



State of Ohio Environmental Protection Agency

**Southeast District Office**

2195 Front Street  
Logan, Ohio 43138

TELE: (740) 385-8501 FAX: (740) 385-6490  
www.epa.state.oh.us

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

April 24, 2008

**GUERNSEY COUNTY  
METALLURG VANADIUM CORP  
DHWM/SEDO  
OHD042319244**

Mr. Richard Caldwell  
Metallurg Vanadium Corporation  
60790 Southgate Road  
Cambridge, Ohio 43725

Dear Mr. Caldwell:

On April 8 and 16, 2008, I inspected Metallurg Vanadium Corporation's ("MVC") Cambridge facility to determine compliance with Ohio's hazardous waste laws as found in Chapter 3734. of the Ohio Revised Code, Chapter 3745. of the Ohio Administrative Code (OAC), and the Variance from Classification as a Waste which was issued on September 26, 2006. This letter will explain the violations we found, what you need to do to correct the violations, other general concerns we have, and what you need to do to respond to our general concerns.

We found the following violations of Ohio's hazardous waste laws. In order to correct these violations, you must do the following and send me the required information **within thirty days** of the date of this letter:

- (1) OAC Rule 3745-52-11, Waste Evaluation:** Any person who generates a waste in Ohio must evaluate the waste to determine if the waste is a hazardous waste in accordance with the criteria set forth in OAC Chapter 3745-51.

MVC failed to evaluate a bucket containing a red solid which was located in the sump room of the chemical plant. Prior to the conclusion of the inspection, the contents were evaluated as a nonhazardous waste using process knowledge. Therefore, MVC has now abated this violation.

- (2) OAC Rule 3745-65-52(D), Content of Contingency Plan:** The contingency plan must list names, addresses and phone numbers of emergency coordinators. The list must be kept up to date.

MVC failed to update the list of emergency coordinators when they changed due to personnel changes at the plant. In order to abate this violation, MVC must amend the contingency plan to include updated emergency information and submit the amended pages to this office as a Class 1 permit modification per OAC Rule 3745-50-51. Note that you must also submit your amended plan to all required authorities per OAC 3745-65-53(B).

- (3) OAC Rule 3745-65-54, Amendment of Contingency Plan, and V.2.g of the Variance for Classification as a Waste:** The contingency plan must be reviewed and immediately amended, if necessary, whenever rules are revised, the plan fails, the facility changes the list of emergency coordinators changes, or the emergency equipment changes.

MVC failed to amend the plan in response to changes in personnel who are emergency coordinators. In order to abate this violation, MVC must amend the contingency plan to include updated emergency coordinator information as well as any other updates required of this rule, and submit the amended pages to this office as a Class 1 permit modification per OAC Rule 3745-50-51. Note that you must also submit your amended plan to all required authorities per OAC 3745-65-53(B).

- (4) OAC Rule 3745-52-34(A), Accumulation Time of Hazardous Waste:** Hazardous waste may be accumulated onsite for less than ninety days without a permit provided that certain conditions are met. Containers of hazardous waste must be labeled with the words hazardous waste and the accumulation start date.

MVC failed to label a drum in the maintenance area used to collect the contents of punctured aerosol cans with the words hazardous waste and the accumulation start date.

In order to abate this violation, please submit a photograph of the properly labeled drum.

- (5) OAC Rule 3745-66-74, Inspections:** The owner or operator must inspect weekly where containers are stored. Inspections must be logged.

MVC failed to conduct weekly inspections of a less than ninety day drum of hazardous waste D001 being accumulated at the aerosol can puncturing unit in the maintenance building.

In order to abate this violation, please submit two weeks of inspection records of this drum. Note that if this requires any revisions to any checklists contained in your Part B permit application, the revisions must be submitted to Ohio EPA as a class 3 modification.

- (6) OAC Rule 3745-270-09(A), Special Rules Regarding Wastes That Exhibit a Characteristic:** (A) If a generator determines that his waste displays a characteristic, he must determine underlying hazardous constituents (UHCs) as defined by OAC Rule 3745-270-02.

During the inspection, MVC was unable to provide documentation that they have identified all UHC's in their characteristic waste as defined in OAC 3745-270-02 and listed in Table UTS in OAC Rule 3745-270-48.

In order to abate this violation, MVC must submit documentation, such as analytical results, that all UHC's have been identified in the characteristic waste generated by MVC. Based on this information, Ohio EPA will further evaluate MVC's compliance with land disposal restriction (LDR) regulations.

**(7) OAC 3745-205-101(A)and(C), Design and Operating Standards for Containment Buildings and Section V.2.c of the Variance for Classification of Hazardous Waste:**

(A) The floor and containment walls of the containment building, including the primary barrier, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, uplift, physical contact with the waste, climatic conditions, the stresses of daily operation (including the movement of heavy equipment). The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure during the life of the unit. All surfaces must be chemically compatible with wastes. Incompatible wastes must not be placed in the unit if they could cause it to fail. (C) Owners and operators of containment buildings must use controls and practices to ensure containment of the hazardous waste within the unit, and at a minimum, maintain the primary barrier to be free of significant cracks and gaps, corrosion or other deterioration that could cause hazardous waste to be released from the primary barrier. Any condition which could lead to or has caused a release of hazardous waste must be promptly repaired and notifications to the Director must be made in accordance with OAC 3745-205-101(C)(3).

A) A portion of the floor (primary barrier) of the RMSB has failed ("bubbled up") due to reasons unknown at this time to MVC personnel. Thus, the unit was either not designed, constructed or operated to prevent failure, in violation of the above cited regulation.

C) While it has not yet been determined if hazardous waste has been released from the primary barrier, MVC has failed to maintain the primary barrier to be free of deterioration. In addition, MVC has not notified the Director of Ohio EPA of the failure of the floor of the RMSB.

In order to abate (A) and (C) above, MVC must determine the cause of failure of the primary barrier, determine if the secondary barrier has failed, determine if waste has been released from the primary and/or secondary barrier, and make all necessary design changes, structural repairs and operational changes to ensure that the building meets the above-cited regulation. In addition, MVC must immediately notify the Director of Ohio EPA of the condition, provide a written plan to the Director that includes a description of steps to be taken to repair the containment building and a schedule for accomplishing the work. Note that the Director will review the information submitted and make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete. Upon completion of the work, the Director must be notified and provided a verification, signed by a qualified, registered professional engineer, that repairs and cleanup have been completed according to the written plan submitted in accordance with OAC rule 3745-205-101(C)(3)(a)(iv).

## GENERAL COMMENTS

- (a) Note that empty aerosol cans of brake cleaner were observed in a "trash" drum located at the railcar unloading station. During the inspection, these were removed and taken to the aerosol can puncturing station in the maintenance area. Note that you should implement a procedure to ensure that all such aerosol cans are properly managed at the railcar unloading area.
- (b) Based on previous discussions with MVC, MVC had decided that all drums of hazardous waste are 90 day accumulation drums, **not as satellite accumulation drums**. Note that this means that all such drums must be inspected weekly, inspections must be logged, the drums must be closed, labeled with the words hazardous waste and the accumulation start date, and contents of the drums manifested offsite within 90 days of the accumulation start date.
- (c) In at least one instance during the inspection, Ohio EPA observed that waste personal protective equipment (gloves), which are typically managed as a solid waste, were drummed with oversized screenings which are recycled back into the furnace. MVC must ensure that all solid waste is managed separately from materials that are to be reused as raw materials.
- (d) Please describe all actions that MVC took to inform the Ohio Central Railroad that K171/K172 hazardous waste reclaimed catalyst was found to have been released onto the ground at the Byesville rail crossing from a railcar that had been previously damaged in a derailment in Newark. In addition, provide the date that the leaking railcar arrived at MVC and the date that K171/K172 was found in Byesville.
- (e) Please provide information which describes how MVC ensures that it is not importing hazardous waste when it imports Mexican power plant ash and New Brunswick residue, both of which are used as raw materials in the production process.

Enclosed, you will find a copy of the checklists that were completed during the inspection. Should you have any questions, feel free to contact me at (740) 380-5293. You can find copies of the rules and other information on the division's web page at <http://www.epa.state.oh.us/dhwm>. Ohio EPA also has helpful information about pollution prevention at the following web address: <http://www.epa.state.oh.us/opp>.

Sincerely,



Donna Goodman  
District Representative  
Division of Hazardous Waste Management

DG/mlm

Enclosure

**NOTICE:**

Ohio EPA's failure to list specific deficiencies or violations in this letter does not relieve your company from having to comply with all applicable regulations.

## PROCESS DESCRIPTION/WASTE ACTIVITIES SUMMARY

Facility Name: Metallurg Vanadium Corporation

Facility Type: LQG

EPA ID#: OHD042319244

Description of Waste				On-Site Management			Off-Site Management	P2 Activities
Process/Activity Generating Waste (e.g. plating bath, machining, baghouse, painting, etc)	Waste Generated (e.g. sludge, spent solvent, ash, etc)	EPA Waste Code	QTY Generated per Month	Type of Accumulation/Storage (e.g. container, tank, etc)	Type of On-Site Treatment (recycle, wwt, etc)	Waste Location (Include map if possible)	Name, state, and type of activity occurring at the facility.	P2 Activities
1	Baghouse from electric arc furnace	Baghouse Dust #1 (BHD #1) (process residual per variance)	40 tons	accum. in 30 CY Rolloff box in baghouse #1	NA	Full rolloff is placed on RCRA pad for less than 90 days until manifested offsite.	Envirite, Canton, OH stabilized and landfilled	MVC is considering briquetting this onsite for reuse as raw material.
2	Baghouse from electric arc furnace	Baghouse Dust #2 (BHD #2) (process residual per variance)	100 tons	accum. in 30 CY rolloff box in baghouse #2.	97% reused onsite by mixing into blend and reprocessing.	Stored in RMSB in rolloff or piles until re-use.	3% not reprocessed manifested to Envirite, Canton, OH. Stabilized and landfilled.	Recycled on-site.
3	FGD from Roaster	"LimeAdd" (process residual)	25-30 tons per day but varies	100 CY steel tank (LimeAdd Silo).		Next to Roaster	60% to Heritage Environmental, Indianapolis, IN stabilized and landfilled. 20% to Envirite; 20% to Waste Mgmt.	40% to Envirite used for land stabilizer. MVC looking into selling rest for use as ingred. in asphalt, seasonally.
4	Fly Ash and LimeAdd	Drop-out waste from ECT, multi-clone and reactor (process residual)	3 tons per month	four steel 1 CY hoppers	reused onsite by reblending in RMSB	Steel hoppers located under FDG system on roaster.		

On September 26, 2006 Ohio EPA granted MVC a variance from classification as a waste, allowing MVC to store vanadium bearing petroleum catalyst received from Shell Alberta before recycling. Prior to the variance, many of MVC's activities, raw materials and process residuals were regulated as hazardous waste management. Since the variance was issued, many of MVC's activities are no longer regulated as hazardous waste management, rendering MVC an episodic large quantity generator of hazardous waste. Note that MVC must comply with conditions specified in the Variance.

A Part A permit was submitted to Ohio EPA on December 6, 2002, and approved on June 10, 2002. With the promulgation of new rules regarding BIFs by Ohio on December 7, 2004, the Roaster operated by MVC is now regulated by Ohio as a BIF if hazardous waste is processed in it, however, Ohio currently is not yet authorized by USEPA for these rules. Thus, SMC submitted a revised Part A permit on 1/05/05, which includes the BIF (Roaster), which was later approved by Ohio EPA. If hazardous waste will be processed in the BIF, USEPA will review and approved of MVC's Part B permit application for their roaster (BIF).

MVC has applied for a part B permit for any petroleum catalyst they may receive in the future that is not from Shell Alberta. While they do not foresee this occurring in the near future, they have filed this Part B permit as a "protective measure" so as not to disrupt business operations should they need to accept catalyst other than from Shell. The Part B permit for storage of spent catalyst K171/K172 in a containment bldg is being processed by Ohio EPA and will be issued in final form in FY 08.

MVC is looking into briquetting baghouse dust onsite in order to avoid offsite disposal.

Other: NA

# LARGE QUANTITY GENERATOR REQUIREMENTS

CESQG: <100Kg. (Approximately 25-30 gallons) of waste in a calendar month.

SQG: Between 100 and 1,000 Kg. (About 25 to under 300 gallons) of waste in a calendar month.

LQG: >1,000 Kg. (~300 gallons) of waste in a calendar month or >1 Kg. Of acutely hazardous waste in a calendar month.

## GENERAL REQUIREMENTS

1. Have all wastes generated at the facility been adequately evaluated? [3745-52-11]  Yes  No  NA  
**A bucket of waste in the chemical plant was unevaluated.**
2. Has the generator obtained a U.S. EPA identification number? [3745-52-12]  Yes  No  NA
3. Were annual reports filed with Ohio EPA on or before March 1<sup>st</sup>? [3745-52-41(A)]  Yes  No  NA
4. Has the generator transported or caused to be transported hazardous waste to other than a facility authorized to manage the hazardous waste? [ORC 3734.02(F)]  Yes  No  NA
5. Has the generator disposed of hazardous waste **on-site without a permit** or at another facility other than a facility authorized to dispose of the hazardous waste? [ORC 3734.02(E) & (F)]  Yes  No  NA
6. Does the generator accumulate hazardous waste?  Yes  No  NA  
*NOTE: If the LQG does not accumulate or treat hazardous waste, it is not subject to 52-34 standards. All other requirements still apply, e.g., annual reports, manifest, marking, record keeping, LDR, etc.*
7. Has the generator accumulated hazardous waste on-site in excess of 90 days without a permit or an extension from the director ORC §3734.02 (E) & (F)?  Yes  No  NA  
*NOTE: If F006 waste is generated and accumulated for > 90 days and is recycled see 3745-52-34(G) & (H).*
8. Does the generator treat hazardous waste in a: [ORC 3734.02(E)&(F)]
  - a. Container that meets 3745-66-70 to 3745-66-77?  Yes  No  NA
  - b. Tank that meets 3745-66-90 to 3745-66-101 except 3745-66-97 (C) and  Yes  No  NA
  - c. Drip pads that meet 3745-69-40 to 3745-69-45?  Yes  No  NA
  - d. Containment building that meets 3745-256-100 to 3745-256-102?  Yes  No  NA*NOTE: Complete appropriate checklist for each unit.  
NOTE: If waste is treated to meet LDRs, use LDR checklist.*
9. Does the generator export hazardous waste? If so:  Yes  No  NA
  - a. Has the generator notified U.S. EPA of export activity? [3745-52-53(A)]  Yes  No  NA
  - b. Has the generator complied with special manifest requirements? [3745-52-54]  Yes  No  NA
  - c. For manifests that have not been returned to the generator: has an exception report been filed? [3745-52-55]  Yes  No  NA
  - d. Has an annual report been submitted to U.S. EPA? [3745-52-56]  Yes  No  NA
  - e. Are export related documents being maintained on-site? [3745-52-57(A)]  Yes  No  NA

## MANIFEST REQUIREMENTS

10. Have all hazardous wastes shipped off-site been accompanied by a manifest?  
(U.S. EPA Form 8700-22) [3745-52-20(A)]  Yes  No  NA

11. Have items (1) through (20) of each manifest been completed? [3745-52-20(A)]  Yes  No  NA

*NOTE: U.S. EPA Form 8700-22(A) (the continuation form) may be needed in addition to Form 8700-22. In these situations items (21) through (35) must also be completed. [3745-52-20(A)]*

12. Does each manifest designate at least one facility which is permitted to handle the waste?  
[3745-52-20(B)]  Yes  No  NA

*NOTE: The generator may designate on the manifest one alternate facility to handle the waste in the event of an emergency which prevents the delivery of waste to the primary designated facility. [3745-52-20(C)].*

13. If the transporter was unable to deliver a shipment of hazardous waste to the designated facility did the generator designate an alternate TSD facility or give the transporter instructions to return the waste? [3745-52-20(D)]  Yes  No  NA

14. Have the manifests been signed by the generator and initial transporter?  
[3745-52-23(A)(1) & (2)]  Yes  No  NA

*NOTE: Remind the generator that the certification statement they signed indicates: 1) they have properly prepared the shipment for transportation and 2) they have a program in place to reduce the volume and toxicity of the waste they generate.*

15. If the generator did not receive a return copy of each completed manifest within 35 days of the waste being accepted by the transporter did the generator contact the transporter and/or TSD facility to check on the status of the waste? [3745-52-42(A)(1)]  Yes  No  NA

16. If the generator has not received the manifest within 45 days, did the generator file an exception report with Ohio EPA? [3745-52-42(A)(2)]  Yes  No  NA

17. Are signed copies of all manifests and any exception reports being retained for at least three years? [3745-52-40]  Yes  No  NA

*NOTE: Waste generated at one location and transported along a publicly accessible road for temporary consolidated storage or treatment on a contiguous property also owned by the same person is not considered "on-site" and manifesting and transporter requirements must be met. To transport "along" a public right-of-way the destination facility has to act as a transfer facility or have a permit because this is considered to be "off-site." For additional information see the definition of "on-site" in OAC rule 3745-50-10.*

## PERSONNEL TRAINING

18. Does the generator have a training program which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to their positions? [3745-65-16(A)(2)]  Yes  No  NA

19. Does the personnel training program include instructions to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems (where applicable)? [3745-65-16(A)(3)(a-f)]  Yes  No  NA

20. Is the personnel training program directed by a person trained in hazardous waste management procedures? [3745-65-16(A)(2)]  Yes  No  NA

21. Do new employees receive training within six months after the date of hire (or assignment to a new position)? [3745-65-16(B)]  Yes  No  NA
22. Does the generator provide annual refresher training to employees? [3745-65-16(C)]  Yes  No  NA
23. Does the generator keep records including: job titles [D(1)], job descriptions [D(2)], type and amount of training given to each person [D(3)] and documentation of completed training or job experience required [D(4)]? [3745-65-16(D)]  Yes  No  NA
24. Are training records for current personnel kept until closure of the facility and are training records for former employees kept for at least three years from the date the employee last worked at the facility? [3745-65-16(E)]  Yes  No  NA

*NOTE: The following section can be used by the inspector to document that all personnel who are involved with hazardous waste management have been trained. The employees who need training (written and/or on-the-job) may include the following: environmental coordinators, drum handlers, emergency coordinators, personnel who conduct hazardous waste inspections, emergency response teams, personnel who prepare Manifests, etc.*

<u>Job Performed</u>	<u>Name of Employee</u>	<u>Date Trained</u>
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**CONTINGENCY PLAN**

25. Does the owner/operator have a contingency plan to minimize hazards to human health or the environment from fires, explosions or any unplanned release of hazardous waste? [3745-65-51(A)]  Yes  No  NA
26. Does the plan describe the following:
- a. Actions to be taken in response to fires, explosions or any unplanned release of hazardous waste [3745-65-52(A)]?  Yes  No  NA
  - b. Arrangements with emergency authorities [3745-65-52(C)].  Yes  No  NA
  - c. A current list of names, addresses and telephone numbers (office and home) of all persons qualified to act as emergency coordinator? [3745-65-52(D)] **List of emergency coordinators was not current.**  Yes  No  NA
  - d. A list of all emergency equipment, including: location, a physical description and brief outline of capabilities? [3745-65-52(E)]  Yes  No  NA
  - e. An evacuation plan for facility personnel where there is possibility that evacuation may be necessary? [3745-65-52(F)]  Yes  No  NA

*NOTE: If the facility already has a "Spill Prevention, Control and Counter measures Plan" under CFR Part 112 or 40 CFR Part 1510, or some other emergency plan, the facility can amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with OAC requirements. [3745-65-52(B)]*

27. Is a copy of the plan (plus revisions) kept on-site and been given to all emergency authorities that may be requested to provide emergency services? [3745-65-53 (A) & (B)]  Yes  No  NA
28. Has the generator revised the plan in response to rule changes, facility, equipment and personnel changes, or failure of the plan? [3745-65-54] **Plan was not revised in response to changes in emergency coordinators.**  Yes  No  NA
29. Is an emergency coordinator available at all times (on-site or on-call)? [3745-65-55]  Yes  No  NA

*NOTE: The emergency coordinator shall be thoroughly familiar with: (a) all aspects of the facility's contingency plan; (b) all operations and activities at the facility; (c) the location and characteristics of waste handled; (d) the location of all records within the facility; (e) facility layout; and (f) shall have the authority to commit the resources needed to implement provisions of the contingency plan.*

## EMERGENCY PROCEDURES

30. Has there been a fire, explosion or release of hazardous waste or hazardous waste constituents since the last inspection? If so:  Yes  No  NA
- a. Was the contingency plan implemented? [3745-65-51(B)]. **Releases of hazardous waste spent catalyst that occurred as a result of a derailment in Newark and along the tracks during transport of the damaged railcar were the responsibility of Ohio Central Railroad, the transporter. MVC was not responsible for implementing their contingency plan for this. Releases of spent catalyst that occurred at MVC when the damaged railcar was unloaded at MVC were not hazardous waste (per the variance).**  Yes  No  NA
- b. Did the facility follow the emergency procedures in 3745-65-56(A) through (H)?  Yes  No  NA
- c. Did the facility submit a report to the Director within 15 days of the incident as required by 3745-65-56(J)?  Yes  No  NA
- NOTE: OAC 3745-65-51(b) requires that the contingency plan be implemented immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents, which could threaten human health and the environment.*

## PREPAREDNESS AND PREVENTION

31. Is the facility operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous waste? [3745-65-31]  Yes  No  NA
32. Does the generator have the following equipment at the facility, if it is required due to actual hazards associated with the waste:
- a. Internal alarm system? [3745-65-32(A)]  Yes  No  NA
- b. Emergency communication device? [3745-65-32(B)]  Yes  No  NA
- c. Portable fire control, spill control and decon equipment? [3745-65-32(C)]  Yes  No  NA
- d. Water of adequate volume/pressure? [3745-65-32(D)]  Yes  No  NA
- NOTE: Verify that the equipment is listed in the contingency plan.*
33. Is emergency equipment tested (inspected) as necessary to ensure its proper operation in time of emergency? [3745-65-33]  Yes  No  NA
34. Are emergency equipment tests (inspections) recorded in a log or summary? [3745-65-33]  Yes  No  NA
35. Do personnel have immediate access to an internal alarm or emergency communication device when handling hazardous waste (unless the device is not required under 3745-65-32)? [3745-65-34(A)]  Yes  No  NA
36. If there is only one employee on the premises is there immediate access to a device (ex: phone, hand held two-way radio) capable of summoning external emergency assistance? (Unless not required under 3745-65-32) [3745-65-34(B)]  Yes  No  NA
37. Is adequate aisle space provided for unobstructed movement of emergency or spill control equipment? [3745-65-35]  Yes  No  NA
38. Has the generator attempted to familiarize emergency authorities with possible hazards and facility layouts? [3745-65-37(A)]  Yes  No  NA
39. Where authorities have declined to enter into arrangements or agreements, has the generator documented such a refusal? [3745-65-37(B)]  Yes  No  NA

## SATELLITE ACCUMULATION AREA REQUIREMENTS

40. Does the generator ensure that satellite accumulation area(s):
- a. Are at or near a point of generation? [3745-52-34(C)(1)]  Yes  No  NA
  - b. Are under the control of the operator of the process generating the waste? [3745-52-34(C)(1)]  Yes  No  NA
  - c. Do not exceed one quart of acutely hazardous waste at anyone time? [3745-52-34(C)(1)]  Yes  No  NA
  - d. Containers are closed, in good condition and compatible with wastes stored in them? [3745-52-34(C)(1)(a)]  Yes  No  NA
  - e. Containers are marked with words "Hazardous Waste" or other words identifying the contents? [3745-52-34(C)(1)(b)]  Yes  No  NA
41. Is the generator accumulating hazardous waste(s) in excess of the amounts listed in the preceding question? If so:
- a. Did the generator comply with 3745-52-34(A)(1)through(4) or other applicable generator requirements within three days? [3745-52-34(C)(2)]  Yes  No  NA
  - b. Did the generator mark the container(s) holding excess with the accumulation date when the 55 gallon (one quart) limit was exceeded? [3745-52-34(C)(2)]  Yes  No  NA
  - c. Do not exceed a total of 55 gallons of hazardous waste per waste stream? [3745-52-34(C)(1)]  Yes  No  NA

*NOTE: The satellite accumulation area is limited to 55 gallons of hazardous waste accumulated from a distinct point of generation in the process under the control of the operator of the process generating the waste (less than 1 quart for acute hazardous waste). There could be individual waste streams accumulated in an area from different points of generation.*

## USE AND MANAGEMENT OF CONTAINERS IN <90 DAY ACCUMULATION AREAS

42. Has the generator marked containers with the words "Hazardous Waste?" [3745-52-34(A)(3)]  Yes  No  NA  
**A drum which contained the contents of punctured aerosol cans in the maintenance area was not labeled with the required words.**
43. Is the accumulation date on each container? [3745-52-34(A)(2)]  Yes  No  NA  
**A drum which contained the contents of punctured aerosol cans in the maintenance area not labeled with the accumulation start date.**
44. Are hazardous wastes stored in containers which are:
- a. Closed (except when adding/removing wastes)? [3745-66-73(A)]  Yes  No  NA
  - b. In good condition? [3745-66-71]  Yes  No  NA
  - c. Compatible with wastes stored in them? [3745-66-72]  Yes  No  NA
  - d. Handled in a manner which prevents rupture/leakage? [3745-66-73(B)]  Yes  No  NA
45. Is the container accumulation areas(s) inspected weekly? [3745-66-74]  Yes  No  NA  
*Note: Per ORC§1.44(A) "Week" means seven (7) consecutive days.*

a. Are inspections recorded in a log or summary? [3745-66-74]

Yes  No  NA

**There was no record of inspections of the drum which contained the contents of punctured aerosol cans in the maintenance area.**

46. Are containers of ignitable or reactive wastes located at least 50 feet (15 meters) from the facility's property line? [3745-66-76]

Yes  No  NA

47. Are containers of incompatible wastes stored separately from each other by means of a dike, berm, wall or other device? [3745-66-77(C)]

Yes  No  NA

48. If the generator places incompatible wastes, or incompatible wastes and materials in the same container, is it done in accordance with 3745-65-17(B)? [3745-66-77(A)]

Yes  No  NA

49. If the generator places hazardous waste in an unwashed container that previously held an incompatible waste, is it done in accordance with 3745-65-17(B)? [3745-66-77(B)]

Yes  No  NA

*NOTE: OAC 3745-65-17(B) requires that the generator treat, store, or dispose of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials so that it does not create undesirable conditions or threaten human health or the environment.*

50. If the generator has closed a <90 day accumulation area does the closure appear to have met the closure performance standard of 3745-66-11? [3745-52-34(A)(1)]

Yes  No  NA

*NOTE: Please provide a description of the unit and documentation provided by the generator to demonstrate that closure was completed in accordance with the closure performance standards. If the generator has closed a <90 day tank, closure must also be completed in accordance with OAC 3745-66-97 (except for paragraph C of this rule). [3745-52-34]*

#### PRE-TRANSPORT REQUIREMENTS

51. Does the generator package/label its hazardous waste in accordance with the applicable DOT regulations? [3745-52-30, 3745-52-31 and 3745-52-32(A)]

Yes  No  NA

52. Does each container <110 gallons have a completed hazardous waste label? [3745-52-32(B)]

Yes  No  NA

53. Before off-site transportation, does the generator placard or offer the appropriate DOT placards to the initial transporter? [3745-52-33]

Yes  No  NA

#### REMARKS

## LDR REQUIREMENTS

### GENERAL LDR REQUIREMENTS

1. Has the generator adequately evaluated all wastes to determine if they are restricted from land disposal? [3745-270-07(A)(1)] If so:  Yes  No  NA
- a. For determinations based solely on knowledge of the waste: Is supporting data retained on-site? [3745-270-07(A)(6)]  Yes  No  NA
- b. For determinations based upon analytical testing: Is waste analysis data retained on-site? [3745-270-07(A)(6)]  Yes  No  NA
2. Has the generator determined each EPA hazardous waste code applicable to the waste? [3745-270-07(A)(2) see Table 1]  Yes  No  NA
3. Has the generator determined the correct "treatability group(s)" (e.g., wastewater; non-wastewater, etc.)? [3745-270-07(A), Table 1]  Yes  No  NA
4. Does the generator generate a characteristic hazardous waste? If so:  Yes  No  NA
- a. Have all underlying hazardous constituents (UHCs) been identified?  Yes  No  NA  
[3745-270-09(A)] **MVC has no documentation that UHCs have been identified for their wastes.**

**NOTE:** *If the waste is D001 non-wastewater treated by CMBST, RORGS, POLYM in Table 1 of Rule 3745-270-42 UHCs do not need to be identified.*

5. Does the generator generate listed waste(s) which also exhibit hazardous characteristics? [3745-270-09] If so:  Yes  No  NA
- a. Has the generator also identified the appropriate treatment standard(s) for the constituent(s) which cause the waste to exhibit a characteristic? [3745-270-09(A)]  Yes  No  NA

**NOTE:** *The generator is not required to identify the treatment standard for the characteristic if the listing covers the associated characteristic (e.g., a F019/D007 hazardous waste - F019 being listed due to chromium content and D007 being the characteristic waste code for chromium). [See OAC Rule 3745-270-09(B)]*

6. Has the generator correctly determined if restricted wastes meet or do not meet treatment standards? [3745-270-07(A)(1)] **This cannot be determined until UHC's have been identified.**  Yes  No  NA

**NOTE:** *Wastes with EPA hazardous waste numbers K174 and K175 (chlorinated aliphatic wastes) have specific requirements in rule 3745-270-33. Waste with EPA hazardous waste numbers K176, K177 and K178 (inorganic chemical wastes) have specific requirements in rule 3745-270-36.*

7. Does the owner/operator ensure that restricted wastes or treatment residues are not diluted as a method of achieving/circumventing LDR treatment standards? [3745-270-03]  Yes  No  NA

**NOTE:** *A generator may dilute a waste (that is hazardous only because it exhibits a characteristic) in a treatment system that discharges to waters of the State pursuant to an NPDES permit (§402 of CWA), that treats waste in a CWA equivalent treatment system, or that treats waste for the purposes of pre-treatment requirements under §307 of CWA, unless a method other than DEACT is specified or the waste is a D003 reactive cyanide wastewater or non-wastewater. [3745-270-03(B)]*

8. Is combustion of any of the wastes identified in the Appendix to Rule 3745-270-03 occurring without meeting one or more of the criteria under Rule 3745-270-03(C) upon generation or after treatment? [3745-270-03(C)]  Yes  No  NA

**NOTE:** *In other words, is combustion a legitimate treatment method?*

9. Has the generator added iron to lead-containing hazardous waste in order to achieve LDR treatment standards for lead? [3745-270-03(D)]  Yes  No  NA

10. Does the facility have a case-by-case extension to the effective date to land dispose of hazardous waste?[3745-270-05] If so: Yes No NA
- a. The facility can dispose of hazardous waste in a on-site landfill or surface impoundment.[3745-270-05] Yes No NA
11. Does the facility have an extension to allow for a restricted waste to be land disposed?[3745-270-06] If so: Yes No NA
- a. The facility can land dispose of the waste. [3745-270-06] Yes No NA
12. Does the facility treat wastes that are otherwise prohibited from land disposal, in a surface impoundment? Yes No NA  
If so:
- a. Has the facility complied with 3745-270-04? Yes No NA

### NOTIFICATION AND CERTIFICATION REQUIREMENTS

13. If a generator's waste or contaminated soil does not meet the treatment standards, does the generator have the paperwork required in Column A of Table 1 of 3745-270-07? [3745-270-07(A)(2)] Yes No NA
14. If a generators' waste or contaminated soil meets the treatment standard at the original point of generation, does the generator have the paperwork required in Column B of Table 1 of 3745-270-07? [3745-270-07(A)(3)] Yes No NA
15. If a generators' waste is exempt (under 3745-270-05, 3745-270-06, national capacity or case-by-case variance, etc.) does the generator have the paperwork required in Column C of Table 1 of 3745-270-07? [3745-270-07(A)(4)] Yes No NA
16. If a generator manages a lab pack containing hazardous waste using the alternative treatment standard in 3745-270-42, does the generator have the paperwork required in Column D of Table 1 of 3745-270-07? [3745-270-07(A)(9)] Yes No NA
17. Does the generator produce a waste that is hazardous waste from the point of generation, but subsequently excluded from regulation under OAC 3745-51-02 through 3745-51-06? [3745-270-07(A)(7)] If so: Yes No NA
- a. Is a one-time notice placed in the facility's file stating such generation, subsequent exclusion or exemption, and disposition of the wastes? [3745-270-07(A)(7)] Yes No NA

**NOTE: Examples include hazardous wastes discharged to a POTW or to a surface water under a NPDES permit.(See 270-07(A)(7))**

18. Does the generator retain on-site a copy of all notices, certifications, demonstrations and waste analysis data for at least three years from the last shipment of waste sent off-site? [3745-270-07(A)(8)] Yes No NA

# USED OIL GENERATOR REQUIREMENTS

**NOTE: (Short Version) - This checklist does not include requirements for used oil transporters and transfer facilities, processors and re-refiners, burners, and marketers.**

## PROHIBITIONS

1. Is used oil being managed in a surface impoundment or waste pile? If so:  Yes  No  NA
- Is the surface impoundment or waste pile being regulated under OAC 3745-54 to 3745-57 and 3745-205 or 3745-65 to 3745-69 and 3745-256? [3745-279-12(A)]  Yes  No  NA
2. Is used oil being used as a dust suppressant? [3745-279-12(B)]  Yes  No  NA
3. Is off-specification used oil fuel burned for energy recovery only in devices specified in 3745-279-12(C)?  Yes  No  NA

## USED OIL GENERATOR STANDARDS

4. Does the generator mix hazardous waste with used oil only as provided in 3745-279-10(B)? [2745-279-21(A)]  Yes  No  NA
5. Does the generator of a used oil containing greater than 1,000 ppm total halogens manage the used oil as a hazardous waste unless the presumption is rebutted successfully? [3745-279-21(B)]  Yes  No  NA
6. Does the generator only store used oil in tanks, containers, or units subject to OAC 3745-54 to 3745-57 and 3745-205 or 3745-65 to 3745-69 and 3745-256? [3745-279-22(A)]  Yes  No  NA
7. Are containers and aboveground tanks used to store used oil in good condition with no visible leaks? [3745-279-22(B)]  Yes  No  NA
8. Are containers, above ground tanks, and fill pipes used for underground tanks clearly labeled or marked "Used Oil?" [3745-279-22(C)]  Yes  No  NA
9. Has the generator, upon detection of a release of used oil, done the following: [3745-279-22(D)]
- a. Stopped the release?  Yes  No  NA
- b. Contained the release?  Yes  No  NA
- c. Cleaned up and properly managed the used oil and other materials?  Yes  No  NA
- d. Repaired or replaced the containers or tanks prior to returning them to service, if necessary?  Yes  No  NA

10. Does the generator burn used oil in used oil fired space heaters? [3745-23] If so:  Yes  No  NA
- a. Does the heater burn only used oil that owner/operator generates or used oil received from household do-it-yourself (DIY) used oil generators?  Yes  No  NA
- b. Is the heater designed to have a maximum capacity of not more than 0.5 million BTU per hour?  Yes  No  NA
- c. Are the combustion gases from heater vented to the ambient air?  Yes  No  NA
11. Does the generator have the used oil hauled only by transporters that have obtained U.S. EPA ID#, unless the generator qualifies for an exemption pursuant to 3745-279-24 (self transportation or tolling agreements)? [3745-279-24]  Yes  No  NA

### USED OIL COLLECTION CENTERS AND AGGREGATION POINTS

12. Is the DIY used oil collection center in compliance with the generator standards in 3745-279-20 to 3745-279-24? [3745-279-30]  Yes  No  NA
13. Is the non-DIY used oil collection center registered with Ohio EPA? [3745-279-31]  Yes  No  NA
14. Is the used oil aggregation point in compliance with the generator standards in 3745-279-20 to 3745-279-24? [3745-279-32]  Yes  No  NA

### WASTE EVALUATION

15. Have all wastes generated at the facility been evaluated? [3745-52-11]  Yes  No  NA

### REMARKS

**SMALL QUANTITY UNIVERSAL WASTE HANDLER REQUIREMENTS  
BATTERIES AND LAMPS**

Large Quantity Universal Waste Handler (LQUWH) = 5,000 Kg or more

Small Quantity Universal Waste Handler (SQUWH) = 5,000 Kg or less

**PROHIBITIONS**

1. Did the SQUWH dispose of universal waste? [3745-273-11(A)]  Yes  No  NA
2. Did the SQUWH dilute or treat universal waste, except when responding to releases as provided in 3745-273-17 or managing specific wastes as provided in 3745-273-13? [3745-273-11(B)]  Yes  No  NA

**WASTE MANAGEMENT - LABELING/MARKING**

**UNIVERSAL WASTE BATTERIES**

3. Are batteries that show evidence of leakage spillage or damage that could cause leaks contained? [3745-273-13(A)(1)]  Yes  No  NA
4. If batteries are contained, are the containers closed and structurally sound, compatible with the contents of the batteries, and lack evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(A)(1)]  Yes  No  NA
5. Does the SQUWH conduct any of the following activities:
- a. Sort batteries by type?  Yes  No  NA
  - b. Mix battery types in one container?  Yes  No  NA
  - c. Discharge batteries to remove the electric charge?  Yes  No  NA
  - d. Regenerated used batteries?  Yes  No  NA
  - e. Disassemble them into individual batteries or cells?  Yes  No  NA
  - f. Remove batteries from consumer products?  Yes  No  NA
  - g. Remove the electrolyte from the battery?  Yes  No  NA
- If so, are the casings of the batteries breached, not intact, or open (except to remove the electrolyte)? [3745-273-13(A)(2)]
6. If the electrolyte is removed or other waste generated, has it been determined whether it is a hazardous waste? [3745-273-13(A)(3)]  Yes  No  NA
- a. If the electrolyte or other waste is characteristic, is it managed in compliance with 3745-50 through 3745-69? [3745-273-13(A)(3)(a)]  Yes  No  NA
  - b. If the electrolyte or other waste is not hazardous, is it managed in compliance with applicable law? [3745-273-13(A)(3)(b)]  Yes  No  NA

7. Are the batteries or containers of batteries labeled with the words "Universal Waste - Batteries" or "Waste Batteries" or "Used Batteries"? [3745-273-14(A)]  Yes  No  NA

**UNIVERSAL WASTE LAMPS**

8. Does the SQGUHW contain lamps in containers or packages that are structurally sound, adequate to prevent breakage, and are compatible with contents of the lamps? Are containers or packages closed and do they lack evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(D)(1)]  Yes  No  NA
9. Are lamps that show evidence of breakage, leakage or damage that could cause a release of mercury or hazardous constituents into the environment immediately cleaned up? Are they placed into a container that is closed, structurally sound, compatible with the contents of the lamps, and lack evidence of leakage spillage or damage that could cause leakage or releases of mercury or hazardous waste constituents to the environment? [3745-273-13(D)(2)]  Yes  No  NA
10. Are the lamps or containers or packages of lamps labeled with the words "Universal Waste - Lamps" or "Waste Lamps" or "Used Lamps"? [3745-273-14(E)]  Yes  No  NA

**NOTE:** Treatment (such as crushing) by a UWH is prohibited under this rule unless the facility is permitted for such activities [3745-273-31(B)]. A generator crushing lamps must manage lamps according to hazardous waste rules (OAC Chapter 3745-52). Lamp crushing is a form of generator treatment (OAC 3745-52-34). Crushed lamps must be transported by a registered hazardous waste transporter to a permitted hazardous waste facility under a hazardous waste manifest.

**ACCUMULATION TIME**

**NOTE:** Accumulation is defined as date generated or date received from another handler.

11. Is the waste accumulated for less than one year? [3745-273-15(A)]  Yes  No  NA  
If not:
- a. Was the waste accumulated over one year in order to facilitate proper recovery, treatment or disposal? (Burden of proof is on the handler to demonstrate) [3745-273-15(B)]  Yes  No  NA
12. Is the length of time the universal waste is stored documented by one of the following: [3745-273-15(C)]  Yes  No  NA
- a. Marking or labeling the container with the earliest date when the universal waste became a waste or was received? [3745-273-15(C)(1)]  Yes  No  NA
- b. Marking or labeling individual item(s) of universal waste with the earliest date that it became a waste or was received? [3745-273-15(C)(2)]  Yes  No  NA
- c. Maintaining an inventory system on-site that identifies the date the universal waste became a waste or was received? [3745-273-15(C)(3)]  Yes  No  NA

- d. Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers became a universal waste or was received? [3745-273-15(C)(4)]  Yes  No  NA
- e. Placing the universal waste in a specific accumulation area and identifying the earliest start date or date received? [3745-273-15(C)(5)]  Yes  No  NA
- f. Any other method, which clearly demonstrates, the length of time the universal waste has been accumulated from the date it became a waste or was received? [3745-273-15(C)(6)]  Yes  No  NA

### EMPLOYEE TRAINING

13. Are employees who handle or have the responsibility for managing universal waste informed of waste handling/emergency procedures, relative to their responsibilities? [3745-273-16]  Yes  No  NA

### RESPONSE TO RELEASES

14. Are releases of universal waste and other residues immediately contained? [3745-273-17(A)]  Yes  No  NA
15. Is the material released characterized? [3745-273-17(B)]  Yes  No  NA
16. If the material released is a hazardous waste, is it managed as required in OAC Chapters 3745-50 through 3745-69? (If the waste is hazardous, the handler is considered the generator of the waste and is subject to Chapter 3745-52) [3745-273-17 (B)]  Yes  No  NA

### OFF-SITE SHIPMENTS

**NOTE: If a SQUWH self-transport waste, then they must comply with the Universal Waste transporter requirements.**

17. Are universal wastes sent to either another handler, destination facility or foreign destination? [3745-273-18(A)]  Yes  No  NA

**NOTE: SQUWHs are prohibited to send waste to any other facility.**

18. If the universal waste meets the definition of hazardous material under 49 CFR 171-180, are DOT requirements met with regard to package, labels, placards and shipping papers? [3745-273-18(C)]  Yes  No  NA
19. Prior to shipping universal waste off-site, does the receiver agree to receive the shipment? [3745-273-18(D)]  Yes  No  NA
20. If the universal waste shipped off-site is rejected by another handler or destination facility does the originating handler do one of the following:
- a. Receive the waste back? [3745-273-18(E)(1)]  Yes  No  NA

- b. Agree to where the shipment will be sent? [3745-273-18(E)(2)]  Yes  No  NA
21. If a handler rejects a partial or full load from another handler, does the receiving handler contact the originating handler and discuss one of the following:  Yes  No  NA
- a. Sending the waste back to the originating handler? [3745-273-18(F)(1)]  Yes  No  NA
- b. Sending the shipment to a destination facility? (If both the originating and receiving handler agree) [3745-273-18(F)(2)]  Yes  No  NA
22. If the handler received a shipment of hazardous waste that was not universal waste, did the SQUWH immediately notify Ohio EPA? [3745-273-18(G)]  Yes  No  NA
23. If the handler received a shipment of nonhazardous, non-universal waste, was the waste managed in accordance with applicable law? [3745-273-18(H)]  Yes  No  NA

### EXPORTS

24. Is waste being sent to a foreign destination? If so:  Yes  No  NA
- a. Does the small quantity handler comply with primary exporter requirements in OAC 3745-52-53, 3745-52-56, and 3745-52-57? [3745-273-20(A)]  Yes  No  NA
- b. Is waste exported only upon consent of the receiving country and in conformance with U.S. EPA's "Acknowledgment of Consent" as defined in 3745-52-50 to 3745-52-57? [3745-273-20(B)]  Yes  No  NA
- c. Is a copy of U.S. EPA's "Acknowledgment of Consent" provided to the transporter? [3745-273-20(C)]  Yes  No  NA

### REMARKS

**Metallurg Vanadium Corporation VARIANCE INSPECTION CHECKLIST  
Cambridge, Ohio Facility**

Company: Metallurg Vanadium Corporation EPA ID#: \_\_\_\_\_

Street: 60790 Southgate Road City: Cambridge

County: Guernsey State: Ohio Zip: 43725

Mailing Address: \_\_\_\_\_  
(If different from above)

Telephone: 740-432-6385 Fax #: \_\_\_\_\_

Owner/ Operator: \_\_\_\_\_  
(If different from above)

Street: \_\_\_\_\_

City: \_\_\_\_\_ State: Ohio Zip: \_\_\_\_\_

Inspection Date(s): \_\_\_\_\_

April 8 and 16 Time(s): \_\_\_\_\_

Inspection Announced? April 16 Yes April 8 NO If so, how much advance notice given?

	<u>Name</u>	<u>Affiliation</u>	<u>Telephone</u>
Inspectors:	<u>Donna Goodman</u>	<u>OEPA</u>	<u>740-380-5293</u>

Facility Representative: Randy Cook and Richard Caldwell MVC 740-432-6345

Variance from Waste Classification Issue date: September 26, 2006

Variance Terminates: September 26, 2016

## Metallurg Vanadium Corporation

### Background

#### Metallurg Vanadium Corporation ("Metallurg")

Metallurg operates a vanadium reclamation facility in Cambridge, Ohio. They buy and reclaim hazardous and nonhazardous vanadium-bearing wastes. The hazardous waste that Metallurg processes is spent catalyst from the petroleum refining industry. The nonhazardous waste is primarily bottom ash from the burning of coal to generate electricity. The spent catalyst comes from Shell Canada in Canada and the bottom ash comes from coal-burning power plants in Mexico.

Metallurg reclaims the spent catalyst using a roaster to convert metallic sulfides to metallic oxides and to remove the sulfur. The conversion is necessary in order to reclaim the vanadium. Two electric arc furnaces are used to further process the catalyst and recover the vanadium.

Metallurg's main product is an alloy of iron and vanadium called FERROVAN. It is sold to the steelmaking industry where it is used to make steel stronger. Other products Metallurg produces are:

1. Iron, Nickel, Molybdenum (FeNiMo) slabs, used in the making of steel; and
2. REVAN, used as a fluxing agent in the steelmaking process.

The current variance was issued September 26, 2006. The Variance terminates 10 years after the effective date September 26, 2016.

**General Variance Compliance**

1. Has the expiration date of the variance passed?  
September 26, 2016. ? (XI) (V.2.o) Yes \_\_\_ No  N/A \_\_\_ RMK#
- a. If the expiration date has passed and a new variance has not been issued, has Metallurg submitted an application for renewal at least 180 days before the expiration date?(V.2.o.i) Yes \_\_\_ No  N/A \_\_\_ RMK#

*Note: Metallurg may continue to operate in accordance with the variance until a new variance is issued or denied if through no fault of Metallurg, a new variance has not been issued pursuant to 3745-50-23 on or before the expiration date (V.2.o.ii).*

2. Does the Metallurg still own or operate the Cambridge Facility? (XI.a) Yes  No  N/A \_\_\_ RMK#
3. Does Metallurg still receive Reclaimed Catalyst from Shell Canada? (XI.b) Yes  No  N/A \_\_\_ RMK#
4. Does Shell Canada still reclaim the catalyst prior to shipping to Metallurg? (XI.c) Yes  No  N/A \_\_\_ RMK#

*Note: If an answer to questions 1a, 2, 3 or 4 is no this variance is terminated. See V.2.p, V.2.q and V.2.r concerning notification to Ohio EPA and preparation of a Sampling and Remediation Plan (SRP).*

**Site Entry-Availability of Records**

5. Has Metallurg provided access to Ohio EPA at reasonable times for the following? (VII):
- a. Monitoring implementation of the variance? Yes  No  N/A \_\_\_ RMK#
- b. Conducting sampling?
- c. Inspecting and copying records, operating logs, contracts, and other documents and information related to the implementation or use of this variance? Yes  No  N/A \_\_\_ RMK#
- d. Verifying any data and other information submitted to Ohio EPA? Yes  No  N/A \_\_\_ RMK#

**Recordkeeping/Operating Requirements**

6. Has Metallurg provided Ohio EPA upon request copies of all documents and information related to issuance, use and implementation of this variance? (VI)

*Note: see variance (VI) for specifics and issues related to trade secret confidentiality.*

Yes  No  N/A \_\_\_ RMK#

7. Does Metallurg record and retain the following documentation of the following for three consecutive years and until December 31, 2011? (V.2.m)

Yes  No  N/A \_\_\_ RMK#

a. Amounts of Lime Add sold for use as an ingredient or as a substitute for a commercial product?

Yes  No  N/A \_\_\_ RMK#

b. Amount of Roasted Catalyst sold for further reclamation?

Yes  No  N/A \_\_\_ RMK#

c. Amounts of baghouse dust reclaimed either on-site or off-site?

Yes  No  N/A \_\_\_ RMK#

d. Amount of Reclaimed Catalyst received?

Yes  No  N/A \_\_\_ RMK#

*Note: The record must include each customer's name and address, and a description of how the materials were recycled.*

8. Does Metallurg report the information in question #7 annually? This report is due on March 1st of each year for three consecutive years. The first report is due March 1, 2007. A copy should go to CO and SEDO. (V.2.n, and XIII)

Yes  No  N/A \_\_\_ RMK# 3

**Material Handling/Minimization of Loss**

9. Is Metallurg constructing, operating and maintaining all of the equipment and storage units associated with the reclamation process in such a manner to minimize loss or release into the environment of Reclaimed Catalyst, Roasted Catalyst and Process Residuals? (V.2)

Yes  No  N/A \_\_\_ RMK#

10. Does Metallurg store the Reclaimed Catalyst and Roasted Catalyst that **does not contain** free liquids in piles, tanks, railcars and/or containers? (V.2.a):

Yes  No  N/A \_\_\_ RMK#

a. Are containers, railcars and tanks non-leaking and compatible with catalyst? (V.2.a.i)

Yes  No  N/A \_\_\_ RMK#

Yes  No  N/A  RMK#

b. Are containers kept closed except when catalyst is not being added or removed? (V.2.a.i)

Yes  No  N/A  RMK#

c. Are railcars stored at the railcar unloading station? (V.2.a.i)

Yes  No  N/A  RMK# 4

d. Are containers stored at the Container Storage Pad or the Raw Material Storage Building? (V.2.a.i)

Yes  No  N/A  RMK#

e. Are piles only stored in the Raw Material Storage Building? (V.2.a.ii)

Yes  No  N/A  RMK# 5

f. Is the floor of the Raw Material Storage Building compatible with the catalyst? (V.2.a.ii)

Yes  No  N/A  RMK#

11. Does Metallurg store the reclaimed Catalyst and Roasted Catalyst that **contains free liquids** in tanks, containers, railcars or piles? (V.2.b):

a. Are containers, railcars and tanks nonleaking and compatible with catalyst? (V.2.b.i)

Yes  No  N/A  RMK#

b. Are containers kept closed except when catalyst is not being added or removed? (V.2.b.i)

Yes  No  N/A  RMK#

c. Are railcars stored at the railcar unloading station? (V.2.b.i)

Yes  No  N/A  RMK#

d. Are containers stored at the Container Storage Pad or the Raw Material Storage Building? (V.2.b.i)

Yes  No  N/A  RMK#

e. Are piles only stored in the Wet Storage Area of the Raw Material Storage Building? (V.2.b.ii)

Yes  No  N/A  RMK#

f. Is the floor of the Wet Storage Area compatible with the catalyst and have a primary barrier to prevent migration of oily residue? (V.2.b.ii)

Yes  No  N/A  RMK#

12. Does Metallurg operate and inspect the Raw Material Storage Building in accordance with OAC rules 3745-256-100 to 3745-256-102? (V.2.c)

Yes  No  N/A  RMK# 6

*Note: This condition shall be superceded by the requirements of a hazardous waste storage permit applicable to the raw Material Storage Building, when the permit is issued. (V.2.c)*

Yes  No  N/A  RMK#

**METALLURG VANADIUM CORPORATION VARIANCE CHECKLIST**

2-2008

Page 5 of 8

13. Does Metallurg use engineering controls and implement procedures to control the release of Roasted Catalyst fugitive dust during the loading and transport of Roasted Catalyst? (V.2.e) Yes  No  N/A \_\_\_ RMK#

14. Does Metallurg use engineering controls and implement procedures to control the release of LimeAdd fugitive dust outside the silo during the loading of transport vehicles? (V.2.f) Yes  No  N/A \_\_\_ RMK#

15. Has Metallurg documented all Emergency spills, fires, or explosions, including the cause and action taken to respond? (V.2.h) Yes  No  N/A \_\_\_ RMK#

a. Has this documentation been retained on-site until the corrective action of the facility has been completed? (V.2.h) Yes  No  N/A \_\_\_ RMK#

16. Does Metallurg maintain the following at the facility and revise as necessary? (V.2.g) Yes \_\_\_ No  N/A \_\_\_ RMK#

a. Facility Contingency Plan (Attachment F in Application)? (V.2.g) Yes  No  N/A \_\_\_ RMK#

b. Employee Training Program and Schedule (Attachment E in Application)? (V.2.k) Yes  No  N/A \_\_\_ RMK#

c. Inspection forms and procedures as described in Section 2, Attachment D of Application? (V.2.j) Yes  No  N/A \_\_\_ RMK#

17. Does Metallurg maintain in good working order the equipment used to handle, store, convey and contain Reclaimed Catalyst, Roasted Catalyst and Process Residuals? Equipment includes but is not limited to: tanks, containers (including transport vehicles), secondary containment systems, loading and unloading areas, sumps, piping and conveyance systems.(V.2.l) Yes  No  N/A \_\_\_ RMK#

**Emergency Preparedness/Inspections & Monitoring**

18. Is the Emergency personnel listed in Attachment F in Application current? (V.2.g) Yes \_\_\_ No  N/A \_\_\_ RMK#

19. Is the spill response equipment listed in Attachment F of Application available? (V.2.g) Yes \_\_\_ No  N/A \_\_\_ RMK# 7

20. Have arrangements been made with local response agencies (Attachment F in Application)? (V.2.g) Yes  No  N/A \_\_\_ RMK#

21. Are inspections at designated areas (below) completed as described in Section 2, Attachment D of Application? (V.2.j)

a. Areas:

i. Roaster: once each day the Roaster is in operation.

Yes  No  N/A \_\_\_ RMK#

ii. Container Storage Pad once each week unit is in operation.

Yes  No  N/A \_\_\_ RMK#

iii. Raw Material Storage Building Visible Emissions Inspection: once per day on days the Raw Materials Storage Building is operational.

Yes  No  N/A \_\_\_ RMK#

iv. Mobile Equipment: once each day Raw Material Storage Building is in operation.

Yes  No  N/A \_\_\_ RMK#

v. Yard Foreman Inspection Form: this inspection addresses the Furnace Room Floor, Briquetter System, the Raw Material Storage Building, Baghouse Area, and Rolloff Box pad. Inspection performed a minimum of once per week facility is in operation.

Yes  No  N/A \_\_\_ RMK#

vi. Railcar Unloading Area Station: once each day railcars are spotted at the Railcar Unloading Area.

Yes  No  N/A \_\_\_ RMK#

b. Emergency and Safety Equipment:

i. Fire Extinguisher: once per week that RCRA facility is in operation.

Yes \_\_\_ No  N/A \_\_\_ RMK#

ii. Safety Equipment: once per week that RCRA facility is in operation.

Yes  No  N/A \_\_\_ RMK#

iii. Emergency Response Equipment: once each week that RCRA facility is in operation.

Yes  No  N/A \_\_\_ RMK#

c. Security Inspection: a minimum of once per month facility is in operation.

Yes  No  N/A \_\_\_ RMK#

Yes \_\_\_ No  N/A \_\_\_ RMK#

22. Are inspection forms retained on-site for 3 years? (V.2.j)

Yes  No  N/A \_\_\_ RMK#

23. Is employee training completed within 30 days of hiring and every 12 months thereafter? (Section 2, Attachment E in Application) (V.2.k)

Yes  No  N/A \_\_\_ RMK#

**METALLURG VANADIUM CORPORATION VARIANCE CHECKLIST**

2-2008

Page 7 of 8

a. Does the training program address the following training components (As described in Section 2, Attachment E in Application) (V.2.k):

- i. Contingency Plan Training (Level I and II)?
- ii. Regulated Waste Training?
- iii. Process training?
- iv. Supervisor training?

Yes  No  N/A  RMK#

24. Is documentation of training signed by the employee and retained at the Facility for 3 years? (V.2.k)

**Managing Residue as a Hazardous Waste**

25. Does Metallurg determine if the cleanup residuals destined for disposal meet the definition of a characteristic hazardous waste and/or are defined as a listed hazardous waste pursuant to OAC rule 3745-52-11? (V.2.i.)

Yes  No  N/A  RMK#

26. Does Metallurg manage cleanup residuals meeting the definition of hazardous waste according to ORC 3734 and the hazardous waste management rules? (V.2.i.)

Yes  No  N/A  RMK#

*Note: Inspector should then complete other checklists as appropriate.*

#3. Variance has only been in effect since 2006, thus only one annual report has been received and is maintained onsite.

#4. Reclaimed catalyst is not stored railcars. It is immediately unloaded.

#5. It is unknown if the floor of the RMSB is compatible with all wastes stored there, as a portion of the floor has failed.

#6. A portion of the RMSB floor has failed, thus is it not in compliance with OAC Rule 3745-205-101(A) and (C).

#7. Emergency Coordinator information in the contingency plan has not been updated.

**METALLURG VANADIUM CORPORATION VARIANCE CHECKLIST**

2-2008

Page 8 of 8

## CONTAINMENT BUILDING INSPECTION CHECKLIST

CESQG: < 100 Kg. (approximately 25-30 gallons) of waste in a calendar month

SQG: Between 100 and 1,000 Kg. (about 25 to under 300 gallons) of waste in a calendar month

LQG: > 1,000 Kg. (~300 gallons) of waste in a calendar month or > 1 Kg. of acutely hazardous waste in a calendar month

NOTE: To convert from gallons to pounds: Amount in gallons x Specific Gravity x 8.345 = Amounts in pounds

### COMPLETE AND ATTACH A PROCESS DESCRIPTION SUMMARY

### DESIGN AND OPERATING STANDARDS

1. Are the containment buildings completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (e.g., precipitation, wind, run-on), and to ensure containment of managed wastes? [OAC 3745-205-101(A)(1)] Yes  No  N/A  RMK# 1
2. Are the floor and containment walls of the unit, including the secondary containment system, designed and constructed of materials of sufficient strength and thickness to: [OAC 3745-205-101(A)(2)] Yes  No  N/A  RMK#
- a. Support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit? Yes  No  N/A  RMK# 1
- b. Prevent failure due to pressure gradients, settlement, compression, or uplift? Yes  No  N/A  RMK# 1
- c. Prevent failure due to physical contact with the wastes to which they are exposed? Yes  No  N/A  RMK# 1
- d. Prevent failure due to climatic conditions? Yes  No  N/A  RMK# 1
- e. Prevent failure due to stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls? Yes  No  N/A  RMK# 1
3. Is the unit designed so that it has sufficient structural strength to prevent collapse or other failure? Yes  No  N/A  RMK# 1

### NOTE:

- A. *DHWM will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of containment buildings.*
- B. *An exemption to the structural strength may be made for lightweight doors and windows if appropriate to the nature of waste management operation to take place in the unit. The lightweight doors and windows must meet the criteria in OAC rule 3745-205-101(A)(2)(a)-(b).*

4. Is incompatible hazardous waste or treatment reagents placed in the unit or its secondary containment system that could cause the unit or secondary containment system to leak, corrode, or otherwise fail [3745-205-101(A))(3)? Yes  No  N/A  RMK# 1
5. Does the containment building have a primary barrier: [OAC 3745-205-101(A)(4)]
- a. Designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit? Yes  No  N/A  RMK# 1
- b. Appropriate for the physical and chemical characteristics of the waste to be managed? Yes  No  N/A  RMK# 1
6. Is the containment building used to manage hazardous waste containing free liquids or treated with free liquids? If so, has the owner/operator included: [OAC 3745-205-101(B)]
- a. A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (i.e., geomembrane covered by a concrete wear surface)? Yes  No  N/A  RMK#
- b. A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building? Yes  No  N/A  RMK#
- i. Is the primary barrier sloped to drain liquids to the associated collection system? Yes  No  N/A  RMK#
- ii. Are liquids and waste collected and removed to minimize hydraulic head on the containment system at the earliest practicable time? Yes  No  N/A  RMK#
- c. A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time? Yes  No  N/A  RMK#
- i. Is the leak detection component constructed with a bottom slope of 1% or more? Yes  No  N/A  RMK#

- ii. Is the leak detection component constructed of a granular drainage material with a hydraulic conductivity of  $1 \times 10^{-2}$  cm/sec or more and a thickness of twelve inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with transmissivity of  $3 \times 10^{-5}$  m<sup>2</sup>/sec or more? Yes  No  N/A  RMK#
- d. If treatment is to be conducted in the buildings, is an area in which such treatment will be conducted designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building? Yes  No  N/A  RMK#
- e. Is the secondary containment system constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building? Yes  No  N/A  RMK#

**NOTE:** *Under certain conditions, containment buildings may serve as secondary containment systems for tanks placed within the building. A containment building may serve as an external liner system for a tank, provided it meets the requirements of OAC rule 3745-55-93(E)(1). In addition, the containment building shall meet the requirements of OAC rule 3745-55-93(B), (C)(1) and (C)(2) to be considered an acceptable secondary containment system for a tank.*

7. Are there existing units other than 90-day generator units? If so: [OAC 3745-205-101(B)(4)] Yes  No  N/A  RMK#
- a. Did the owner/operator provide written notice to the director of their request? If so: Yes  No  N/A  RMK#
- i. Did the notification describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment? Yes  No  N/A  RMK#
- b. Did the owner/operator respond within 30 days to any comments from the director on these plans? Yes  No  N/A  RMK#
- c. Did the owner/operator fulfill the terms of the revised plan approved by the director? Yes  No  N/A  RMK#

8. Does the owner/operator of all containment buildings use controls and practices to ensure containment of hazardous waste within the unit? And at a minimum do the following: [OAC 3745-205-101(C)]

Yes \_\_\_ No  N/A \_\_\_ RMK# \_\_\_

a. Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier?

Yes \_\_\_ No  N/A \_\_\_ RMK# 1

b. Maintain the level of stored/treated hazardous waste within the containment walls of unit so that the height of any containment is not exceeded?

Yes  No  N/A \_\_\_ RMK# \_\_\_

c. Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste?

Yes  No  N/A \_\_\_ RMK# \_\_\_

d. Designate an area to decontaminate equipment, and collect and properly manage any rinseate?

Yes  No  N/A \_\_\_ RMK# \_\_\_

e. Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions?

Yes  No  N/A \_\_\_ RMK# \_\_\_

9. Has the owner/operator obtained certification by a qualified registered professional engineer that the containment building design meets the requirements of OAC rule 3745-205-101(A) to (C)(4)?

Yes \_\_\_ No  N/A \_\_\_ RMK# \_\_\_

a. For units placed into operation prior to the effective date of OAC rule 3745-205-101 (December 7, 2000), did the owner/operator place the certification in the facility's operating record?

Yes \_\_\_ No  N/A  RMK# \_\_\_

b. For units placed into operation after the effective date of OAC rule 3745-205-101, did the owner/operator obtain certification prior to operation of the unit?

Yes  No  N/A \_\_\_ RMK# \_\_\_

10. Did the owner/operator promptly repair any condition that could lead to or cause a release of hazardous waste in accordance with the following procedures:

a. Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) did the owner/operator:

i. Enter a record of the discovery in the facility's operating record?

Yes  No  N/A \_\_\_ RMK# 2

- ii. Immediately remove from service the containment building affected by the condition? Yes  No  N/A  RMK# 2
- iii. Determine that steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs? Yes  No  N/A  RMK# 2
- iv. Within seven days after the discovery of the condition, notify the director of the condition, and within 14 working days, provide a written plan to the director with a description of the steps taken to repair the containment building and with the schedule for accomplishing the work? Yes  No  N/A  RMK# 2
11. Upon completing all repairs and cleanup, did the owner/operator notify the director in writing and provide verification, signed by a qualified registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with OAC rule 3745-205-101(C)(3)(a)(iv) [OAC 3745-2050101(C)(3)(c)]? Yes  No  N/A  RMK# 2
12. Did the owner/operator, at least once every seven days, in order to detect signs of releases of hazardous waste, inspect and record in the facility's operating record, data gathered from [3745-205-101(C)(4)]:
- a. Monitoring equipment? Yes  No  N/A  RMK#
- b. Leak detection equipment? Yes  No  N/A  RMK#
- c. The containment building? Yes  No  N/A  RMK#
- d. The area immediately surrounding the containment building? Yes  No  N/A  RMK#
13. For containment buildings that contain both areas with secondary containment and without secondary containment, did the owner/operator: [OAC 3745-205-101(D)]
- a. Design and operate each area in accordance with the requirements of OAC rule 3745-205-101(A) to (C)(4)? Yes  No  N/A  RMK#

b. Take measures to prevent the releases of liquids or wet materials into areas without secondary containment?

Yes \_\_\_ No  N/A  RMK# \_\_\_

c. Maintain in the facility's operating record a written description of the operating procedures used to maintain the integrity of area without secondary containment?

Yes \_\_\_ No  N/A  RMK# \_\_\_

## CLOSURE AND POST-CLOSURE

1. Did the owner/operator close the containment building? If so: [OAC 3745-205-102(A)]

Yes \_\_\_ No  N/A \_\_\_ RMK# \_\_\_

a. Did the owner/operator remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste or leachate?

Yes \_\_\_ No  N/A  RMK# \_\_\_

b. Manage all waste generated by removal or containment as hazardous waste unless paragraph (D) of OAC rule 3745-51-03 applies?

Yes \_\_\_ No  N/A  RMK# \_\_\_

2. Does the closure plan, closure activities, cost estimate for closure, and financial responsibility for containment buildings meet all of the requirements specified in OAC rules 3745-55-10 to 3745-55-20 and 3745-55-40 to 3745-55-51? [OAC 3745-205-102(A)]

Yes  No  N/A \_\_\_ RMK# \_\_\_

3. Did the owner/operator find that not all contaminated subsoils can be practically removed or decontaminated after making all reasonable efforts required by OAC 3745-205-102(A)? If so: [OAC 3745-205-102(B)]

Yes \_\_\_ No \_\_\_ N/A  RMK# \_\_\_

a. Did the owner/operator close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills (see OAC rule 3745-57-10)?

Yes \_\_\_ No  N/A  RMK# \_\_\_

## REMARKS

#1. A portion of the floor of the RMSB has failed ("bubbled up") for an unknown reason.

#2. MVC has not yet determined if waste has been released from the portion of the floor that has "bubbled up". That portion of the floor has been cordoned off and is not currently in use. MVC is getting quotes from companies who can investigate the cause of the failure, determine if waste has been released, and repair the floor. MVC must notify the Director of the discovery of the damaged floor.