



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

December 14, 2012

Re: Guernsey County
AMG Vanadium
Compliance Enforcement Inspection
01100018; OH0114847
Correspondence (IWW)

Ms. Jane M. Neal, Senior Vice President
AMG Vanadium, Inc.
60790 Southgate Road
Cambridge, Ohio 47325

Dear Ms. Neal:

On November 20, 2012, I conducted a Compliance Evaluation Inspection (CEI) of the AMG Vanadium (AMG) facility located in Cambridge, Ohio. The purpose of the inspection was to determine the facility's compliance status with the terms and conditions of NPDES Permit Number 01100018*BD. Laura Macpherson, Sustainability Manager and myself were present during the inspection.

As a result of the inspection, I have the following comments:

1. A review of the facility's discharge monitoring reports (DMRs) from October 2008 (date of last inspection) through September 2012 showed two violations for oil and grease and two violations for total suspended solids (see attached data). An appropriate response has already been provided for these violations.
2. The DMR data indicates that toxicity was present at outfall 001 during the June 2012 whole effluent toxicity test for both *Ceriodaphnia dubia* (water fleas) and *Pimephales promelas* (fathead minnows). Part III, Item 2.D indicates that the effluent shall at all times be free of substances in amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life.
3. During the inspection all outfalls were observed. The following are my observations for the outfalls:
 - a. **Outfall 001:** Stormwater is collected from the Raw Material Storage Building #1, Mill Building and Melt Shop, Office Building and associated drives and parking lots and drains to a stormwater retention basin. The stormwater retention basin flows to the engineered wetland to the Northwest of the facility. Outfall 001 is the discharge from the engineered wetland to a natural wetland that flows to Chapman Run. During the inspection a small flow (trickle) was flowing over the v-notched weir at the outfall location. No observable impacts to the receiving wetland were noted during the inspection.

- b. **Outfall 002:** Stormwater is collected from the Raw Material Storage Building #2, roasters, associated drives and parking lots and drains to a stormwater retention basin. The stormwater retention basin flows to the engineered wetland to the Southeast of the facility. Outfall 002 is the discharge from the engineered wetland to a natural wetland that flows to Chapman Run. During the inspection a small flow (trickle) was flowing over the v-notched weir at the outfall location. No observable impacts to the receiving wetland were noted during the inspection.
 - c. **Outfall 003:** Stormwater collected from the Pilot Plant flows to a small drainage ditch west of the pilot plant. Outfall 003 is located where the drainage ditch passes under the railroad track north of the pilot plant. The pilot plant is no longer utilized by AMG Vanadium. In an inspection letter dated October 21, 2008, former Ohio EPA employee Jake Greuey instructed AMG to only sample outfall 003 when outfall 002 is sampled. Please disregard these instructions and perform all future sampling for outfall 003 per Part I, Table 6 of the permit.
 - d. **Outfall 801:** Samples for outfall 801 are being collected from an unnamed tributary to Chapman Run that runs through AMG's property. The samples are collected at the point where the unnamed tributary crosses under State Route 209 just west of Carter Lumber (39° 58' 56"N, 81° 33' 27"W). This is not the sampling location as specified in the permit. Part II, Item A of the permit indicates samples are to be collected on Chapman Run at State Route 209. Collect all future samples at the State Route 209 bridge between County Road 3470 (Desmond Drive) and State Route 660 (Brick Church Road). Changes to this location may be proposed during the permit renewal process.
 - e. **Outfall 901:** Samples for outfall 901 are collected on Chapman Run downstream of outfalls 001, 002 and 003.
4. In an email to me dated October 24, 2012 and during the inspection, Ms. Macpherson had several questions on how the outfalls should be sampled in accordance with the requirements of Part V of the permit. The monitoring required in the tables of Part I for outfalls 001, 002, 003, 801 and 901 are separate and independent requirements from the monitoring requirements of Part V of the permit. Part V is an annual monitoring event (1/year). Please refer to the Monitoring Requirements Matrix in Part V, Item B.1 to determine what parameters you should sample for in accordance with the Industrial Activity Category that applies to AMG.

Furthermore, the monitoring required in Part I can be collected any time the outfall is discharging over the weir. If there is no discharge over the weir for the entire month, mark the "No Discharge" box in the eDMR report. If possible, please sample all outfalls per Part I, on the same day.

5. AMG uses Ream & Haager Laboratory to analyze all parameters required in your NPDES permit. However, Standard Methods 4500 H+B requires pH to be analyzed within fifteen minutes of collection. The person collecting the samples should begin analyzing pH at the time of collection.
6. AMG's best management practices for prevention of stormwater pollution include sweeping the paved drives and parking lots on a daily basis, storing all materials under roof or in covered roll-off bins, utilizing covered loading and unloading areas, and performing routine stormwater inspections. Please provide an up-to-date digital copy of your Stormwater Pollution Prevention Plan (SWPPP) to this office. Please send the SWPPP to my email (tim.fulks@epa.ohio.gov).
7. Ohio EPA has received your Ecological Assessment Report. We are in the process of reviewing the report. When the review is complete, we will contact you to set up a meeting to discuss the recommendations of the report.

Please revise your sampling procedure to address items 3, 4, and 5 of this letter. Please provide the revised procedures to this office within ten (10) days upon receipt of this letter.

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (source reduction). For those wastes or pollutants that are generated, the second priority is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment, and improve your public image by implementing pollution prevention programs. For more information about pollution prevention, including fact sheets or U.S. EPA's "Facility Pollution Prevention Guide" (EPA/600/R-92.008), please contact the Ohio EPA Pollution Prevention Section at (614) 644-3469.

Attached is a copy of the inspection report. If you have any questions about my inspection, please feel free to contact me by phone at (740) 380-5418 or email at tim.fulks@epa.state.oh.us.

Sincerely,



Timothy A. Fulks
District Representative
Division of Surface Water

TF/dh

Enclosure



State of Ohio Environmental Protection Agency
Southeast District Office

Industrial NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES #	Month/Day/Year	Inspection Type	Inspector	Facility Type
01100018*BD	OH0114847	November 20, 2012	C	S	2

Section B: Facility Data			
Name and Location of Facility Inspected		Entry Time	Permit Effective Date
AMG Vanadium 60790 Southgate Road Cambridge, Ohio 43725		9:45 a.m.	March 1, 2005
		Exit Time	Permit Expiration Date
		2:30 p.m.	March 31, 2007
Name(s) and Title(s) of On-Site Representative(s)		Phone Number(s)	
Laura Macpherson, CHMM, Sustainability Manager Richard Caldwell, Health and Safety Manager		(740) 435-4604 (740) 435-4665	
Name, Address, and Title of Responsible Official		Phone Number	
Jane M. Neal, Senior Vice President and General Manager 60790 Southgate Road Cambridge, Ohio 47325		(740) 435-4608	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory; M = Marginal; U = Unsatisfactory; N = Not Evaluated; N/A = Not Applicable)					
S	Permit	S	Flow Measurement	N/A	Pretreatment
S	Records/Reports	M	Laboratory	U	Compliance Schedules
S	Operations & Maintenance	M	Effluent/Receiving Waters	U	Self-Monitoring Program
S	Facility Site Review	N/A	Sludge Storage/Disposal	N/A	Other
S	Collection System				

Section D: Summary of Findings (attach additional sheets if necessary)			
<p>Laboratory - pH needs to be analyzed onsite by the person collecting the sample. The hold time for pH is 15 minutes and therefore cannot be analyzed at the contract lab.</p> <p>Compliance Schedules - AMG submitted and Ecological Assessment proposing alternative limits for vanadium on October 9, 2012. The compliance schedule contained in Part I of the NPDES permit required any report proposing alternative limits to be submitted no later than September 31, 2006.</p> <p>Effluent/Receiving Waters - The June 2012 Whole effluent toxicity test indicated toxicity for both Ceriodaphnia dubia (water fleas) and Pimephales promelas (fathead minnows).</p> <p>Self Monitoring Program - Samples for the upstream station (outfall 801) are not being collected at the location indicated in the permit</p> <p>Please see the attached letter for further details.</p>			
Inspector		Reviewer	
 Timothy A. Fulks Division of Surface Water Southeast District Office		 Jennifer M. Witte Compliance & Enforcement Supervisor Division of Surface Water Southeast District Office	
Date 12/13/12		Date 12/14/12	

Sections E through K: Complete on all inspections as appropriate
Y = Yes; N = No; N/A = Not Applicable; N/E = Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee..... Y
- (b) Correct name and location of receiving waters Y
- (c) Do Categorical Standards apply? If yes, list applicable standards..... N
- (d) Product(s) and production rates conform with permit application (Industries) N/A
- (e) Flows and loadings conform with NPDES permit N/A
- (f) Treatment processes are as described in permit application Y
- (g) All discharges are permitted Y
- (h) Number and location of discharge points are as described in permit..... N
- (i) Storm water discharges properly permitted..... Y

Comments/Status:

Section F: Compliance

- (a) Any significant violations since the last inspectionY
- (b) Appropriate Non-compliance notification of violationsY
- (c) Permittee is taking actions to resolve violationsY
- (d) Permittee has a compliance scheduleY
- (e) Compliance schedule contained inNPDES
- (f) Permittee is in compliance with scheduleN
- (g) Has biomonitoring shown toxicity in discharge since last inspection.....Y

Comments/Status:

Compliance Schedules - AMG submitted and Ecological Assessment proposing alternative limits for vanadium on October 9, 2012. The compliance schedule contained in Part I of the NPDES permit required any report proposing alternative limits to be submitted no later than September 31, 2006.

Section G: Operation and Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available generator or dual feed N/A
 - i. What does the back-up power source operate
 - ii. How often is the generator tested under load
- (b) Which components have an alarm system available for power or equipment failures

No mechanic treatment systems
- (c) All treatment units in service other than backup units Y
- (d) What method is used for scheduling routine and preventative maintenance (calendar, software, etc.)
- (e) Any major equipment breakdown since last inspection N
- (f) Operation and maintenance manual provided and maintained N/E
- (g) Any plant bypasses since last inspection N
- (h) Any plant upsets since last inspection N

Comments/Status:

Section H: Sludge Management

- (a) Method of Sludge Disposal.....
 - Land Application
 - Haul to Another NPDES Permittee
 - Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.

Class A – Exception Quality Sewage Sludge (monitoring station 584)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 – 38% Volatile Solids Reduction	Option 2 – Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 - >75% Solids without Unstabilized Solids	Option 8 - >75% Solids with Unstabilized Solids
Alternative 1 – Time and Temperature Regime (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 – Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 – Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Gamma Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 – Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Class B – Sewage Sludge (monitoring station 581)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 – 38% Volatile Solids Reduction	Option 2 – Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 - >75% Solids without Unstabilized Solids	Option 8 - >75% Solids with Unstabilized Solids	Option 9 – Land Injection	Option 10 – Immediate Incorporation
Alternative 1 – Geometric Mean of Seven Fecal Samples (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 – Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (b) Has amount of sludge generated changed significantly since the last inspection N/A
- (c) How much sludge storage is provided at the plant
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06) N/A
- (e) Any complaints received in last year regarding sludge N/A
- (f) 5/8" screen at headworks for facilities that land apply sludge N/A
- (g) Are sludge application sites inspected to verify compliance with NPDES permit N/A
- (h) Is a contractor used for sludge disposal N/A
If so, what is the name of the contractor

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices operated and maintained.....Y
Type of device (e.g., weir with ultrasonic level sensor):
- (b) Calibration frequency adequate..... N/A
Date of last calibration:
- (c) 24-hour recording instruments operated and maintained..... N/A
- (d) Flow measurement equipment adequate to handle full range of flows Y
- (e) Actual flow discharged is measured Y
- (f) Flow measuring equipment inspection frequency
Daily: Weekly: Monthly: Other:

Comments/Status:

Sampling:

- (a) Sampling location(s) are as specified by permit N
- (b) Parameters and sampling frequency agree with permit Y
- (c) Permittee uses required sampling method (see GLC page) Y
- (d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e., continuous monitoring instrumentation, calibration and maintenance records) Y

Comments/Status:

Upstream samples should be collected on Chapman Run in accordance with the NPDES permit. Refer to the attached letter for further detail. Permittee should be performing pH analysis onsite as the hold time for pH is only 15 minutes. Analysis of pH cannot be performed at the contract lab.

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite N/A
- (b) Do SOP's include the following if applicable N/A

- | | |
|----------------------------------|-----------------------------|
| • Title | • Procedure |
| • Scope and Application | • Calculations |
| • Summary | • Quality Control |
| • Sample Handling & Preservation | • Maintenance |
| • Interferences | • Corrective Action |
| • Apparatus and Materials | • Reference (Parent Method) |
| • Reagents | |

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of known precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

- (c) EPA approved analytical testing procedures used (40 CFR 136.3) Y
- (d) If alternate analytical procedures are used, proper approval has been obtained N/A
- (e) Analyses being performed more frequently than required by permit N
- (f) If (e) is yes, are results in permittee's self-monitoring report N/A
- (g) Satisfactory calibration and maintenance of instruments/equipment (see score from GLC page) N/A
- (h) Commercial laboratory used Y

Parameters analyzed by commercial lab: **All Chemical parameters of permit**
 Lab name: **Ream & Haager Laboratories**

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling N/A
Date:
- (b) Were any parameters "Unsatisfactory" N/A
- (c) Reasons for "Unsatisfactory" parameters

Section J: Effluent/Receiving Water Observations

Outfall #: **001**

Outfall Description: **Final Outfall**

Receiving Stream: **Natural Wetland flowing to Chapman Run**

Receiving Stream Description: **No observable adverse impact to wetlands or Chapman Run**

Outfall #: **002**

Outfall Description: **Final Outfall**

Receiving Stream: **Natural Wetland flowing to Chapman Run**

Receiving Stream Description: **No observable adverse impact to wetlands or Chapman Run**

Outfall #: **003**

Outfall Description: **Final Outfall**

Receiving Stream: **Natural Wetland flowing to Chapman Run**

Receiving Stream Description: **No observable adverse impact to wetlands or Chapman Run**

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work & storage areas or laboratories N
- (b) Do you notice staining or discoloration of soils, pavement or floors..... N
- (c) Do you notice distressed (unhealthy, discolored, dead) vegetation N
- (d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks N
- (e) Do you notice any unusual odors or strong chemical smells..... N
- (f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities N

If any of the above are observed, ask the following questions:

- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?