



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

Eval 000
Ent 003

October 10, 2012

Mr. James Shaw
Norcold, Inc.
1 Century Drive
Gettysburg, OH 45328

**RE: Notice of Violation/Partial Return to Compliance
Norcold Inc., OHD982616229**

Dear Mr. Shaw:

On September 20, 2012, I performed an inspection to determine Norcold Inc.'s compliance with Ohio's hazardous waste rules as found in Chapter 3734. of the Ohio Revised Code (ORC) and Chapter 3745. of the Ohio Administrative Code (OAC). As is our practice, my inspection was unannounced. Our inspection began with a review of your processes and the wastes generated. See the enclosed "process description summary" for my understanding of your processes and waste management practices. Our physical inspection focused on the waste storage areas, the discharge cabinet unit and its associated hazardous waste tank and the ancillary piping. We also inspected all of the locations where waste is managed under the satellite accumulation area rules. We finished up with a review of employee training records, manifests and the contingency plan. You provided, by email, copies of your hazardous waste tank certification because I had additional questions about its design. You provided photocopies of the land disposal restrictions notice and certification for two waste streams for my review at a later time.

I found violations of the following hazardous waste rules.

- 1) Small quantity handlers (SQH) of universal waste lamps must manage them properly:** OAC 3745-273-13(D)(1) requires that a small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

- 2) **SQHs must manage universal waste lamps in packages that are labeled:** OAC 3745-273-14(E) requires that SQHs manage universal waste lamps in containers that are labeled or marked clearly with one of the following phrases: "Universal Waste-Lamps(s)" or "Waste Lamp(s)" or "Used Lamps". The rules do not allow alternate wording.

We saw six partial cardboard boxes of used fluorescent lamps propped against the wall. Some of the lamps were protruding from the boxes and not all of the boxes were properly labeled.

☞ Later on, we returned to the area and workers were in the process of repackaging the lamps and marking the boxes. No further actions are required by you to abate these two violations.

I should also remind you that OAC 3745-273-15 requires that SQHs accumulate universal waste lamps for not longer than one year unless a longer accumulation time is necessary to facilitate the proper recycling or disposal. You are also required to demonstrate in some manner that no single lamp has been accumulated for longer than one year.

- 3) **Standards for external liner systems for hazardous waste tanks:** OAC 3745-66-93(E)(1)(f) requires that external concrete liners that function as the secondary containment for a tank used to manage hazardous waste must be equipped with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete.

Norcold manages D007 waste drained from the refrigeration unit in a 3,000 gallon tank. The tank is placed in a concrete berm that serves as secondary containment. The concrete appeared to be bare and the engineer's certification (item #10, page 3) confirms that the concrete is not coated.

☞ To correct these violations, you must devise an appropriate way to provide secondary containment around your hazardous waste tank. Since Norcold has chosen to manage waste in a stand-alone plastic tank, your option is limited to an external liner. I should make you aware that our rules would also allow a buried tank completely encased in a vault or alternately a double-walled tank. If you choose to continue using a concrete secondary containment, you also have an option of using an appropriate liner such as a plastic insert. Of course, the option to apply a concrete coating is also available.

The liner must be capable of preventing migration of the waste into the concrete. Your waste is an aqueous ammonia solution that is characterized as D007. Put

most simply, you must choose a liner (or a concrete coating) that is impermeable to the aqueous ammonia and that prevents migration of hexavalent chromium, Cr(VI), into the concrete.

- 4) **Leak detection system:** OAC 3745-66-93(C)(3) requires that secondary containment systems must be provided with a leak detection system that is designed and operated so that it will detect a failure of either the primary and secondary containment systems or a release of accumulated liquid in the secondary containment system. The rule specifies that the leak must be detected in 24 hours.

The following is a summary of the federal and state (Ohio) interpretation of this rule: For tanks managing hazardous waste that are provided secondary containment in the form of an external liner, there must be a physical separation (interstitial space) between the primary and secondary containment which is able to be monitored. The rules require that any liquids leaking from the primary containment be detected within twenty-four hours. The rules do not specify the detection method—electrical conductivity measurements, an interrupted light beam that triggers a signal, visual inspection, etc., could be used.

Norcold has implemented a secondary containment system in the form of an external liner. The detection method is a visual inspection. The tank is cylindrical in shape with one of the flat-ends on the bottom and the engineer's certification of the tank system apparently shows that the tank is resting directly on the floor. It is not supported by a framework. I have determined that the existing leak detection system is not robust enough to detect a release from the bottom of the tank that flows through a penetration in the secondary containment. Such a leak could continue for an indefinite period of time and yet never result in a visible accumulation of liquid.

☞ Within 30 days of receipt of this letter, please submit in writing a description of the method Norcold has chosen to satisfy the leak detection requirement in OAC 3745-66-93(C)(3). The letter should also provide a schedule for implementation of the leak detection system that you have chosen. If additional time is needed to make this decision, please submit a request for this additional time along with justification. I am available to meet with you at any time to discuss the resolution of this violation. As long as progress is being made, it is not my intention to pursue further enforcement action. That being said, the violation will remain outstanding until the final remedy is in place and has been determined to be compliant.

Mr. James Shaw
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Enclosed you will find a copy of the LQG checklist, a process description summary, an LDR checklist and a universal waste checklist. Please call me at (937) 285-6090 if you have any questions about this letter or if I can assist you in any way.

Sincerely,



Tom Ontko
Hazardous Waste Inspector
Division of Materials and Waste Management

TO/tf

Enclosures

cc: files

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.

**LARGE QUANTITY GENERATOR REQUIREMENTS
COMPLETE AND ATTACH A PROCESS DESCRIPTION SUMMARY**

CESQG: =100 Kg. (Approximately 25-30 gallons) of waste in a calendar month or < 1 Kg. of acutely hazardous waste.
 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.

Safety Equipment Used:

GENERAL REQUIREMENTS

1.	Have all wastes generated at the facility been adequately evaluated? [3745-52-11]	Yes	
2.	Are records of waste determination being kept for at least 3 years? [3745-52-40(C)]	Yes	
3.	Has the generator obtained a U.S. EPA identification number? [3745-52-12]	Yes	
4.	Were annual reports filed with Ohio EPA on or before March 1 st ? [3745-52-41(A)]	Yes	
5.	Are annual reports kept on file for at least 3 years? [3745-52-40(B)]	Yes	
6.	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)]	No	
7.	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)]	No	
8.	Does the generator accumulate hazardous waste?	No	

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.

9.	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)?		
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NOTE: If F006 waste is generated and accumulated for > 90 days and is recycled see 3745-52-34(G)&(H).

10.	Does the generator treat hazardous waste in a: [ORC 3734.02(E)&(F)]	
	a. Container that meets 3745-66-70 to 3745-66-77?	N/A
	b. Tank that meets 3745-66-90 to 3745-66-100 except 3745-66-97(C)?	N/A
	c. Drip pads that meet 3745-69-40 to 3745-69-45?	N/A
	d. Containment building that meets 3745-256-100 to 3745-256-102? Norcold does not treat hazardous waste.	N/A

NOTE: Complete appropriate checklist for each unit.

NOTE: If waste is treated to meet LDRs, use LDR checklist.

11.	Does the generator export hazardous waste? If so:	No
	a. Has the generator notified U.S. EPA of export activity? [3745-52-53(A)]	N/A
	b. Has the generator complied with special manifest requirements? [3745-52-54]	N/A
	c. For manifests that have not been returned to the generator: has an exception report been filed? [3745-52-55]	N/A
	d. Has an annual report been submitted to U.S. EPA? [3745-52-56]	N/A
	e. Are export related documents being maintained on-site? [3745-52-57(A)]	N/A

MANIFEST REQUIREMENTS

12.	Have all hazardous wastes shipped off-site been accompanied by a manifest? (U.S. EPA Form 8700-22) [3745-52-20(A)(1)]	Yes
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13.	Have items (1) through (20) of each manifest been completed? [3745-52-20(A)(1)]&[3745-52-27(A)]	Yes
<i>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)(1)]</i>		
14.	Does each manifest designate at least one facility which is permitted to handle the waste? [3745-52-20(B)]	Yes
<i>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)]</i>		
15.	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)]	N/A
16.	Have the manifests been signed by the generator and initial transporter? [3745-52-23(A)(1)&(2)]	Yes
<i>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 waste they generate.</i>		
17.	If the generator received a rejected load or residue, did the generator:	
	a. Sign item 20 of the new manifest or item 18c of the original manifest? [3745-52-23(F)(1)]	N/A
	b. Provide the transporter a copy of the manifest? [3745-52-23(F)(2)]	N/A
	c. Send a copy of the manifest to the designated facility that returned the shipment with 30 days after delivery of the rejected shipment? [3745-52-23(F)(3)]	N/A
18.	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)]	N/A
19.	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)]	N/A
20.	Are signed copies of all manifests and any exception reports being retained for at least three years? [3745-52-40]	Yes
<i>NOTE: A generator who sends a shipment of hazardous waste to a TSD facility with the understanding that the TSD facility can accept and manage the waste and later receives that shipment back as a rejected load or residue may accumulate the waste on-site for <90 days or <180 days depending on the amount of hazardous waste on-site in that calendar month. [3745-52-34(M)]</i>		
<i>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.</i>		
PERSONNEL TRAINING		
21.	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
22.	Does the personnel training program, at a minimum, include instructions to ensure that facility personnel are able to respond effectively to emergencies involving hazardous waste by familiarizing them with emergency procedures, emergency equipment and emergency systems (where applicable)? [3745-65-16(A)(3)]	Yes
<i>NOTE: For facility employees that receive emergency response training pursuant to OSHA regulations, the facility is not required to provide separate emergency response training, provided that the overall facility training meets all the requirements of OAC 3745-65-16(A). [3745-65-16(A)(4)]</i>		
23.	Is the personnel training program directed by a person trained in hazardous waste management procedures? [3745-65-16(A)(2)]	Yes
24.	Do new employees receive training within six months after the date of hire (or assignment to a new position)? [3745-65-16(B)]	Yes

25.	Does the generator provide refresher training to employees during each period from January 1 st to December 31 st and does each training occur within 15 months after the previous training? [3745-65-16(C)]	Yes	<input type="checkbox"/>
26.	Does the generator keep records and documentation of:		
	a. Job titles? [3745-65-16(D)(1)]	Yes	<input type="checkbox"/>
	b. Job descriptions? [3745-65-16(D)(2)]	Yes	<input type="checkbox"/>
	c. Type and amount of training given to each person? [3745-65-16(D)(3)]	Yes	<input type="checkbox"/>
	d. Completed training or job experience required? [3745-65-16(D)(4)]	Yes	<input type="checkbox"/>
27.	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	<input type="checkbox"/>

Norcold holds annual employee training every November.

Job Performed	Name of Employee	Date Trained

CONTINGENCY PLAN

28.	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	<input type="checkbox"/>
29.	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	<input type="checkbox"/>
	b. Arrangements with emergency authorities? [3745-65-52(C)]	Yes	<input type="checkbox"/>
	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)]	Yes	<input type="checkbox"/>
	d. A list of all emergency equipment, including: location, a physical description and brief outline of capabilities? [3745-65-52(E)]	Yes	<input type="checkbox"/>
	e. An evacuation plan for facility personnel where there is possibility that evacuation may be necessary? [3745-65-52(F)]	Yes	<input type="checkbox"/>

NOTE: If the facility already has a "Spill Prevention, Control and Countermeasures Plan" under 40 CFR Part 112 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. The facility may develop one contingency plan which meets all regulatory requirements. Ohio EPA recommends that the plan be based on the "National Response Team's Integrated Contingency Plan Guidance (One Plan)." [3745-65-52(B)]

30.	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	<input type="checkbox"/>
31.	Has the generator revised the plan in response to rule changes, facility, equipment and personnel changes, or failure of the plan? [3745-65-54]	No	<input type="checkbox"/>
32.	Is an emergency coordinator available at all times (on-site or on-call)? [3745-65-55]	Yes	<input type="checkbox"/>

EMERGENCY PROCEDURES

33.	Has there been a fire, explosion or release of hazardous waste or hazardous waste constituents since the last inspection? If so:	No	<input type="checkbox"/>
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a.	Was the contingency plan implemented? [3745-65-51(B)]	N/A
b.	Did the facility follow the emergency procedures in 3745-65-56(A) through (H)?	N/A
c.	Did the facility submit a report to the Director within 15 days of the incident as required by 3745-65-56(I)?	N/A

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

34.	Is the facility operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous waste? [3745-65-31]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	Does the generator have the following equipment at the facility, if it is required due to actual hazards associated with the waste:					
a.	Internal communications or alarm system? [3745-65-32(A)]	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A <input type="checkbox"/>
b.	Emergency communication device? [3745-65-32(B)]	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A <input type="checkbox"/>
c.	Portable fire control, spill control and decon equipment? [3745-65-32(C)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Water of adequate volume/pressure per documentation or facility rep? [3745-65-32(D)]	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: Verify that the equipment is listed in the contingency plan.

36.	Is emergency equipment tested (inspected) as necessary to ensure its proper operation in time of emergency? [3745-65-33]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37.	Are emergency equipment tests (inspections) recorded in a log or summary? [3745-65-33]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	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	<input type="checkbox"/>	No	<input type="checkbox"/>	N/A <input type="checkbox"/>
39.	If there is only one employee on the premises, is there immediate access to a device (eg. phone, and hand held two-way radio) capable of summoning external emergency assistance (unless not required under 3745-65-32)? [3745-65-34(B)]	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	Is adequate aisle space provided for unobstructed movement of emergency or spill control equipment? [3745-65-35]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	Has the generator attempted to familiarize emergency authorities with possible hazards and facility layouts? [3745-65-37(A)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	Where authorities have declined to enter into arrangements or agreements, has the generator documented such a refusal? [3745-65-37(B)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SATELLITE ACCUMULATION AREA REQUIREMENTS

43.	Does the generator ensure that satellite accumulation area(s):					
a.	Are at or near a point of generation? [3745-52-34(C)(1)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Are under the control of the operator of the process generating the waste? [3745-52-34(C)(1)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Do not exceed a total of 55 gallons of hazardous waste per waste stream? [3745-52-34(C)(1)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Do not exceed one quart of acutely hazardous waste at any one time? [3745-52-34(C)(1)]	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Containers are closed, in good condition and compatible with wastes stored in them? [3745-52-34(C)(1)(a)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Containers are marked with words "Hazardous Waste" or other words identifying the contents? [3745-52-34(C)(1)(b)]	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44.	Is the generator accumulating hazardous waste(s) in excess of the amounts listed in the preceding question? If so:	No
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)]	N/A
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)]	N/A

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

45.	Has the generator marked containers with the words "Hazardous Waste?" [3745-52-34(A)(3)]	Yes	
46.	Is the accumulation date on each container? [3745-52-34(A)(2)]	Yes	
47.	Are hazardous wastes stored in containers which are:		
a.	Closed (except when adding/removing wastes)? [3745-66-73(A)]	Yes	
b.	In good condition? [3745-66-71]	Yes	
c.	Compatible with wastes stored in them? [3745-66-72]	Yes	
d.	Handled in a manner which prevents rupture/leakage? [3745-66-73(B)]	Yes	

NOTE: Record location on process summary sheets, photograph the area, and record on facility map.

48.	Is the container accumulation areas(s) inspected at least once during the period from Sunday to Saturday? [3745-66-74]	Yes	
a.	Are inspections recorded in a log or summary? [3745-66-74]	Yes	
49.	Are containers of ignitable or reactive wastes located at least 50 feet (15 meters) from the facility's property line? [3745-66-76]	N/A	
50.	Are containers of incompatible wastes stored separately from each other by means of a dike, berm, wall or other device? [3745-66-77(C)]	N/A	
51.	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)]	N/A	
52.	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)]	N/A	

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.

53.	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)]	N/A	
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NOTE: Please provide a description of the unit and documentation provided by the generator for the file 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

54.	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
55.	Does each container ≤119 gallons have a completed hazardous waste label? [3745-52-32(B)]	Yes
56.	Before off-site transportation, does the generator placard or offer the appropriate DOT placards to the initial transporter? [3745-52-33]	Yes

Norcold manages hazardous waste under the SAA rules in the following locations:

Proto-type lab manages a container of charge solution (D007)

Defoaming station manages a drum of debris contaminated with charging solution (D007)

Fuse tube station

Batch mixing room

Maintenance area—crushed aerosol cans

All the containers managed under the SAA rules were compliant.

PROCESS, WASTE, P2 SUMMARY SHEET

Facility Name: Norcold		Facility Type: LQG		Date of Inspection: September 20, 2012		EPA ID #: OHD982616229	
Waste Generated			On- or Off-Site Management		P2 Activities		
Process/Activity Generating Waste (e.g. plating bath, machining, baghouse, painting, general maintenance, etc)	Waste Description (e.g. sludge, solvent, ash, used oil, spent lamps, etc.) and EPA Waste Code, if applic.	QTY Generated per Month, Type of Accumulation (container, tank, etc) and location of waste accumulation area	Type of On-Site Treatment (recycle, wwt, etc)	Name, state, and type of activity occurring at the off-site facility.	Current P2 Activities	P2 Opportunities	
1	discharge of refrigeration units	D007 aqueous ammonia solution with chromate salts	1,100 gallon/month Managed in tank		Heritage	This is actually a re-use process as customer return refrigeration units are discharged and refurbished	
2	Debris in contact w/ discharged fluids	debris, floor sweepings contaminated with D007	2-3 drums per month		Heritage		
3	tube cleaning flux	D002	drums –none present during inspection		Heritage		
4	paint line	non-hazardous paint waste and debris	1-2 drums per month		Clean Water		

5	maintenance of hydraulic equipment	used oil	over 1 drum per month		Clean Water		
6	parts washer	hi-flash spent solvent, non-hazardous			Clean Water		
7							
8							
9							

REMARKS-GENERAL INFORMATION

General Process Information:

The Gettysburg Norcold facility manufactures gas absorption refrigeration units of the kind typically seen on RVs. The units are shipped pre-charged to the Sidney Ohio plant for final assembly. The system uses a mixture of ammonia gas, hydrogen gas, water and Cr(VI) salts. The units are not charged with the fluoorocarbons associated with home refrigerators. Norcold fabricates the components by bending, welding and painting steel tubing. Wastes from the water-based paints used are non-hazardous. A hi-flash parts washer is used that does not produce hazardous waste. Norcold generates a waste tube cleaning flux (D002) but none of this waste was being accumulated at the time of the inspection. Additionally, Norcold refurbishes old refrigeration units. The units are first drained and flushed in a discharge cabinet. Fluids (hazardous for D007, hexavalent chromium) are gravity drained from a sump in the cabinet and then pumped to a 3,000 gallon plastic tank.

Regulatory/Enforcement History (if applicable):

Additional P2 remarks and information:

Would this facility be interested in a P2 assessment? Yes* _____ No _____

*If yes, refer promptly to your district P2 coordinator. Office of Compliance Assistance and Pollution Prevention – 1-800-329-7518 or p2mail@epa.state.oh.us or www.epa.state.oh.us/ocapp/ocapp.html

Other:

**GENERATOR LDR CHECKLIST
DOES NOT APPLY TO CESQGS**

GENERAL REQUIREMENTS

1.	If LDRs do not apply, does the generator have a statement that lists how the HW was generated, why LDRs don't apply and where the HW went? [3745-270-07(A)(7)]	N/A	
2.	Did the generator determine if the HW/soil must be treated to meet the LDR treatment standard prior to disposal? Generator knowledge or testing may be used. [3745-270-07(A)(1)] If not,	Yes	
a.	Did the generator send the waste to a permitted HW TREATMENT facility? [3745-270-07(A)(1)]	N/A	

NOTE: This is done by determining if the HW /soil contains levels of constituents greater than the levels given in its LDR treatment standard in 3745-270-40. However, if a specific treatment method is given in 3745-270-40 for the HW, no determination is required [3745-270-07(A)(1)(b)]. If soil, generator can choose to have soil treated to LDR levels given in 3745-270-49 (alternative treatment levels for soils).

3.	Does the generator have documentation of how he determined whether the HW/soil meets or does not meet the LDR treatment standard in 2, above? [3745-270-07(A)(6)(a) or 3745-270-07(A)(6)(b)]	Yes	
4.	Does the generator keep the documentation required in #2, above, on-site for at least three years from the last date the HW/soil was sent on-site/off-site for treatment/disposal? [3745-270-07(A)(8)]	Yes	
5.	Does the generator generate a listed HW that exhibits a characteristic? If yes,	No	
a.	Did the generator determine if the listed HW exhibits a characteristic that is not treated under the LDR treatment standard for the listed HW? [3745-270-09(A)]	N/A	

FOR EXAMPLE: F006 that exhibits the characteristic for silver or K062 that is corrosive, D002. Review LDR treatment standard in 3745-270-40 to determine what constituents the listed HW is treated for.

6.	Did the generator determine if its characteristic HW contains underlying hazardous constituents that need to be treated? [3745-270-09(A)]	Yes	
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NOTE: This is done by evaluating which underlying hazardous constituents (UHC) are in the HW at levels above the universal treatment standards given in 3745-270-48. This requirement does not apply to high total organic carbon (i.e., contains >10% TOC) D001 wastes or listed HWs.

NOTE: Written documentation of this determination is not required.

7.	Did the generator treat his HW /soil on-site <u>to meet</u> the LDR treatment standard?	No	
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NOTE: If "Yes" see question #16.

8.	Did the generator send a one-time LDR notification form to the TSD with the first shipment to that facility? [3745-270-07(A)(2)]	Yes	
a.	If the generator chose not to make the determination of whether his waste must be treated, did he send a notice to the TSD facility with each shipment? [3745-270-07(A)(2)] If so, did the notice include:	N/A	
i.	Applicable HW codes?	N/A	
ii.	Manifest number of the first shipment to the TSD?	N/A	
iii.	A statement that conveys that the HW may or may not be subject to the LDR treatment standards and the TSD must make that determination."?	N/A	

9.	Did the generator resubmit the LDR notification form to the TSD when the HW changed or the generator used a new TSD? [3745-270-07(A)(2)]	Yes	
10.	Does the generator have a copy of the LDR notification form/notice on file? [3745-270-07(A)(2)]	Yes	
a.	Is the form/notice kept on file for three years after last HW shipped? [3745-270-07(A)(8)]	Yes	

NOTIFICATION FORM

11.	Does the LDR Notification form contain the following information:		
	a.	Manifest number of the first waste shipment to the TSD? [3745-270-07(A)(2)]	Yes
	b.	Applicable waste codes (includes characteristic codes for a listed HW if applicable)? [3745-270-07(A)(2)]	Yes
	c.	A statement that conveys that the HW is subject to LDRs and must be treated to meet LDR treatment requirements? [3745-270-07(A)(2)]	Yes
	d.	A designation whether the HW is a wastewater or non-wastewater? [3745-270-07(A)(2)]	Yes
NOTE: A wastewater contains <1% by wt. total suspended solids(TSS) and <1% by wt. TOC. If you doubt the HW is a wastewater or non-wastewater, the HW can be tested using for example, Standard Methods (SM) 160.2 for TSS, SW-846 method 9060a for TOC.			
	e.	Designation of the waste subcategory when applicable? [3745-270-07(A)(2)]	Yes
NOTE: Subcategories are found on the LDR treatment standards table under the applicable waste code. Not all HWs have subcategories			
	f.	A listing of the underlying hazardous constituents for which a characteristic waste must be treated? [3745-270-07(A)(2)]	Yes
NOTE: Not required if the waste is high TOC D001 or the TSD tests its treatment residues for all underlying hazardous constituents.			
	g.	If the HW is F001-F005 or F039, did the generator note on the LDR form what solvents or constituents, respectively, the waste contains and must be treated for? [3745-270-07(A)(2)]	N/A
NOTE: Not required if the TSD tests its treatment residues for all underlying hazardous constituents.			
PROHIBITED DILUTION			
12.	Is the HW treated by burning?		No
	If "No" go to #15.		
13.	Is the HW a metal-bearing HW?		N/A
NOTE: Generally, metal-bearing HWs contain heavy metals above TCLP levels or were listed due to the presence of metals. A list of the restricted metal-bearing HWs are given in the Appendix to 3745-270-03.			
14.	a.	Metal-bearing HWs cannot be incinerated, combusted or, blended and burned for fuel unless one of the following conditions apply. [3745-270-03(c)]	N/A
	i.	Contains > 1% TOC?	N/A
	ii.	Contains organic constituents or cyanide at levels greater than the UTS levels?	N/A
	iii.	Is made up of combustible material e.g., paper, wood, plastic?	N/A
	iv.	Has a reasonable heating value (e.g., > 5000 Btu)?	N/A
	v.	Co-generated with a HW that must be combusted?	N/A
	b.	If all responses to 14 a.i. through 14 a.v. are "No", HW is being improperly treated by dilution, violation of 3745-270-03(C). Is HW being treated by dilution?	N/A
15.	Was the HW treated by wastewater treatment?		No
	a.	Is a LDR treatment method, other than DEACT or a numerical value, specified for the waste? [3745-270-03(B) and 3745-270-40(A)(3)]	No
NOTE: If "Yes", HW is improperly being treated by dilution.			
	b.	Does the waste carry the D001 code <u>and</u> contain $\geq 10\%$ TOC?	No

	c.	Does the wastewater treatment process include a process to separate/recover the organic phase of the waste?	N/A
<i>NOTE: If the answers to b & c are "yes" and "no", respectively, waste is improperly being treated by dilution and generator is in violation of [3745-270-03(B)] and 3745-270-40(A)(3)].</i>			
<i>NOTE: A list of separation/recovery processes are given in 3745-270-42 under RORG.</i>			
GENERATOR TREATMENT			
16.		Does the generator treat to meet LDRs on-site?	No
		Did the generator treat his hazardous waste/soil on-site in a tank, container, drip pad or containment building <u>to meet</u> the LDR treatment standard?	No
		If "Yes" ...complete the rest of the checklist. If "No" ...stop...you are done.	
	a.	Does the generator have a written waste analysis plan (WAP) that describes the procedures he will follow to treat the HW/soil to the LDR treatment standard? [3745-270-07(A)(5)]	N/A
	b.	Did the generator use a detailed chemical and physical analysis of the HW/soil in order to develop the WAP? [3745-270-07(A)(5)(a)]	N/A
<i>NOTE: This is a laboratory analysis but it does not have to be kept by the generator.</i>			
	c.	Does the WAP contain all information necessary to treat the HW/soil to the LDR treatment standard? [3745-270-07(A)(5)(a)]	N/A
	d.	Does the WAP include the testing frequency of the treated HW/soil to demonstrate that the LDR treatment standard is being met? [3745-270-07(A)(5)(a)]	N/A
	e.	Does the generator keep the WAP on-site? [3745-270-07(A)(5)(b)]	N/A
	f.	Is the WAP available for the inspector's review during the inspection? [3745-270-07(A)(5)(b)]	N/A
NOTIFICATION FORM FOR GENERATOR TREATMENT			
17.	a.	Contains all information in #11 a-g above and	N/A
	b.	If the treated HW/soil is listed.....notification contains the following certification statement: "I certify under penalty of law that I personally have examined and am familiar with the waste, through analysis and testing or through knowledge of the waste, to support this certification that the waste complies with the treatment standards specified in rule 3745-270-40 to 3745-270-49 of the Administrative Code. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."	N/A
	c.	If the treated HW/soil no longer exhibits a characteristic and is no longer a HW, did the generator:	N/A
		i. Prepare a one-time notification? [3745-270-09 (D)]	N/A
		ii. Maintain a copy of the notice onsite? [3745-270-09(D)]	N/A
		iii. Include in the notification: [3745-270-09(D)]	N/A
		1. Name & address of receiving landfill?	N/A
		2. Description of HW when generated?	N/A
		3. HW code when generated?	N/A
		4. Treatability group when generated?	N/A
		5. Underlying hazardous constituents present when generated?	N/A
	iv.	Contain the certification statement as required by 3745-270-07(B)(4)?	N/A

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)]	No
2.	Did the SQUWH dilute or treat universal waste, except when responding to releases as provided in OAC rule 3745-273-17 or managing specific wastes as provided in OAC rule 3745-273-13? [3745-273-11(B)]	No
WASTE MANAGEMENT AND 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)]	N/A
4.	If batteries are contained, are the containers closed and structurally sound, compatible with the contents of the battery and lack evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(A)(1)]	N/A
5.	Are the casings of the batteries breached, not intact, or open (except to remove the electrolyte)? [3745-273-13(A)]	N/A
6.	If the electrolyte is removed or other wastes generated, has it been determined whether the electrolyte or other wastes exhibit a characteristic of hazardous waste? [3745-273-13(A)(3)]	N/A
a.	If the electrolyte or other waste is characteristic, is it managed in compliance with OAC Chapters 3745-50 through 3745-69? [3745-273-13(A)(3)(a)]	N/A
b.	If the electrolyte or other waste is not hazardous, is it managed in compliance with applicable law? [3745-273-13(A)(3)(b)]	N/A
7.	Are the batteries or containers of batteries labeled with the words "Universal Waste - Batteries" or "Waste Battery(ies)" or "Used Battery(ies)"? [3745-273-14(A)]	N/A
UNIVERSAL WASTE LAMPS		
8.	Does the SQUWH contain lamps in containers or packages that are structurally sound, adequate to prevent breakage, and 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)]	No
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)]	N/A
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 rule 3745-52-34). Crushed lamps must be transported by a registered hazardous waste transporter to a permitted hazardous waste facility using a hazardous waste manifest.		
10.	Are the lamps or containers or packages of lamps labeled with the words "Universal Waste - Lamp(s)" or "Waste Lamp(s)" or "Used Lamp(s)"? [3745-273-14(E)]	No
ACCUMULATION TIME		
11.	Is the waste accumulated for less than one year? [3745-273-15(A)]	Yes
a.	If not, is 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)]	

<i>NOTE: Accumulation is defined as date generated or date received from another handler.</i>		
12.	Is the handler able to demonstrate the length of time the universal waste has been accumulated? [3745-273-15(C)] If yes, describe below: Norcold ships universal waste lamps annually.	Yes <input type="checkbox"/>
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 <input type="checkbox"/>
RESPONSE TO RELEASES		
14.	Are releases of universal waste and other residues immediately contained? [3745-273-17(A)]	N/A
15.	Is the material released characterized? [3745-273-17(B)]	N/A
16.	If the material released is a hazardous waste, was 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 OAC Chapter 3745-52) [3745-273-17(B)]	N/A
OFF-SITE SHIPMENTS		
<i>NOTE: If a SQUWH self-transport waste, then the handler must comply with the Universal Waste transporter requirements.</i>		
17.	Are universal wastes sent to either another handler, destination facility or foreign destination? [3745-273-18(A)]	Yes
18.	Is the handler aware of DOT requirements for packaging and shipping? If no, make aware of 49 CFR 171-180.	Yes
19.	Prior to shipping universal waste off-site, does the originating handler ensure that the receiver agrees to receive the shipment? [3745-273-18(D)]	Yes
20.	Has the originating handler ever had an off-site shipment rejected by another handler or destination facility?	No
	a. If yes, did the originating handler receive the waste back or agree to where the shipment was sent? [3745-273-18(E)(2)]	N/A
21.	If a handler rejects a partial or full load from another handler, does the receiving handler contact the originating handler and discuss and do <u>one of the following</u> :	N/A
	a. Send the waste back to the originating handler or send the shipment to a destination facility (If both the originating and receiving handler agree)? [3745-273-18(F)(2)]	N/A
22.	If the handler received a shipment of hazardous waste that was not a universal waste, did the SQUWH immediately notify Ohio EPA? [3745-273-18(G)]	N/A
Notes		
We found six cardboard containers of various sizes holding universal waste lamps. The boxes were not properly marked and the flaps were not folded over.		
<i>NOTE: Violations regarding exporting universal waste to foreign destinations should be referred to U.S. EPA Region 5 because the federal counterpart provisions are not delegable to states.</i>		

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)]	No
2.	Did the SQUWH dilute or treat universal waste, except when responding to releases as provided in OAC rule 3745-273-17 or managing specific wastes as provided in OAC rule 3745-273-13? [3745-273-11(B)]	No
WASTE MANAGEMENT AND 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)]	N/A
4.	If batteries are contained, are the containers closed and structurally sound, compatible with the contents of the battery and lack evidence of leakage, spillage or damage that could cause leakage? [3745-273-13(A)(1)]	N/A
5.	Are the casings of the batteries breached, not intact, or open (except to remove the electrolyte)? [3745-273-13(A)]	N/A
6.	If the electrolyte is removed or other wastes generated, has it been determined whether the electrolyte or other wastes exhibit a characteristic of hazardous waste? [3745-273-13(A)(3)]	N/A
	a. If the electrolyte or other waste is characteristic, is it managed in compliance with OAC Chapters 3745-50 through 3745-69? [3745-273-13(A)(3)(a)]	N/A
	b. If the electrolyte or other waste is not hazardous, is it managed in compliance with applicable law? [3745-273-13(A)(3)(b)]	N/A
7.	Are the batteries or containers of batteries labeled with the words "Universal Waste - Batteries" or "Waste Battery(ies)" or "Used Battery(ies)"? [3745-273-14(A)]	N/A
UNIVERSAL WASTE LAMPS		
8.	Does the SQUWH contain lamps in containers or packages that are structurally sound, adequate to prevent breakage, and 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)]	No
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)]	N/A
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 rule 3745-52-34). Crushed lamps must be transported by a registered hazardous waste transporter to a permitted hazardous waste facility using a hazardous waste manifest.		
10.	Are the lamps or containers or packages of lamps labeled with the words "Universal Waste - Lamp(s)" or "Waste Lamp(s)" or "Used Lamp(s)"? [3745-273-14(E)]	No
ACCUMULATION TIME		
11.	Is the waste accumulated for less than one year? [3745-273-15(A)]	Yes
	a. If not, is 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)]	

<i>NOTE: Accumulation is defined as date generated or date received from another handler.</i>		
12.	Is the handler able to demonstrate the length of time the universal waste has been accumulated? [3745-273-15(C)] If yes, describe below: Norcold ships universal waste lamps annually.	Yes
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
RESPONSE TO RELEASES		
14.	Are releases of universal waste and other residues immediately contained? [3745-273-17(A)]	N/A
15.	Is the material released characterized? [3745-273-17(B)]	N/A
16.	If the material released is a hazardous waste, was 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 OAC Chapter 3745-52) [3745-273-17(B)]	N/A
OFF-SITE SHIPMENTS		
<i>NOTE: If a SQUWH self-transport waste, then the handler must comply with the Universal Waste transporter requirements.</i>		
17.	Are universal wastes sent to either another handler, destination facility or foreign destination? [3745-273-18(A)]	Yes
18.	Is the handler aware of DOT requirements for packaging and shipping? If no, make aware of 49 CFR 171-180.	Yes
19.	Prior to shipping universal waste off-site, does the originating handler ensure that the receiver agrees to receive the shipment? [3745-273-18(D)]	Yes
20.	Has the originating handler ever had an off-site shipment rejected by another handler or destination facility?	No
	a. If yes, did the originating handler receive the waste back or agree to where the shipment was sent? [3745-273-18(E)(2)]	N/A
21.	If a handler rejects a partial or full load from another handler, does the receiving handler contact the originating handler and discuss and do <u>one of the following</u> :	N/A
	a. Send the waste back to the originating handler or send the shipment to a destination facility (If both the originating and receiving handler agree)? [3745-273-18(F)(2)]	N/A
22.	If the handler received a shipment of hazardous waste that was not a universal waste, did the SQUWH immediately notify Ohio EPA? [3745-273-18(G)]	N/A
Notes		
We found six cardboard containers of various sizes holding universal waste lamps. The boxes were not properly marked and the flaps were not folded over.		
<i>NOTE: Violations regarding exporting universal waste to foreign destinations should be referred to U.S. EPA Region 5 because the federal counterpart provisions are not delegable to states.</i>		

LQG TANK SYSTEM REQUIREMENTS (OAC rule 3745-52-34(A) and OAC rules 3745-66-90 through 3745-66-100)

(Please refer to the rules before or while completing this checklist.)

1.	Is each tank clearly labeled/marked with the words "Hazardous Waste?" [3745-52-34(A)(3)]	Yes	<input type="checkbox"/>
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TANK SYSTEM – GENERAL OPERATING REQUIREMENTS

2.	Does the o/o follow the general operating requirements below:		
a.	Does the o/o prevent placement of hazardous waste or treatment reagents in tank or secondary containment if such placement can cause the system to leak, rupture, corrode, or otherwise fail? [3745-66-94(A)]	Yes	<input type="checkbox"/>
b.	Does the o/o use appropriate controls to prevent spills or overflows from the system (e.g., check valves, dry disconnect couplings, high level alarms, etc.)? [3745-66-94(B)]	Yes	<input type="checkbox"/>
c.	If a leak or spill has occurred in the tank system, has the o/o complied with 3745-66-96? [3745-66-94(C)]	N/A	<input type="checkbox"/>

TANK SYSTEM – INSPECTION REQUIREMENTS

3.	Has the o/o documented the inspections required in 3745-66-95, in the operating record, including inspection of the following:		
a.	Data from leak detection equipment each operating day? [3745-66-95(A)]	Yes	<input type="checkbox"/>
b.	Spill control equipment each operating day? [3745-66-95(B)(1)]	Yes	<input type="checkbox"/>
c.	Above ground portion of tank each operating day? [3745-66-95(B)(2)]	Yes	<input type="checkbox"/>
d.	Construction materials and area immediately surrounding the tanks for signs of erosion or release of hazardous waste each operating day? [3745-66-95(B)(3)]	Yes	<input type="checkbox"/>

NOTE: "Each operating day" is each day that the tank system is being used to manage (store or treat) hazardous waste.

4.	For tank systems using leak detection systems to alert facility personnel to leaks or implementing established workplace practices to ensure leaks are promptly identified, has the o/o documented: [3745-66-95(C)]		
a.	Inspections of spill control equipment weekly?	Yes	<input type="checkbox"/>
b.	Inspections of above ground portion of tank weekly?	Yes	<input type="checkbox"/>
c.	Inspections of construction materials and area immediately surrounding the tanks for signs of erosion or release of hazardous waste weekly?	Yes	<input type="checkbox"/>
d.	Use of the alternate inspection schedule, including a description of the established workplace practices at the facility?	N/A	<input type="checkbox"/>
5.	For ancillary equipment NOT provided with secondary containment, has the o/o documented inspections of such equipment each operating day? [3745-66-95(E)]		Yes <input type="checkbox"/>
6.	Where applicable, did the o/o inspect the cathodic protection system to confirm proper operation within six months of initial installation and annually thereafter? [3745-66-95(F)(1)]		N/A <input type="checkbox"/>
7.	Where applicable, did the o/o inspect all sources of impressed current at least bi-monthly? [3745-66-95(F)(2)]		N/A <input type="checkbox"/>

TANK SYSTEM CLOSURE REQUIREMENTS

8.	If the o/o has closed a <90 day tank, was closure completed in accordance with OAC 3745-66-97 (except for paragraph C)?	N/A	<input type="checkbox"/>
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TANK SYSTEMS STORING IGNITABLE OR REACTIVE WASTES		
9.	For tanks used to treat or store ignitable or reactive wastes, has the o/o complied with one of the following: [3745-66-98(A)]	N/A
a.	Is the waste treated immediately after placement in the tank so that the resultant mixture is no longer ignitable or reactive and the o/o has conducted such activities in compliance with 3745-66-17(B)? [3745-66-98(A)]; or	N/A
b.	Is the waste stored or treated to protect it from materials or conditions which may cause ignition or reaction? [3745-66-98(A)]; or	N/A
c.	The tank is used solely for emergencies? [3745-66-98(A)]	N/A
10.	If ignitable or reactive waste is stored or treated, are protective distances maintained between waste management areas and any public streets, alleys or adjoining property lines as required by the NFPA Flammable and Combustible Liquids Code (2008)? [3745-66-98(B)]	N/A
11.	Has the o/o placed incompatible wastes or materials into the same tank system, or into a tank system that has not been decontaminated and which previously held an incompatible waste or material? [3745-66-99(A) and/or (B)]	No
a.	If so , have the requirements of 3745-65-17(B) been met? [3745-66-99(A) and/or (B)]	N/A
TANK SYSTEM – WASTE ANALYSIS REQUIREMENTS		
12.	In addition to conducting the waste analysis required by 3745-65-13, when the tank system is used to store or treat a waste which is substantially different or uses a substantially different process than previously used, has the o/o done one of the following: [3745-66-100]	N/A
a.	Conducted waste analysis and trial treatment or storage tests? [3745-66-100(A)]; OR	N/A
b.	Obtained written documentation on similar waste under similar operating conditions to show that the proposed storage/treatment will meet the requirements of OAC 3745-66-94? [3745-66-100(B)]	N/A
TANK SYSTEMS REQUIREMENTS		
13.	Is there a written assessment attesting that the design, installation and structural integrity of the system is adequate for the management of hazardous waste(s)? [3745-66-92(A)]	Yes
<i>NOTE: You should review the file to see if the written assessment has been previously reviewed and what the results were.</i>		
14.	Does the written assessment include the following: [3745-66-92(A)]	
a.	Certification by a qualified professional engineer? [3745-66-92(A)]	Yes
b.	Consideration of the design standards of the system? [3745-66-92(A)]	Yes
c.	Consideration of the hazardous characteristics of the waste(s)? [3745-66-92(A)]	Yes
d.	An evaluation by a corrosion expert (only if the external system/components are metal and in contact with soil or water)? [3745-66-92(A)]	N/A
e.	A determination of design and operational measures that will be needed to protect the tank system from potential damage (only for underground tank components)? [3745-66-92(A)]	N/A
f.	Design considerations to ensure that the tank foundations will maintain the load of a full tank? [3745-66-92(A)]	Yes
g.	Design considerations for anchoring the unit to prevent floatation (only for tanks situated in a seismic fault zone or saturated zone)? [3745-66-92(A)]	N/A

	h.	Design considerations to ensure that the tank system will withstand the effects of frost heave (only for underground tank systems)? [3745-66-92(A)]	N/A	
<i>NOTE: CO-DHWM Engineering staff are available to assist you with evaluation of the written assessment.</i>				
15.		Are there written statements by those persons who supervised installation or certified design of the new tank system, that the tank system was properly installed and designed and that required repairs were performed? [3745-66-92(G)]	Yes	
		Do the written statements address all of the following:		
	a.	Inspection for damage and/or inadequate construction and installation was conducted? [3745-66-92(B)]	Yes	
	b.	Statement that deficiencies were corrected before the tank system was covered or put into use? [3745-66-92(B)]	Yes	
	c.	Proper backfilling? [3745-66-92(C)]	N/A	
	d.	Tightness test; if the tank system was found not to be tight, does the statement indicate that proper repairs were made? [3745-66-92(D)]	N/A	
	e.	Proper support and protection of ancillary equipment? [3745-66-92(E)]	Yes	
	f.	Supervision of the installation of field fabricated corrosion protection? [3745-66-92(F)]	N/A	
SECONDARY CONTAINMENT				
16.		Has secondary containment been provided? [3745-66-93(A)]	Yes	
<i>NOTE: Secondary containment must be provided for tank systems that store or treat materials that become hazardous wastes within two years after the hazardous waste listing, or when the system has reached 15 years of age, whichever comes later. [3745-66-92(A)(2)]</i>				
17.		Is secondary containment one of the following:	Yes	
	a.	An External Liner ? [3745-66-93(E)(1)] If so,	Yes	
		i. Is liner designed or operated to contain 100% of the capacity of the largest tank?	Yes	
		ii. Is liner designed and operated to prevent run-on and infiltration <u>or</u> the collection system has <u>excess</u> capacity to contain run-on and infiltration from a 25-year, 24-hour storm?	Yes	
		iii. Is liner free of cracks and gaps?	Yes	
		iv. Does liner completely surround the tank and cover all earth likely to be contacted by waste during a release?	Yes	
		v. Are chemically resistant water stops in place at all points? (concrete liners only)	Yes	
		vi. Is there a compatible interior coating or lining to prevent migration of waste into the concrete? (concrete liners only)	No	
	b.	Vault System ? [3745-66-93(E)(2)] If so,	No	
		i. Is vault system designed to contain 100% of the capacity in the largest tank?	N/A	
		ii. Is liner designed and operated to prevent run-on and infiltration <u>or</u> the collection system has <u>excess</u> capacity to contain run-on and infiltration from a 25-year, 24-hour storm?	N/A	
		iii. Are chemically resistant water stops in place at all points?	N/A	
		iv. Is there a compatible interior coating to prevent migration into the concrete?	N/A	

	v.	For ignitable or reactive waste : Is the vault system provided with means to prevent (or alternatively "protect against") the formation or ignition of vapors?	N/A
	vi.	Is vault system provided with an exterior moisture barrier?	N/A
	c.	Double-Walled Tank? [3745-66-93(E)(3)] If so,	No
	i.	Is double-walled tank designed as an integral structure to contain any release from the inner tank?	N/A
	ii.	If metal , are the primary tank interior and outer shell exterior surfaces protected from corrosion?	N/A
	iii.	Is double-walled tank provided with a continuous leak detection system able to detect a release within 24 hours or at the earliest practicable time?	N/A
	d.	An Equivalent Device? As described in 3745-66-93(D)(4) which has been approved by the director? [3745-66-93(D)&(E)]	N/A
SECONDARY CONTAINMENT DESIGN/OPERATION/INSTALLATION			
18.		Has each secondary containment system been designed, installed and operated to prevent <u>any</u> migration of wastes or liquid to the soil, groundwater, or surface water and is it capable of <u>detecting</u> and <u>collecting</u> releases and accumulated liquids? [3745-66-93(B)(1)&(2)]	Yes <input type="checkbox"/>
19.		Does the secondary containment system meet the following minimum requirements of [3745-66-93(C)]:	
	a.	Constructed or lined with compatible materials of sufficient strength to prevent failure? [3745-66-93(C)(1)]	Yes <input type="checkbox"/>
	b.	Placed on a foundation or base capable of providing support? [3745-66-93(C)(2)]	Yes <input type="checkbox"/>
	c.	Provided with a leak detection system designed/operated to detect failure to primary or secondary containment or any release of hazardous waste within 24 hours or at earliest practicable time? [3745-66-93(C)(3)]	No <input type="checkbox"/>
	d.	Sloped or designed to drain and remove liquid resulting from leaks, spills or precipitation? [3745-66-93(C)(4)]	No <input type="checkbox"/>
	e.	Any liquid which accumulates in the containment unit resulting from spills, leaks or precipitation removed within 24 hours or in a timely manner? [3745-66-93(C)(4)]	Yes <input type="checkbox"/>
ANCILLARY EQUIPMENT REQUIREMENTS			
20.		Is ancillary equipment provided with secondary containment (such as double-walled piping, jacketing or a trench)?	No <input type="checkbox"/>
		If not , is the ancillary equipment one of the following: [3745-66-93(F)]	
	a.	Above ground piping (exclusive of flanges, joints, valves and connections) that is inspected daily?	No <input type="checkbox"/>
	b.	Welded flanges, welded joints and/or welded connections that is inspected daily?	No <input type="checkbox"/>
	c.	Sealless or magnetic coupling pumps and/or sealless valves?	No <input type="checkbox"/>
	d.	Pressurized above ground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown and/or loss of pressure-actuated shut-off devices) that is inspected daily?	Yes <input type="checkbox"/>
TANK SYSTEMS FOUND TO BE LEAKING OR UNFIT FOR USE			
21.		Has there been a leak or spill from any tank system or has any tank system been found unfit for use? If so , did the o/o:	No <input type="checkbox"/>
<i>NOTE: If the tank is found to be unfit for use, inspector should explain why.</i>			
	a.	Immediately cease flow of material into tank and investigate the cause of the release? [3745-66-96(A)]	N/A <input type="checkbox"/>
	b.	Remove waste from tank system to prevent further release within 24 hours of detection or earliest practicable time? [3745-66-96(B)(1)]	N/A <input type="checkbox"/>

	c.	Remove all material released into secondary containment system within 24 hours or as timely as possible to prevent harm to human health and the environment? [3745-66-96(B)(2)]	N/A
	d.	For a visible release to the environment, immediately conduct a visual inspection of the release? [3745-66-96(C)]	N/A
	e.	For a visible release to the environment, prevent further migration of the leak or spill to soils or surface waters? [3745-66-96(C)]	N/A
	f.	For a visible release to the environment, properly dispose of any visibly contaminated soil or surface water? [3745-66-96(C)]	N/A
	g.	Report any release to the environment to the director within 24 hours unless it was less than one pound and was cleaned up immediately? [3745-66-96(D)(1)]	N/A
	h.	For a release to the environment, submit a written report of the incident to the director within 30 days of the release? [3745-66-96(D)(3)]	N/A
	i.	Remediate the spill and repair the unit prior to returning it to service? [3745-66-96(E)(2)]	N/A
	j.	For a release from a tank system without secondary containment, did the o/o provide secondary containment meeting the requirements of 3745-66-93 for the unit prior to putting it back into service? [3745-66-96(E)(4)]	N/A
NOTE: The requirements noted in 20.j. do not apply if the release was from an above ground component of the tank which can be inspected visually after being put back into service.			
	22.	In the event that the repairs to the tank system were major (e.g., replacement of liner, repair of ruptured primary or secondary containment structure), did the o/o obtain a certification from a qualified professional engineer attesting that the repaired unit is capable of handling hazardous waste? [3745-66-96(F)]	N/A
	23.	Was a copy of the certification submitted to the director within seven days after returning the system to use? [3745-66-96(F)]	N/A
	24.	If the o/o was unable to repair and return the unit to service as described in 20.a through 20.e, was the tank system closed in accordance with 3745-66-97? [3745-66-96(E)(1)]	N/A
	25.	Does the o/o have a tank system with a variance from secondary containment from which a release has occurred but <u>has not</u> migrated beyond the zone of engineering control? If so,	N/A
	a.	Has the o/o complied with 3745-66-96(A) through (F), except (D), and decontaminated soils? [3745-66-93(G)(3)]	N/A
	b.	If soils cannot be decontaminated/removed, has the o/o complied with 3745-66-97(B)? [3745-66-93(G)(3)]	N/A
	26.	Does the o/o have a tank system with a variance from secondary containment from which a release occurred and <u>has</u> migrated from the zone of engineering control? If so,	N/A
	a.	Has the o/o complied with 3745-66-96(A) through (D), prevented migration, and decontaminated soil? [3745-66-93(G)(4)]	N/A
	b.	If soils cannot be decontaminated/removed, or if the groundwater has been contaminated, has the o/o complied with 3745-66-97(B)? [3745-66-93(G)(4)]	N/A

Norcold manages hazardous waste (D007) in a 3000 gallon plastic tank located in the warehouse. The tank is hard-plumbed to the 'discharge cabinet' which captures the refrigerant mixture drained from units returned by customers. The refrigerant is pumped from a to the tank through a system of lines which are not provided with secondary containment but the lines are open to visual inspection their entire length.

The tank is a vertically-mounted cylinder standing on its flat bottom -the tank is not supported by

a framework or structure. . The tank is located in an uncoated concrete secondary containment area. The tank is equipped with overflow prevention devices and the secondary containment is equipped with an alarm triggered by a float switch.

An electronic copy of the original tank certification letter performed by QEI Engineers and dated March 29, 2002 was provided after the inspection. The certification has been determined to be compliant with the exception of the lack of coating on the concrete of the secondary containment. The compliance of the tank with the requirement of OAC 3745-66-