L | 1 | 10/16/13 | CC |
| SM20th_4500H+B | pH | 9.83 | S.U. | | 10/1/2013 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 283 | mg/L | 1 | 10.1.2013 | WG |
| SM20th_2310B | Acidity as CaCO3 | 0 | mg/L | 1 | 10/1/2013 | WG |
| SM20th_2340B | Hardness as CaCO3 | 81.7 | mg/L | 1.00 | 100113 | CC |
| SM20th_2340B | Hardness as CaCO3 | 81.7 | mg/L | 1.00 | 10/16/13 | CC |
| EPA_300.0 | Sulfate | 1050 | mg/L | 5 | 10/8/2013 | WG |
| SM20th_2510B | Conductivity | 1920 | µS/cm | 0.1 | 10/1/2013 | WG |
| EPA_200.7 | Aluminum | 0.36 | mg/L | 0.01 | 100113 | CC |
| | Antimony | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 100113 | CC |

**Client:** ROSEBUD MINING CO.

Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Attachment to Antidegradation Addendum December 9, 2013

**Final Report**

**Report Date:** 10/18/2013

**Report Number:** 14842-0

**Lab ID:** 13092665 **Date Sampled:** 9/30/2013 8:15:00AM

**Sample Type:** Wastewater **Date Received:** 9/30/2013

**Your Sample ID:** 001 **Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA_200.7 | Calcium | 9.45 | mg/L | 0.01 | 100113 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Copper | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Lead | 0.05 | mg/L | 0.01 | 100113 | CC |
| | Magnesium | 14.1 | mg/L | 0.01 | 100113 | CC |
| | Nickel | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Potassium | 13.0 | mg/L | 0.01 | 100113 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 100113 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Zinc | <0.01 | mg/L | 0.01 | 100113 | CC |
| EPA_200.7 | Iron | 0.21 | mg/L | 0.01 | 10/16/13 | CC |
| | Manganese | 0.20 | mg/L | 0.01 | 10/16/13 | CC |

**Lab ID:** 13092666 **Date Sampled:** 9/30/2013 9:00:00AM

**Sample Type:** Wastewater **Date Received:** 9/30/2013

**Your Sample ID:** 003 **Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| EPA 335.4 | Cyanide | <0.02 | mg/L | 0.02 | 100113 | CC |
| EPA_245.1 | Mercury | <0.00020 | mg/L | 0.0002 | 10.1.2013 | WG |
| EPA_420.4 | Total Phenolics | <0.05 | mg/L | 0.05 | 10.4.2013 | WG |
| SM20th_2540D | Total Suspended Solids | 5 | mg/L | 1 | 10/16/13 | CC |
| SM20th_4500H+B | pH | 3.70 | S.U. | | 10/1/2013 | WG |
| SM20th_2320B | Alkalinity as CaCO3 | 0 | mg/L | 1 | 10.1.2013 | WG |
| SM20th_2310B | Acidity as CaCO3 | 50 | mg/L | 1 | 10/1/2013 | WG |
| SM20th_2340B | Hardness as CaCO3 | 465 | mg/L | 1.00 | 100113 | CC |
| SM20th_2340B | Hardness as CaCO3 | 465 | mg/L | 1.00 | 10/16/13 | CC |
| EPA_300.0 | Sulfate | 1210 | mg/L | 5 | 10/8/2013 | WG |

Client: ROSEBUD MINING CO.
Rosebud Mining Company
Vail South Coal Refuse Disposal Facility
Attachment to Antidegradation Addendum December 9, 2013

**Final Report**
**Report Date:** 10/18/2013
**Report Number:** 14842-0

**Lab ID:** 13092666
**Sample Type:** Ground/Surface Water
**Your Sample ID:** 003

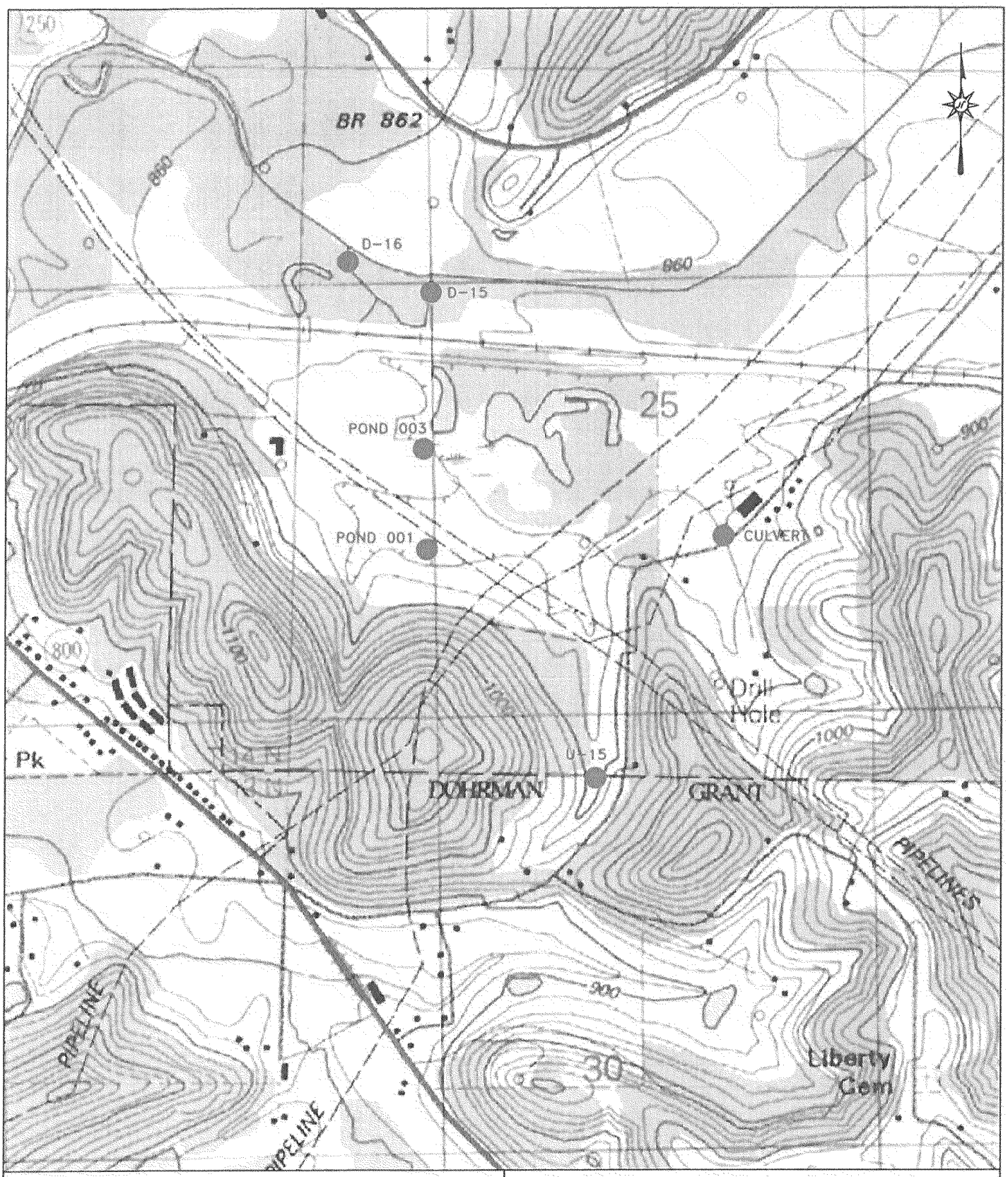
**Date Sampled:** 9/30/2013 9:00:00AM
**Date Received:** 9/30/2013
**Collection:** GRAB

| Method | Analyte | Result | Units | MDL/PQL | Analysis Date | Analyst |
|---|---|---|---|---|---|---|
| SM20th_2510B | Conductivity | 1480 | µS/cm | 0.1 | 10/11/2013 | WG |
| EPA_200.7 | Aluminum | 4.44 | mg/L | 0.01 | 100113 | CC |
| | Antimony | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Arsenic | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Beryllium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Cadmium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Calcium | 133 | mg/L | 0.01 | 100113 | CC |
| | Chromium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Copper | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Lead | 0.16 | mg/L | 0.01 | 100113 | CC |
| | Magnesium | 32.3 | mg/L | 0.01 | 100113 | CC |
| | Nickel | 0.15 | mg/L | 0.01 | 100113 | CC |
| | Potassium | 9.37 | mg/L | 0.01 | 100113 | CC |
| | Selenium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Silver | <0.005 | mg/L | 0.005 | 100113 | CC |
| | Thallium | <0.01 | mg/L | 0.01 | 100113 | CC |
| | Zinc | 0.31 | mg/L | 0.01 | 100113 | CC |
| EPA_200.7 | Iron | 0.71 | mg/L | 0.01 | 10/16/13 | CC |
| | Manganese | 6.45 | mg/L | 0.01 | 10/16/13 | CC |

QA/QC Manager

Results relate only to items tested. Samples tested as received. This report may not be reproduced except in full with the approval of Ream and Haager Laboratory, Inc.

2014-00657200607



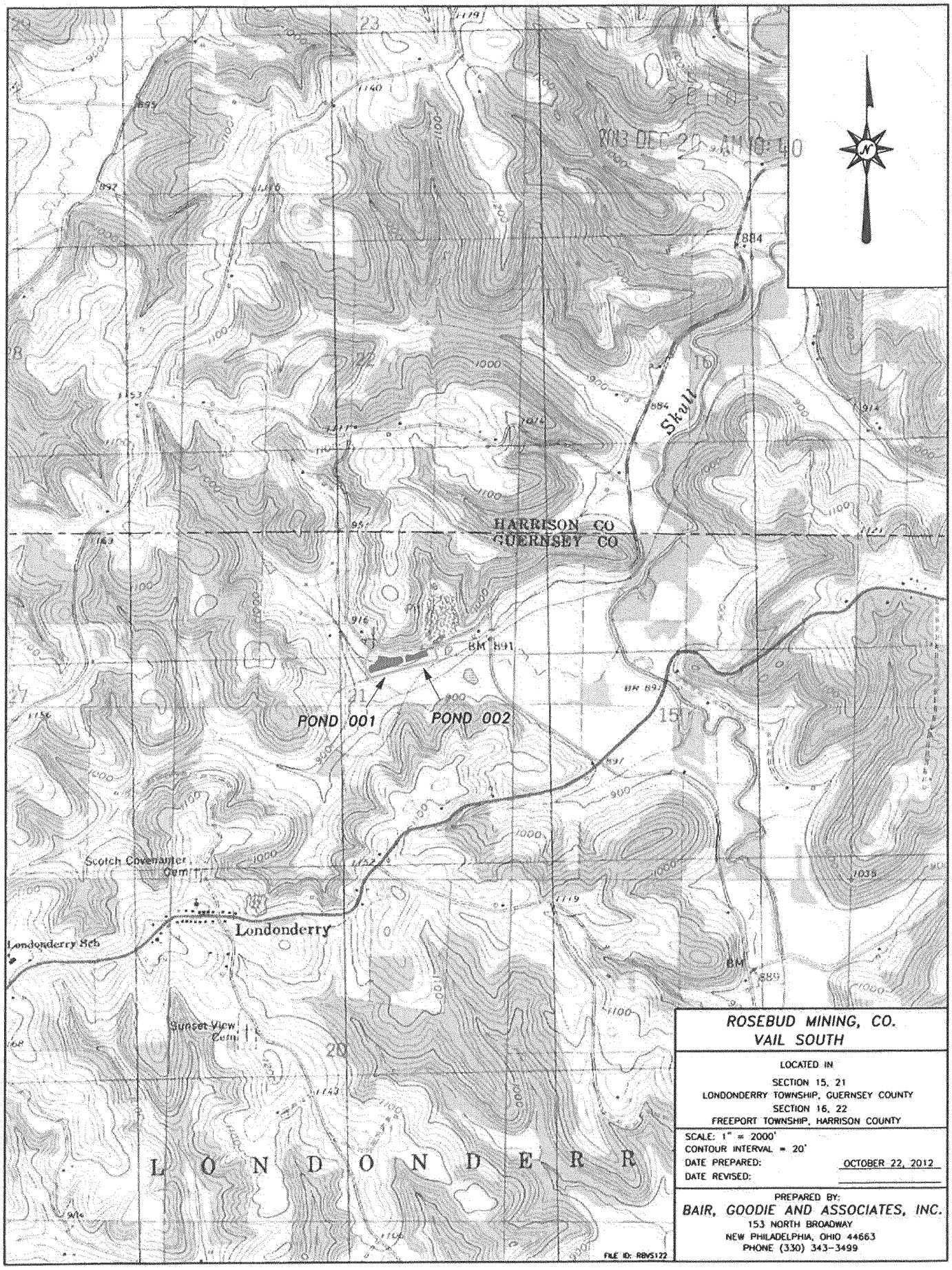

ROSEBUD MINING COMPANY
SAMPLE SITES – SEPTEMBER 2013
UHRICHSVILLE QUADRANGLES
TUSCARAWAS & HARRISON COUNTY, OHIO
SCALE: 1" = 1000' DATE: 11/1/13

● SAMPLE SITE

PREPARED BY:
BAIR, GOODIE AND ASSOCIATES, INC.
153 NORTH BROADWAY
NEW PHILADELPHIA, OHIO 44663
PHONE (330) 343-3499

RBTC106

2014-00657200607




ROSEBUD MINING, CO.
VAIL SOUTH

LOCATED IN
SECTION 15, 21
LONDONDERRY TOWNSHIP, GUERNSEY COUNTY
SECTION 16, 22
FREEPORT TOWNSHIP, HARRISON COUNTY

SCALE: 1" = 2000'
CONTOUR INTERVAL = 20'
DATE PREPARED: OCTOBER 22, 2012
DATE REVISED:

PREPARED BY:
BAIR, GOODIE AND ASSOCIATES, INC.
153 NORTH BROADWAY
NEW PHILADELPHIA, OHIO 44663
PHONE (330) 343-3499