Ohio EPA
State of Ohio Environmental Protection Agency

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Bob Taft, Governor
Bruce Johnson, Lieutenant Governor
Joseph P. Koncelik, Director

November 14, 2005

RE: ZACLON LLC
CUYAHOGA COUNTY
OHD 004 184 768
LQG CEI NOTICE OF VIOLATION

CERTIFIED MAIL

Mr. John Curry
Quality Assurance/Compliance Regulatory Manager
Zaclon LLC
2981 Independence Road
Cleveland, Ohio 44115-3699

Dear Mr. Curry:

On August 10, 11 and 12, 2005, the Ohio EPA conducted a compliance evaluation inspection (CEI) of Zaclon LLC's (Zaclon), Cleveland, Ohio facility to determine Zaclon's compliance with Ohio's hazardous waste laws and regulations as found in the Ohio Revised Code and the Ohio Administrative Code ("ORC" and "OAC" respectively). Zaclon was represented by Joseph Turgeon, Jon Hall, James Krimmel, Joseph Busovicki and you. Suzanne Prusnek and I represented the Ohio EPA. Mitch Mathews, also with Ohio EPA was present on August 10, 2005.

Zaclon is a manufacturer of both specialty and basic chemicals. These chemicals include ammonium chloride, zinc chloride, chrome complexes, galvanizing fluxes (zinc ammonium chloride), potassium silicate, potassium acetate, and other specialty products including a rubber accelerator.

Zaclon is a large quantity generator of hazardous waste (greater than 1000 kg per month generated). The wastes generated at Zaclon include an ignitable waste (D001) from the production of the accelerator, a heavy metal (cadmium (D006) and lead (D008)) contaminated sludge from the production of zinc chloride, and a heavy metal (D006 and D008) contaminated debris from the use of SASH in the production of zinc chloride. Zaclon also generates a sludge from the production of the galvanizing fluxes currently managed as a hazardous waste for heavy metals (D006 and D008) but this waste may be recharacterized as nonhazardous due to production changes.

Ohio EPA's compliance inspection included an inspection of the facility operations and a review of written documentation. Based on this inspection, Ohio EPA has determined that Zaclon has violated at least the following state hazardous waste regulations:

Violations:

1.a. ***Establishing and operating a hazardous waste facility without a permit and storing hazardous waste without a permit, Ohio Revised Code (ORC) § 3734.02***

(E) and (F): No person shall establish or operate a hazardous waste facility for the storage, treatment, disposal of hazardous waste without a hazardous waste facility installation and operation permit issued in accordance with section 3734.05 of the Revised Code nor shall they store, treat, or dispose of hazardous waste, regardless of whether the waste was generated on or off the premises without a permit.

Zaclon has and is currently managing hazardous waste in a pile at their facility without a hazardous waste permit. At some point during the facility's past, when it was being operated by E.I. Dupont de Nemours and Company Incorporated, a pile of ash-like material which is high in zinc content (referred to as "SASH") was created to be used in the manufacture of zinc chloride. The SASH was transported to the facility on a bill of lading. The pile of SASH is located on a pad outside of BLDG. #24. Zaclon took over operations at the site in 1987. Zaclon continued to purchase SASH and place it into the existing SASH pile until 1991/92. When Zaclon purchased SASH, the SASH was assayed to determine the zinc content. Zaclon, Ohio EPA and U.S. EPA consider SASH a by-product of the galvanizing industry.

On August 22, 2001, U.S. EPA and Ohio EPA conducted a hazardous waste compliance inspection at the facility. On September 19, 2002, US EPA took ten samples of the SASH pile. In a letter dated December 17, 2002, US EPA sent the facility a copy of the Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) analytical results for the samples taken during the September 19, 2002 sampling event. The results of the TCLP test demonstrate that nine of the ten samples collected were above the regulatory level of 5.0 mg/L for lead. Six of the ten samples had cadmium levels above the regulatory level of 1.0 mg/L.

Per information available to Ohio EPA, the SASH was not used for at least six (6) years prior to a September 19, 2002 US EPA sampling event. During the August 2005 Ohio EPA inspection, Zaclon stated that they started using the SASH in the zinc chloride process again in approximately 2001.

OAC rule 3745-51-01(C)(8) states, in part, "a material is 'accumulated speculatively' if it is accumulated before being recycling. A material is not accumulated speculatively if the person accumulating the material can show that the material is potentially recyclable and has a feasible means of being recycled; and that during the calendar year, commencing January first, the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75% by weight or volume of the amount of that material accumulated at the beginning of the calendar year." By-products exhibiting a characteristic of a hazardous waste are wastes when accumulated speculatively per OAC rule 3745-51-02 (C)(4). Since Zaclon did not recycle requisite amount of the SASH for a period of several years (from 1987 through September 19, 2002), the SASH is a waste and based on analysis, the waste is a hazardous waste since the levels of both cadmium and lead exceed the regulatory level for each constituent.

Since neither US EPA nor Ohio EPA have issued a permit to Zaclon to store and/or dispose hazardous waste, Zaclon has created a hazardous waste storage and disposal unit subject to the permitting requirements and has been operating the pile without a permit in violation of ORC § 3734.02 (E) and (F) and all the applicable requirements in OAC rules 3745-56-50 through 3745-56-59.

You must immediately begin to control the run off and tracking from the waste pile pad area. Methods to achieve this may include immediate removal of the hazardous waste for appropriate off-site management or containerizing all remaining hazardous waste (SASH material). Also, you must prepare and submit for Ohio EPA's approval a closure plan in accordance with OAC rule 3745-56-58(C).

1.b. Zaclon stored and disposed hazardous waste (baghouse dust) in a waste pile without a permit. U.S. EPA noted during the August 22, 2001 inspection, baghouse dust was being managed on a ledge several feet away from the SASH pile. On September 19, 2002, US EPA took five samples of the baghouse dust. In a letter dated December 17, 2002, US EPA sent the facility a copy of the Method 1311, Toxicity Characteristic Leaching Procedure analytical results for the samples taken during the September 19, 2002 sampling event. The results of the TCLP test indicate that three of the five samples collected were above the regulatory level of 5.0 mg/L for lead. Four of the five samples had cadmium levels above the regulatory level of 1.0 mg/L.

The baghouse dust meets the definition of a sludge per OAC rule 3745-51-01 (C)(2). The material was on site for at least six years and was accumulated speculatively. Since the baghouse dust is a waste and exhibited a characteristic, Zaclon managed/disposed of a hazardous waste without a permit, **in violation of ORC § 3734.02(E) and (F).**

Per Zaclon, since US EPA's 2001 inspection all of the baghouse dust has been consumed in the process at Zaclon and the area where it was stored is no longer being used for storage of hazardous waste. You must also prepare and submit for Ohio EPA's approval a closure plan in accordance with OAC rule 3745-56-58(C).

1.c. Zaclon receives and stores hazardous waste spent stripping acid from off-site facilities. As noted above, Zaclon does not hold a hazardous waste permit. The stripping acid is stored in two tanks at the facility prior to use. To use the stripping acid, Zaclon must put the acid through a two step reclamation process. During the August 2005 inspection, the Zaclon representatives told Ohio EPA that if raw materials were used in the process, these reclamation steps would not be necessary. The stripping acid does not meet the requirements set forth in OAC rule 3745-51-02(E)(1)(a) since it is not directly used or reused in an industrial process to make a product without being reclaimed.

Zaclon therefore needs to either put this hazardous waste directly into the reclamation portion of the system without any prior storage, cease receiving this spent stripping acid hazardous waste permanently, or cease receiving this spent stripping acid hazardous

waste until Zaclon obtains a hazardous waste installation and operation permit which allows you to receive and store hazardous waste in these tanks.

Please submit a revised copy of the "Flow Sheet for the Overall Zinc Products" and the "Stripping Acid Processing Operation Steps" since these have changed from the copy submitted to Ohio EPA in 1994.

Additionally, you must submit a closure plan in accordance with OAC rule 3745-55-97 for Ohio EPA's approval for these two tanks.

1.d. Zaclon received and stored hazardous waste brass fines and rolling mill fines in the mid 1990's. On June 19, 2005 there was a fire in building #39 which involved brass fines and rolling mill fines which had been stored at Zaclon since the mid 1990's. The process which utilized these materials has not been used since the mid 1990's as well. Since the materials were either sludges (air pollution control dust) or by-products which exhibited characteristics of a hazardous waste (cadmium and lead) that were never recycled, the material was a hazardous waste.

The area where the brass fines and rolling mill fines were stored was a hazardous waste storage area. Since neither US EPA nor Ohio EPA have issued a permit to Zaclon to store hazardous waste, Zaclon has created a hazardous waste storage unit subject to the permitting requirements and operated said unit without a permit in violation of the law.

After the fire, the remnants of the hazardous waste were containerized and sent off-site for disposal as a hazardous waste. Since this storage area is subject to closure, you must submit a closure plan in accordance with OAC rule 3745-55-12.

Since Zaclon violated ORC §3734.02(E) and (F), Zaclon is subject to all applicable general facility standards found in OAC chapters 3745-54 and 55. Additionally, at any time Ohio EPA may assert its right to have Zaclon begin facility-wide cleanup pursuant to the Corrective Action process under Ohio law.

2.a. ***Waste Evaluation, OAC rule 3745-52-11:*** Any person who generates a waste 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.

During the inspection, Ohio EPA noted the following wastes which need to be properly evaluated to determine how the waste should be managed:

i. There was a one (1) gallon container in the accelerator building which was unlabeled and opened.

ii. There was a blue poly drum in the accelerator building near the hazardous waste satellite accumulation drum without a label. Ohio EPA marked this as DRUM #1.

iii. The rags and solvents used to clean at the facility. The potential contaminants and solvents getting on the rags need evaluated for all the different areas in the facility that use rags. This should be specifically documented and if necessary a hazardous waste management protocol developed.

iv. The sock filters found in a bin next to the CWZ used to filter the zinc chloride. Ohio EPA has concerns that the filters may be contaminated with heavy metals during the processing of the SASH.

v. Ohio EPA noted a red unlabeled drum and an unlabeled pail in Shop #2.

vi. There was spent oil dry by the hazardous waste roll off box in (under) BLDG #39. It was unclear as to how this waste is characterized and managed.

vii. There was a significant amount of oil dry in the accelerator building near the satellite accumulation area. Since the accelerator hazardous waste is characteristically hazardous for ignitability (D001) and benzene (D018) it needs to be determined if the floor dry exhibits any of these characteristics.

viii. Ohio EPA noted floor dry being used at both hazardous waste sludge generation points at the facility. Zaclon needs to determine if these are hazardous waste; if so, they need to determine if it can be placed in the EnviroServe roll-off boxes.

For the wastes noted above in *i* through *viii*, please document the waste characterization either through generator knowledge or analytical results. If Zaclon wants to use generator knowledge for the characterization of any of these wastes, you should include the specific MSDS and process description to substantiate the characterization.

2.b. Zaclon removes debris (wood, metal, supersacks, *etc.*) from the SASH in the waste pile as a first treatment step to make the SASH usable in the production of zinc chloride. This step generates a waste (the debris) which must be evaluated. At the time of the inspection, Zaclon was placing the debris in an unlined Waste Management roll-off box to be managed as a non hazardous waste. Zaclon representatives stated that this was the first box to be generated, previous to this, any debris remained in the waste pile.

During the inspection, Ohio EPA discussed with you various options for characterizing this waste. It is Ohio EPA's understanding that Zaclon will segregate out the scrap metal and send this off for metal recycling. The rest of the debris will be managed as characteristically hazardous debris for cadmium (D006) and lead (D008). If this is still Zaclon's intention, please confirm this in writing.

2.c Zaclon sent four (4) 20 yard roll-off boxes to Vexor in 2004. The waste was from the residue from a sulfuric acid tank and was shipped as a non-hazardous waste.

Zaclon should submit any toxicity characteristic leaching procedure (TCLP) analytical results they have for this material.

2.d During the inspection, Ohio EPA noted at least four rooms and an old laboratory in BLDG #13 which contained numerous boxes of samples and various containers of flux, chemicals and other materials. While there was too much material for Ohio EPA to conduct an exhaustive survey, the following wastes were:

i. In the first room Ohio EPA noted numerous brass samples. Per the Zaclon representative, these samples have been here for approximately four (4) or five (5) years. In this room there were at least 22 boxes with 16 and 8 ounce jars of samples. Ohio EPA also noted a box of fluorescent bulbs and 2 buckets with unknown contents.

ii. In the second room Ohio EPA noted at least 17 5-gallon pails of zinc chloride wetting solution, galvanizing zinc and flux. There were at least eleven (11) boxes of samples of zinc chloride or zinc ammonium chloride. Some of these samples had been dated 5/94 others as old as 1988. There were also at least seven 25-pound bags (five of which were open) of zinc chloride (fluxes).

iii. In the third room Ohio EPA noted at least 40 boxes of sample jars (most of the jars were 16 ounces). Other containers of material which may be samples not in boxes but sitting on the floor.

iv. In the fourth room (room with a window) Ohio EPA found at least 20 5-gallon buckets of alumina chromic oxide, galvanizing flux and zinc chloride. One box was labeled "brass dust" that contained 12 ounce jars. At least three (3) boxes of brass samples were also found in this room. The closet in this room was full of zinc chloride samples.

v. In the fifth room, which appeared to be a former laboratory, Ohio EPA specifically noted 2 1-gallon containers of "chrome complex in isopropanol" on the bench. The rest of the bench was covered with sample jars. Also noted was a 1-gallon container of formic acid; 1-gallon container of sodium hydroxide, and at least seven (7) 5-gallon buckets of what may have been zinc chloride. Also noted were five (5) 1-gallon jars of cupric chloride, more samples and 5 gallon buckets. The drawers of the lab benches were opened and these also contained jars of chemicals or samples. Ohio EPA noted a 55-gallon drum of Zaclon Galvanizing Flux which may be reusable per the Zaclon representatives.

Ohio EPA was told during the inspection that Zaclon stopped using the lab in the 1996-1998 period. There was no evidence such as footprints in the dirt on the floor that anyone had recently been in the building.

During the exit interview, Ohio EPA stated that since Zaclon obviously had no idea what was in that building, nor even now could they go into that building and easily find material to be reworked into a product, the material had been abandoned and was

therefore a waste. If Zaclon claims the material is not a waste, they must demonstrate/document it is a usable product. For example, Zaclon could go through an inventorying process to demonstrate the material is not a waste.

The first step in documenting what this waste is and how it should be managed is for Zaclon to develop an inventory, with quantities, origins of the source and current locations of the waste. Ohio EPA would then encourage Zaclon to use any of the waste found in BLDG #13 in their processes if it is a legitimate use of the waste. Even if the waste cannot be used immediately, if Zaclon does not believe it to be a waste since it has value for a specific process, then that material should be managed and stored in a manner which demonstrates that it has value to Zaclon. To do this, the inventory and storage of usable material should be such that it can be found for use when a process is restarted and document/demonstrate how it can be used. Any material that cannot be used is a waste and will need to be characterized and disposed appropriately.

2.e The most recent analytical data for the iron mud is several years old. This mud is combined with the wastewater treatment sludge and disposed of as a non-hazardous waste. Since Zaclon has changed the process, this mud needs to be re-sampled for characterization.

Zaclon must submit the waste characterization data for the iron muds, including, but not limited to, the sampling methodology documenting the sample(s) are representative, the chain-of-custody documentation of the sample and the laboratory report.

3. ***Generator Identification Number, OAC rule 3745-52-12:*** A generator may not treat, store, dispose of, transport, or offer for transportation hazardous waste without having received a U.S. EPA identification number from U.S. EPA or Ohio EPA. A generator who has not received a U.S. EPA identification number must obtain one by applying to Ohio EPA using Ohio EPA form EPA9029.

The generator identification number OHD004184768 was issued to Zaclon Inc. During the inspection Ohio EPA was told that the new operator is Zaclon LLC, which is a separate legal entity from Zaclon Inc. A "generator" is defined in OAC rule 3745-50-10(A)(45) as any person, by site, whose act or process produces hazardous waste as identified or listed in Chapter 3745-51 of the Administrative Code or whose act first causes a hazardous waste to become subject to the hazardous waste rules.

While it is true that the same identification number will be issued to Zaclon LLC that was issued to Zaclon, Inc., Zaclon LLC still needs to complete EPA Form9029 to switch the number to the appropriate owner. You can renotify and have the hazardous waste identification number assigned to Zaclon LLC by going to the following web site and following the instructions for the Notification of Regulated Waste Activity form: http://www.epa.state.oh.us/dhwm/notiform.html .

4. ***Annual Report, OAC rule 3745-52-41(A)(5):*** A generator who ships any hazardous waste off site must prepare and submit to Ohio EPA the "Annual Hazardous Waste

Report" by March 1st of each year. The report must include, in part, a description, EPA hazardous waste number (from rules 3745-51-20 to 3745-51-24 or 3745-51-30 to 3745-51-35 of the Administrative Code), U.S. DOT hazard class and quantity of each hazardous waste shipped off site to a treatment, storage or disposal facility.

Zaclon reported shipping 900 pounds of outdated chemicals from a lab clean-out (7/15/04) from BLDG #2A to Chemtron Corp. on page 7 of the 2004 Annual Hazardous Waste Report. Per the Annual Report, the waste was characteristically hazardous for corrosivity (D002), cadmium (D006), chromium (D007) and lead (D008). A review of the manifests revealed that Chemtron had added the waste code D005 for barium upon receipt at Chemtron. This waste code should have been included for this waste stream on the Annual Hazardous Waste Report for 2004.

Zaclon must send a letter to the attention of Tammy Heffelfinger, Ohio EPA, Division of Hazardous Waste Management, Information Services Unit, P.O. Box 1049, Columbus, Ohio 43216-1049. In the letter, you must indicate that you would like to amend the Zaclon 2004 Annual Hazardous Waste Report. You must include Zaclon's identification number and the page of the report you would like to amend and what specifically needs to be amended.

A copy of this letter should be sent to me to document compliance with this regulation.

5. ***Personnel Training, OAC rule 3745-52-34(A)(4) and OAC rule 3745-65-16(D):*** The owner or operator must maintain the following documents and records at the facility:

a.) Job titles, as they relate to hazardous waste management, and the name of each employee filling each job.
b.) Job descriptions, including requisite skill, education, or other qualifications, and duties of facility personnel assigned to each person filling a position.
c.) Type and amount of both introductory and continuing training to be given to each person filling a position.
d.) Documentation that personnel have completed the training or job experience required under the rules.

While Zaclon had some of the elements noted above, they need to provide the following information to demonstrate compliance with this rule:

The name of each employee filling each job; the requisite skill, education or other qualifications for each job descriptions; a job description which includes the movement of the accelerator waste to the Quilon building for shipment and documentation that a back-up for Laura Stochl has been trained.

Additionally, the personnel training program includes an Exhibit B which is a 1986 analytical result for the filter muds. If Zaclon is going to include the waste characterization of their hazardous waste, they should include it for all waste streams and it should be kept up-to-date. Exhibit C in the personnel training should be updated

to include the zinc muds. Exhibit H should be updated to include the weekly inspection logs currently being used at the facility. If Zaclon chooses to update the weekly inspection log to include the emergency equipment, then this copy should be included. If a separate emergency equipment log is developed, that too should be included.

6. ***Personnel Training, OAC rule 3745-52-34(A)(4); OAC rule 3745-65-16(A)(2); and OAC 3745-65-16(A)(3):*** The personnel training program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste procedures, including contingency plan implementation, relevant to the positions in which they are employed. Additionally, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing hem with emergency procedures, emergency equipment and emergency systems.

   Zaclon did not include their contingency plan in the personnel training program which would include the emergency procedures, equipment and systems.

   Once Zaclon has updated their contingency plan, they must train the required facility personnel on its use and submit documentation demonstrating the personnel have been trained.

7. ***Contingency Plan Requirements, OAC rules 3745-65-52(A) through (F):*** The contingency plan must include [in part] the following elements:

   a. Actions to be taken in response to fires, explosions or any unplanned release of hazardous waste

   b. A current list of names, addresses and telephone numbers (office and home) of all persons qualified to act as emergency coordinator

   c. A list of all emergency equipment, including: location, physical description and brief outline of capabilities

   d. An evacuation plan for facility personnel where there is a possibility that evacuation may be necessary.

   Zaclon's contingency plan refers one to the plant safety manual for fire and disaster procedures and spill control plans. However, in the plant safety manual, there is no mention of hazardous waste. The contingency plan must be updated to include actions to be taken in response to fires, explosions or unplanned releases of hazardous waste.

   The telephone numbers for the emergency coordinators should include the area codes with the telephone numbers. Also, Jon Hall will be using his cell phone as his home telephone number and this should be noted in the plan.

The contingency plan did not include a list of emergency equipment as described above. The plan should be updated to include this information.

Zaclon did not have an evacuation plan in the contingency plan. The Zaclon representatives stated that since there are so few people and everyone knows everyone, one was not needed. Zaclon does not have a meeting point in case of an emergency. Given that the site is 35 acres on both sides of Independence Road with at least 13 buildings where personnel may be located and that some of the operations only have one employee, Ohio EPA believes Zaclon should have an evacuation plan with at least one meeting point. This way, Zaclon will know if an employee is trapped inside should a disaster occur and emergency personnel can be notified.

During the inspection, you were given a copy of an example contingency plan. On August 16, 2005, Suzanne Prusnek transmitted a WORD version of that document to you via e-mail.

Zaclon submitted a copy of their revised contingency plan to Ohio EPA and this copy was sent to me. This contingency plan will be reviewed and comments/deficiencies will be sent to you under separate cover.

8. ***Contingency Plan Requirements, OAC rule 3745-65-51(A)***: Each owner or operator shall have a contingency plan for the facility that is designed to minimize hazards to human health or the environment from fires, explosions or any unplanned sudden or non-sudden release of hazardous waste, hazard constituents to air, soil or surface water.

   Since the contingency plan did not speak to hazardous waste, it did not meet this requirement.

   Once the contingency plan has been revised to include all of the required elements, this violation will be abated.

9. ***Copies of Contingency Plan, OAC rule 3745-65-53(B):*** A copy of the contingency plan and all revisions shall be submitted to all local police departments, fire departments, hospitals, and Ohio EPA and local emergency response teams that may be requested to provide emergency services.

   Zaclon did not provide a copy of the contingency plan to the emergency services.

   Once Zaclon has updated the contingency plan, copies must be sent to the appropriate authorities. Zaclon must submit documentation demonstrating this has occurred.

10. ***Purpose and Implementation of the Contingency Plan, OAC rule 3745-65-51 (B):*** The provisions of the contingency plan shall be implemented immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

On June 19, 2005, there was a fire in building #39 which involved brass fines and rolling mill fines which had been stored at Zaclon since the mid 1990's. The process which utilized these materials has not been used for a similar length of time. Since the materials were either sludges (air pollution control dust) or by-products which exhibit a characteristic of a hazardous waste that was never recycled, the materials are a hazardous waste.

The fire department was notified and responded. Since the contingency plan did not have any actions in it to follow should there be an emergency, it would be impossible to comply with OAC rules 3745-65-56(A) through (H). The facility should have submitted a report to the Director of Ohio EPA within 15 days of the incident as required by OAC rule 3745-65-56(J).

Zaclon is already revising the contingency plan per the violations noted above. Zaclon must submit the report to the Director, even though it will be late, as required by OAC rule 3745-65-56(J). A copy must be sent to this office to document compliance with this regulation.

11. ***Maintenance/Design and Operation of Facility, OAC rule 3745-65-31/OAC rule 3745-54-31:*** Facilities shall be operated to minimize the possibility of a fire explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

The operation in the Accelerator Building where the ignitable waste is generated is not operated to minimize fire, explosion or any unplanned release of hazardous waste. The accelerator waste had filled the secondary containment pallet to the point it may be overflowing. There were significant amounts of contaminated floor dry in the satellite accumulation area. There was hazardous waste on top of the drums in the accumulation area. Finally, the most recent weekly inspection of this area (conducted on August 9, 2005) indicated that there were no problems in the area.

Zaclon must empty the secondary containment, clean up the floor dry and clean the tops of all the hazardous waste drums in the accumulation area and document this via photographs. In addition, the operator of the area needs to be trained in the proper management of hazardous waste. The person conducting the weekly inspections needs to be trained in noting these problems and ensuring that if they occur again, that the problem is addressed immediately.

Zaclon must control the ongoing releases of hazardous waste from the hazardous waste pile (SASH pile). Zaclon must containerize or somehow remove the material from the pad to eliminate the tracking, run off and wind dispersal of the hazardous waste.

Documentation (*e.g.* photographs, *etc.*) demonstrating that these waste areas are now being maintained and operated in accordance with the rule should be submitted to document compliance.

12. ***Required [Emergency] Equipment, OAC rule 3745-65-32:*** All facilities shall be equipped with internal alarm system, communication device, portable fire control, spill control and decontamination equipment and water of adequate volume/pressure.

    Zaclon did not have decontamination equipment in any of the accumulation areas.

    Zaclon must place the appropriate equipment (brooms and shovels) in the hazardous waste accumulation areas. The list of equipment must be listed in the contingency plan and a photograph demonstrating the equipment is in place shall be submitted to document compliance with this requirement.

    Note: Ohio EPA is allowing the use of a cell phone as the communication device in the accelerator building since the current one is located above the accumulation area making access to it very dangerous, if not impossible during an emergency. It is Zaclon's responsibility to ensure that the accelerator operator is trained to carry this phone at all times when he is working in the accelerator building.

13. ***Testing and Maintenance of Equipment, OAC rule 3745-65-33:*** All facility communication or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment shall be tested and maintained to assure proper operation in time of emergency. These tests shall be documented in a log or summary.

    Zaclon did not have an emergency equipment log for the communication device, spill control and decontamination equipment for any of the accumulation areas.

    Zaclon must either add the emergency equipment inspection to the weekly accumulation inspection log, or create an inspection log for the emergency equipment. While the emergency equipment log does not need to be completed weekly, if Zaclon chooses to inspect on a less stringent schedule, Zaclon must give the reasons why a less frequent schedule would be sufficient for them.

14. ***[Satellite] Accumulation Area Requirements, OAC rule 3745-52-34(C)(1)(b):*** A generator may accumulate as much as 55 gallons of hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit and without complying with paragraph (A) of OAC rule 3745-52-34 provided he marks his containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

    Several satellite containers of hazardous waste were noted not to have been marked during the inspection. These containers included:

    a. The sludge hopper in the zinc chloride building extracting the heavy metal sponge from the product

    b. The drum accumulating the accelerator waste in BLDG #14.

Zaclon must label these containers and submit photographs documenting the containers have been labeled. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

15. ***Labeling Requirements for Hazardous Waste Containers, OAC rule 3745-52-34(A)(3):*** Containers accumulating hazardous waste must be clearly marked with the words "Hazardous Waste."

The box containing the debris from the SASH pad was not marked with the words "Hazardous Waste."

Zaclon must label the box with the words "Hazardous Waste" and submit a photograph documenting compliance with this rule. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

16. ***Labeling Requirements for Hazardous Waste Containers, OAC rule 3745-52-34(A)(2):*** Containers accumulating hazardous waste must be clearly marked with the date accumulation began.

The box containing the debris from the SASH pad did not have an accumulation date on it. In addition, the box containing the heavy metal sludge from the zinc chloride production did not have the year marked on it.

Zaclon put the year on the heavy metal sludge from the zinc chloride production during the inspection. No further action is required for this container. Zaclon must submit a photograph documenting that the container of debris has been marked with an accumulation date. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

17. ***Requirements for Hazardous Waste Containers, OAC 3745-66-73(A):*** Containers of hazardous waste must be kept closed except when adding or removing waste.

The following containers were open at the time of the inspection:

a. The roll off box containing the debris from the SASH pile

b. The hazardous waste box in BLDG #39 accumulating the waste from the production of galvanizing fluxes was open.

c. The satellite container collecting the accelerator waste in BLDG #27W had the hose from the reactor in it.

Zaclon must submit a photograph demonstrating the box of debris is closed to demonstrate compliance with this rule.

Zaclon may be able to demonstrate that the waste generated in BLDG #39 is no longer hazardous (see concern 35 below). If it is determined to be non-hazardous, no further action needs to be taken by Zaclon for this container.

Ohio EPA suggested that Zaclon set up a hook or clamp into which the hose can be placed so that the opening faces upward to minimize drips/releases from it. This will eliminate the need to leave the hose in the drum. At a minimum, Zaclon must submit a photograph demonstrating the drum is closed. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

18. ***Used Oil Storage Requirements for Generators, OAC rule 3745-279-22:*** All containers of used oil shall be clearly labeled or marked "Used Oil."

Ohio EPA noted at least the following containers not marked "Used" oil:

a. The four drums in BLDG #119 that were labeled "Drain Oil." These were labeled "Used Oil" during the inspection and no further action is required for these containers;

b. The various containers (at least 6) left by Inorganic Coatings outside of BLDG #25.

c. There were various containers in the oil storage building next to the Used Oil tank. These containers included gallon milk containers and other small containers. Zaclon representatives stated that the contents of these containers would be placed in the used oil tank.

d. The three (3) containers in the centrifuge room.

e. The trench/sump in the oil storage building was full of used oil acting as a tank. Zaclon representatives stated that this would be emptied at the next used oil pick up by Heartland. Note: this trench/sump must not be used as a tank to accumulate used oil.

Zaclon must either label the containers noted in a, b, c and d above as "used oil" or empty the containers into the used oil tank. Zaclon should submit photographs demonstrating the containers have been labeled or emptied into the tank to demonstrate compliance with this rule. Zaclon should also submit a photograph demonstrating the trench/sump has been emptied. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

19. ***Packaging of universal waste lamp, OAC rule 3745-273-13(D)(1):*** Universal waste lamps must be contained in containers or packages that are structurally sound, adequate to prevent breakage, and are compatible with the contents of the lamps. In addition, the containers or packages must be closed, lack evidence of leakage, spillage or damage that could cause leakage.

    The box of spent fluorescent bulbs in BLDG #39 was open. Also, there was nothing in between the bulbs to prevent possible breakage.

    Ohio EPA noted three (3) spent fluorescent bulbs in the office of BLDG #14, several loose bulbs and some still in the fallen lights in BLDG #92 and several bulbs in BLDG #13. These bulbs must be collected and managed with the bulbs in BLDG #39.

    Zaclon shall procure a box/container for the spent fluorescent lamps which is adequate to prevent breakage of the lamps and which can be kept closed. Zaclon shall label the box in accordance with OAC 3745-273-14 (E) (see violation 20 below) and submit a photograph demonstrating compliance with this rule.

20. ***Labeling/marking- standards for small quantity handlers of universal waste, OAC rule 3745-273-14(E):*** Universal waste [fluorescent] lamps shall be labeled as "Universal Waste - Lamps," "Waste Lamp(s)," or "Used Lamp(s)."

    The box containing the spent fluorescent bulbs was not labeled. In addition, the various bulbs noted in violation 19 above were not labeled.

    Please document via photograph(s) that all containers are labeled to document compliance with this regulation. In addition, Zaclon must submit documentation describing the standard operating procedures that have been instituted to prevent reoccurring violations of this rule.

21. ***Accumulation time limits – standards for small quantity handlers of universal waste, OAC rule 3745-273-15(C):*** A facility must be able to demonstrate the length of time that a universal waste has been accumulated. There are six ways to document the accumulation time:

    a. Marking or labeling the container with the earliest date when the universal waste became a waste,

    b. Marking or labeling individual item(s) of universal waste with the earliest date that it became a waste,

    c. Maintaining an inventory system on-site that identifies the date the universal waste became a waste,

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,

e. Placing the universal waste in a specific accumulation area and identify the earliest start date of accumulation, or

f. Any other method, which clearly demonstrates the length of time universal waste has been accumulated from the date it became a waste.

Zaclon could not document the length of time the spent fluorescent bulbs had been on site and therefore must immediately recycle or otherwise properly dispose of the lamps off site. The disposal documentation (*e.g.* manifest, shipping paper) must be submitted to demonstrate these bulbs have been shipped off site.

Additionally, please provide documentation demonstrating that one of the above methods (a through f) is in place to demonstrate that further accumulation of spent fluorescent bulbs is less than one year.

22. ***Employee Training for Small Quantity Handlers of Universal Waste, OAC rule 3745-273-16:*** A small quantity handler of universal waste [one who does not accumulate five thousand kilograms or more total of universal waste (batteries, pesticides, thermostats or lamps, collectively) at any given time] shall inform all employees who handle or have responsibility for managing universal waste. The information shall describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

The contract employee managing the universal waste has not been informed of the proper handling procedures.

Zaclon shall inform the employee and submit documentation demonstrating the employee has been informed. This can be done via a written statement.

23. ***Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(1):*** A generator of a hazardous waste must determine if the waste has to be treated before it can be land disposed.

Manifest 00101 dated July 11, 2005 to Chemtron had line 11b missing from the LDR. A corrected copy of the LDR was sent to Zaclon and was on-site during the August 12, 2005 portion of the inspection.

Manifest 00103 dated July 7, 2005 to Chemtron had the waste code D002 for the waste listed on line 11b. Once the waste reached Chemtron, Chemtron requested that the waste code D007 be added to the waste stream. Zaclon changed the manifest but did not update the LDR.

The manifest to Spring Grove dated February 26, 2003 did not have line 11b on the land disposal notification for 5600 pounds of ignitable (D001), corrosive (D002) and chromium (D007) contaminated waste.

Zaclon must update their copies of the LDR and notify Chemtron and Spring Grove to be sure their copy of the LDR is also updated.

24. ***Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(2), Table 1:*** The generator of a hazardous waste which does not meet the treatment standard must determine the correct "treatability group(s)" (e.g. wastewater, non-wastewater, *etc.*)

Manifest 05007 dated August 9, 2005 to Chemtron had a waste on the manifest which in the description was noted as a "waste solid." However, on the LDR form, it was listed as a "wastewater."

Zaclon must notify Chemtron to be sure that their copy of the LDR has been corrected and correct the copy they have on site.

25. ***Retention of Land Disposal Restriction Forms, OAC rule 3745-270-07(A)(8):*** The generator must 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.

During the inspection, Zaclon could not find the completed land disposal restriction (LDR) form for the waste shipped to Chemtron on July 15, 2004. Chemtron faxed a copy of the LDR to Zaclon during the inspection abating this violation. However, line 11a did not include the D005 waste code in violation of OAC rule 3745-270-07(A)(1).

Please demonstrate that Chemtron has been notified to correct their copy of the LDR form.

26. ***Retention of Land Disposal Restriction Forms, OAC rule 3745-270-07(A)(8):*** The generator must 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.

During the inspection, Zaclon could not find the LDR for the zinc waste stream sent to Envirite with the waste profile number CS5377.

Zaclon must submit a copy to Ohio EPA documenting that an LDR has been completed for this waste stream.

27. ***Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(7),*** If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous waste or waste, or is exempt from regulation as a hazardous waste under rule 3745-51-

02 to 3745-51-06 of the Administrative Code subsequent to the point of generation, the generator must place in his file a one-time notice describing such generation, subsequent exclusion from the definition of hazardous waste or waste exemption from regulation as a hazardous waste, and the disposition of the waste.

Zaclon generates a chromium bearing waste water from the production of Quilon. The waste water is treated on-site in a chromium reduction waste water pretreatment unit prior to the waste being shipped to the main waste water treatment system for the facility.

Zaclon must submit a copy of the one time notification is on-site to abate this violation.

28. ***Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities, OAC rule 3745-270-07(A)(2),*** The initial shipment of waste which does not meet the treatment standard must have a one time notice sent to each treatment or storage facility receiving the waste and a copy of the notice placed in the generator's file. This notice must include the information in Column A of Table 1 of this rule. This information includes, but is not limited to, the manifest number for the first shipment.

In July of this year, Zaclon created two manifests with the manifest number of 00106. One of the copies of this manifest was changed to have the manifest number of 00108. The LDR which accompanied manifest 00108 was not changed to indicate the new manifest number.

Zaclon must demonstrate that they have notified Chemtron of this error and submit a copy to Ohio EPA.

Ohio EPA also had the following concerns:

29. Zaclon generates an ignitable hazardous waste stream that is also being managed as characteristically hazardous for benzene (D018). The benzene characterization is from Hukill Chemical's gas chromatograph (GC) analysis of the waste. A GC analysis is not the same as the TCLP test. Ohio EPA would recommend that Zaclon have the waste analyzed using the appropriate test method prior to using the D018 waste code.

30. During the walk-through portion of the inspection, Ohio EPA noted a lead acid battery next to BLDG #15. The representatives from Zaclon stated that the battery belonged to a former tenant, BC Transportation. As stated during the inspection, if BC Transportation leaves the battery behind, Zaclon will need to manage it appropriately. Please document whether or not BC Transportation manages the battery or if Zaclon does.

31. Ohio EPA noted a blind sump/secondary containment underneath the first process tank (CWZ) in the production of zinc chloride that contained a green liquid. The integrity of

the bottom of the containment could not be determined. The Zaclon representatives stated that the liquid is recycled back into the process. Ohio EPA has concerns that if this material is hazardous, which it might be depending on the materials being processed, and it was to be released from the containment, it would be a release of hazardous waste. Zaclon must empty the secondary containment, determine the condition of the containment, and make any repairs necessary. In addition, Zaclon must not allow liquids to sit in the containment; but must immediately place the liquid back into the tank if the process will allow, or into a holding container while it awaits processing.

32. Zaclon stated that a portion of BLDG #24 was going to be demolished by the end of 2005. Zaclon stated that the asbestos abatement had already occurred. Please be aware that demolition debris is subject waste characterization per OAC rule 3745-52-11. One way of minimizing the potential of the demolition debris being characterized as a hazardous waste is to remove any and all materials that may cause the waste to be hazardous. This would include mercury switches, light ballast, light fixtures, fluorescent bulbs, etc. Another step which may be taken to characterize the demolition debris is to determine if there is any lead paint on the portion of the building to be demolished.

33. *OAC rule 3745-52-34(C)(1) {Satellite} Accumulation Requirements for Hazardous Waste Containers* requires a generator who exceeds 55 gallons in a satellite accumulation area to move the excess from the area within three days or the area becomes subject to all of the requirements in OAC rule 3745-52-34(A) or other applicable provisions of Chapter 3745-52.

The hopper collecting the heavy metal sludge from the production of the zinc chloride can collect an excess of 55 gallons. During the inspection, it only contained approximately 50 gallons of waste. Ohio EPA discussed with you the various options Zaclon can take to maintain this area as a satellite accumulation area. It is Ohio EPA's understanding that Zaclon will empty the hopper every time the press is used, ensuring the waste will not sit in the hopper for three days or more.

Please confirm this understanding in writing. If Zaclon wishes to comply with this regulation in another manner, please document how this will be accomplished.

34. Ohio EPA had concerns when reviewing the manifests in regards to the manifest numbered 00104 to Chemtron Corporation on July 7, 2005. The concern was in regards to how Zaclon split box #12 - "Containers and Type" into two. On the top half of the box Zaclon marked "001 DF" and on the bottom, "007 DM." Zaclon also had two different quantities marked for each container type in box #13. On August 30, 2005, I spoke with a representative of PUCO and was told while it does not appear that this is a violation, Zaclon should note that 49 CFR § 172.201 (a)(2) requires the shipping description on a shipping paper and all copies thereof used for transportation purposes must be <u>legible</u> and printed (manually or mechanically) in English. While Ohio EPA

believes that the manifest is still legible, care should be taken in the future to ensure all entries are clear and legible.

35. Due to process changes in BLDG #39, Zaclon believes that the waste being generated may no longer be a hazardous waste. The last analytical results from Envirite seem to support this assertion. If Zaclon wants to recharacterize this waste as a non hazardous waste, Ohio EPA would like a clear statement as to what specifically changed in the process which would eliminate the heavy metals previously seen in the waste stream. This would include a current process description including a discussion of what constituents could be in the sludge. If it is determined that the waste is no longer hazardous, Zaclon must comply with the generator closure requirements found in OAC rule 3745-66-11 for the accumulation area.

36. Ohio EPA noted aerosol cans of various products being used at the facility. All of the personnel questioned stated that the cans were completely empty prior to disposal. Zaclon should note what types of materials are dispensed via an aerosol can to determine if a can would contain a hazardous waste if the entire contents cannot be discharged due to a malfunction or other factor. If any of the cans might be hazardous waste, Zaclon must notify the personnel using these products that waste cans cannot be thrown in with the trash, but must be managed as a hazardous waste.

37. As part of the waste water management at BLDG 27W, Zaclon has a system which reduces the chromium prior to the water being piped to the main waste water treatment system. During the inspection, Ohio EPA noted that there was definite signs of disintegration of the concrete pad under this system. Based on viewing the berm of the concrete pad, the pad had been coated with some type of sealant. This sealant has apparently failed. During the inspection, Ohio EPA noted a brown/green liquid on the pad. The Zaclon representatives stated that all material on the pad is washed back into the system and is treated. Ohio EPA cautioned Zaclon that the waste water exclusion only applied to the waste which actually goes through the treatment. If the secondary containment is breached, this material would be a waste and a clean up would be required. Ohio EPA therefore recommends that Zaclon address the pad before a release occurs.

38. Behind BLDG #25, Ohio EPA noted a number of drums which were identified by representatives of Zaclon as usable material. The drums included a drum of kerosene, four drums of "H-66 Surfactant," a group of least 50 drums identified as potassium silicate, another group of 15 drums also identified as potassium silicate, eight drums near the electrical control for the potassium silicate that had contents identified as potassium silicate, two bulging drums identified as solidified silicates, a group of at least 33 containers identified as either potassium silicate or caustic soda to be reworked into the process and five drums near BLDG #119 whose contents were identified as silicate to be reworked. While Ohio EPA encourages facilities to consume all products and re-use materials whenever possible, if the material has economic value to Zaclon it should be managed as such. With the exception of the "H-66 Surfactant" drums, none of the

containers were labeled; many of the containers were in very poor condition, many of the containers were open allowing rain water to get in with the "usable" material and finally, Ohio EPA was not convinced Zaclon knew precisely what each container held. Ohio EPA asked that the material in the containers in poor condition be transferred to new containers. Ohio EPA also asked for the drums/containers to be labeled, drums to be closed and the drums to be managed in such a way that it is obvious the material has value to Zaclon.

The first step in documenting what this waste is and how it should be managed is for Zaclon to develop an inventory, with quantities, origins of the source and current locations of the waste. Ohio EPA would then encourage Zaclon to use any of the waste noted above in their processes if it is a legitimate use of the waste. Even if the waste cannot be used immediately, if Zaclon does not believe it to be a waste since it has value for a specific process, then that material should be managed and stored in a manner which demonstrates that it has value to Zaclon. To do this, the inventory and storage of usable material should be such that it can be found for use when a process is restarted and document/demonstrate how it can be used. Any material that cannot be used is a waste and will need to be characterized and disposed appropriately

39. Ohio EPA noted a sand blasting unit is the weld shop. Zaclon representatives stated that no waste had been disposed from the unit. Ohio EPA informed Zaclon that the waste would need to be characterized per OAC rule 3745-52-11 prior to disposal.

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (i.e. source reduction). For those wastes and pollutants that are generated, the second is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment and improve your public image by implementing pollution prevention programs. The Office of Compliance Assistance and Pollution Prevention provides compliance and pollution prevention assistance on environmental issues related to air, land and water. Their web site is: http://www.epa.state.oh.us/opp/ocapp.html.

The Division of Hazardous Waste Management has created an electronic news service to provide you with quick and timely updates on events and news related to hazardous waste activities in Ohio. You can find more information at the following Web link http://www.epa.state.oh.us/dhwm/listserv.html.

Failure to list specific deficiencies and/or violations in this communication does not relieve Zaclon from the responsibility of complying with all applicable laws, rules and regulations.

Further be advised that any instances of noncompliance can continue as subjects of pending or future enforcement actions.

In accordance with OAC rule 3745-50-30, if Zaclon takes the position that records of Ohio EPA, including correspondence such as this letter, contain trade secret information, Zaclon must provide a request to Ohio EPA which is accompanied by sufficient supporting documentation.

Please respond to this letter in writing by December 16, 2005, and provide all of the information requested above. I have included a copy of the checksheets used during the inspection for your information. Should you have any questions or require additional information, please contact Frank Popotnik, my supervisor, or me at (330) 963-1200.

Sincerely,

Karen L. Nesbit
Division of Hazardous Waste Management

KLN:cl

Enclosure

ec: Frank Popotnik, DHWM, NEDO
Harry Sarvis, DHWM, CO

cc: Mitch Mathews, DHWM, CO (with enclosures)
Mike Cunningham, USEPA, Region V (with enclosures)