December 7, 1993

To: Calvin Lee Avon Lake

From: Herm Waltemate Cleveland

AVON LAKE SAFETY AUDIT
NOVEMBER 15-19, 1993

Attached is the final report of the Safety Audit conducted at the Avon Lake site.

The overall safety program of the Avon Lake site has made good progress. This progress has been somewhat difficult because of continuous change and the further change that will be encountered.

In the following chart, I have compared the Avon Lake total site GEON Company Recordable, Lost Time (including restricted cases) and C-DAW incidence rate with the BLS Chemical and Allied Products, CMA and The GEON Company.

	BLS	CMA	GEON	AVON LAKE
1990				
Rec. IR	5.90	3.97	3.25	5.18
Lost Time IR	*2.90	*1.84	*1.20	* .95
C-DAW IR	**	.75	.34	.32
1991				
Rec. IR	5.70	3.77	2.26	3.01
Lost Time IR	*2.80	*1.79	* .91	* .93
C-DAW IR	**	.74	.26	.12
1992				
Rec. IR	**	3.86	1.96	3.28
Lost Time IR	**	*1.77	* .37	.27
C-DAW IR	**	.64	.09	.14
1993				
Rec. IR	**	3.25	1.29	1.36
Lost Time IR	**	1.57	* .44	* .39
C-DAW IR	**	.65	.18	.19

* Include restricted work cases
** Not available

NGC 12841

The report format is laid out for you to write in your abatement program and indicate the status as Completed, In-Progress, or Incomplete. A progress report giving the status of the items requiring attention is due February 15, 1994 and each quarter thereafter until all items have been corrected. For your convenience, I have included the word processing disc on which you can enter your response.

The report includes the following:

H. Waltemate

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cc: G. Higby
R. Grahek
E. Martinelli/W. Patient
L. Larson
E. Beeler
L. Maresca
J. Griffin

AVON LAKE SAFETY AUDIT
NOVEMBER 15-19, 1993

I. Positive Observations

1. I was very impressed with the response to various recommendations and suggestions made during the entire audit. Individuals were interested to learn of methods that might make a condition safer.

2. The internal safety audits conducted were very thorough and involved board employee participation. This approach should pay off in the long term.

3. An excellent job is being done with the employee exposure monitoring. A wide variety of materials are monitored and exposure levels in general are very low.

4. The new Management of Change procedure was well done and appears to be effective in managing change.

5. The Safety Monitor Meetings continue to be effective and a good method to address safety concerns with employees.

6. The monthly Environmental, Health and Safety progress report is well done. It is an effective means of keeping key people informed of ongoing activities.

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II. Previous Audit Items

I reviewed the following previous audits and consider all items to be complete or in progress:

- ALGC Safety Audit June 1991
- ALGC Industrial Health Audit July 19, 1991
- ALTC Corporate HS&E Audit March 1991
- ALTC Industrial Health Audit January 1990

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III. Items to Be Corrected

1993-1 The forklift trailer entry program needs to be reviewed and corrective action taken. Trailer restraints are to be installed by January 1, 1994 as required by GEON Company Safety Standard SA-131.

The following situations/conditions were observed during the plant inspection tour:

i) Trailer being loaded/unloaded and the trailer number was not on the trailer entry checklist.

ii) Jackstands not snug under trailer.

iii) Not completing trailer entry checklist when removing material with forklift.

iv) Not verifying jackstands and engagement of the trailer restraint from the dock apron.

v) No trailer restraints at B/441, B/455 and B/452.

Plant Response

___ Complete ___ In-Progress ___ Incomplete

1993-2 During the plant inspection tour we observed an employee crossing the railroad track in preparation to hookup the switch engine to a resin hopper car. The distance between the switch engine and the resin hopper car was less than five feet. A procedure prohibiting this practice needs to be put into place unless adequate space is provided. This should include any railroad car that is not protected by a derail.

The WPS for moving railroad cars must state the requirements for crossing between railroad cars.

Plant
Response

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___ **Complete** ___ **In-Progress** ___ **Incomplete**

1993-3 In my review of the dispensary, several open issues were noted. These issues need to have written closure if the medical records, are ever subjected to an inspection.

The following issues were noted:

i) The OSHA Log is different than the official log maintained by the Safety Department.

ii) The follow-up and recording of current 10db standard threshold shifts in conjunction with a 25db shift from the original baseline.

iii) The written medical status of injuries is different than what is posted on the OSHA log.

iv) Fit testing for respirators is being done with saccharin instead of irritate smoke as specified in plant procedure SA-42.

Plant
<u>Response</u>

___ **Complete** ___ **In-Progress** ___ **Incomplete**

1993-4 The lab mill safety checks and rescue drills need to be reviewed and corrective action taken. The following situations were observed during the audit:

i) Monthly mill rescue drills, as required by GEON Safety Standard SA-117, need to be conducted in ALTC Polymer Process Area.

ii) The documentation for mill drills in the Color Lab need to be improved.

iii) The lab mill safety checks, performed daily before use, need to be documented.

Plant
Response

___ Complete ___ In-Progress ___ Incomplete

NGC 12848

1993-5 The operating procedures in the boiler house need to be brought up-to-date. The procedures reviewed were dated 1974, 1976, 1981, 1986 and 1989. The procedures for the boilers which are currently shutdown should state this fact and that prior to start up, they would be updated.

The Ton Chlorine cylinders used at the Cooling Towers are covered by OSHA 1910.119. This standard requires that operating procedures reflect current operating practice and management must certify annually that these procedures are current and accurate.

Plant
Response

____ Complete   ____ In-Progress   ____ Incomplete

1993-6 During the plant inspection tour, several extension cords were noted with a metal handybox used as the female outlet. Also a large metal start/stop box was used on the cord of an auger. Electrical equipment are to be used only in the service for which it was intended. The metal handyboxes are designed to be mounted in a fixed location.

Proper female plugs and control switches should be installed as part of the next electrical cord inspection.

Plant
Response

___ **Complete** ___ **In-Progress** ___ **Incomplete**

1993-7 OSHA has issued 29 CFR 1910.119 Management of Highly Hazardous Chemicals and a compliance directive covering this standard. I did not conduct a PSM Compliance Audit as required by section (o), but I did note the following which should be addressed:

i) A document which clearly lays out the areas in the facility, which are covered by the standard and which areas are excluded, needs to be prepared.

ii) A document, which certifies that operating procedures reflect current operating practice and are accurate, needs to be prepared annually.

iii) A Process Hazard Analysis such as a HAZOP needs to be performed on the Cooling Tower Chlorine addition system.

iv) You should verify that the PHA, which already have been completed, cover the seven areas listed by the standard. Facility siting and human factors are commonly not included in earlier HAZOP's.

v) The plant safety procedure covering employee participation with PSM needs to be finalized and issued. I would suggest that employee access to all information required by the PSM standard be included in this procedure.

vi) Writter operating procedures are required on safety systems. These procedures should describe the safety systems function, how they operate and what steps to take when an incident occurs. Procedures which cover these items need to be prepared for the various fire water sprinkler systems and for Electrical and Control Room Pressurization in Class I areas.

vii) Compliance with Company Standards is required. If you do not intend to comply with such a requirement, a written variance must be obtained. An example is the inspection of the VCM sphere relief valves on a five year frequency. The GEON Company Safety Standard SA-131 has a 3 year requirement.

viii) It is important to document all activities taken to comply with the various requirements of this OSHA Standard.

Plant
Response

___ Complete ___ In-Progress ___ Incomplete

1993-8 During the plant inspection, I observed operators riding freight elevators in B/441 and B/452 with no materials being transported. A plant policy needs to be developed on the riding of freight elevators in Class II areas and that policy needs to be enforced. All elevators must have a means of escape in case of an electrical power failure.

Plant
Response

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___ **Complete**   ___ **In-Progress**   ___ **Incomplete**

1993-9 There are two situations which concern me from an ergonomics standpoint - the dimming of the lights in B/452 Control Room and some of the setups of the VDT workstations.

Steps need to be taken to eliminate the VDT screen glare in B/452 Control room so the lights do not have to be dimmed.

Repetitive motion recordable illnesses are beginning to occur to people who work for long periods at VDT workstations. Within the past two years The GEON Company has experienced 3 cases.

It is recommended that the plant review the VDT workstations for proper ergonomic design. Work stations which are used by an individual four or more hours a day should be modified to fit the individual properly.

You should use the Liberty Mutual Workplace Design bulletin LP 186 R1 as a guide in reviewing your VDT workstations. You should also provide employees in these job classification education in this area.

Plant
<u>Response</u>

___ Complete ___ In-Progress ___ Incomplete

1993-10 A decision has been made within The GEON Company to label PVC Resin with the Cancer Warning statement contained in OSHA Standard 1910.1017(1)(4). Tags with this statement are presently being placed on PVC Resin railroad hopper cars and new bags are being printed with this statement.

There are two situations in the facility, where PVC Resin is put into Vinyl compound gaylord boxes. When this occurs the compound label needs to be removed and the VCM Cancer Warning label added.

PVC Resin maybe placed in Compound Gaylord boxes in the compounding when cleaning out a storage tank. Also Compound Gaylord boxes are used in the Pilot Plant for transporting resin to the manufacturing plant for drying.

Plant
Response

___ Complete ___ In-Progress ___ Incomplete

1993-11 With some of the recent major fires and explosions, the importance of a safe exit from the workplace has been brought out. You need to continue with the project to provide illuminated exit signs in place of the non-illuminated signs.

You also need to be sure that fencelines exits which are established as plant evacuation exits are unimpeded. These exits are required to be open when an emergency, which requires evacuation, occurs.

Also the SE exit door from the ALTC maintenance building has stairs which obstructs the access. The stairs need to be modified or relocated.

Plant
Response

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____ **Complete** ____ **In-Progress** ____ **Incomplete**

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IV. Plant Inspection Tour
November 15, 1993

Dispensary Review

1. 1992 Hearing lose lined out on OSHA log in the Dispensary but not on the OSHA Log maintained in the Safety Office.

2. Repeat hearing test to verify 10db STS is being compared to the incorrect baseline.

3. Injury removed from log when application of silvadene was applied on three different visits.

4. Current 10/25 db hearing shift with a restriction to noise exposure, needs to be thoroughly reviewed.

5. Hand written OSHA log maintained in the dispensary is different than the log maintained in the Safety Office.

6. Safety Procedure SAF 3800 states that irritate smoke will be used for respirator fit testing, but saccharin is being used in the dispensary.

Utilities

1. Operating procedures need to be brought up-to-date. Procedures reviewed had 1974, 1976, 1982, 1986 and 1989 dates.

2. Insulation cover is missing on the 24" manhead on drain tank cooler reboiler.

3. Several items (I-beam, angle iron, pipe, tube etc.) need to be removed from reboiler deck.

4. The insulation needs to be replaced on the control valve at the reboiler.

5. Open electrical wires on top of the primary clarifier need to be checked to determine if properly disconnected and tagged accordingly.

6. The oxygen/acetylene cylinders in the wet well pump building need to be returned to proper storage. Refer to OSHA Standard 1910.253(b)(2)(ii).

7. A tag needs to be installed on the lock on W6 No.4 fan breaker. Refer to OSHA Standard 1910.147(c)(5)(d).

8. Coal mover 950 CAT needs to be provided with a seat belt and required to be worn when operating the tractor. Refer to OSHA 1926.602(a)(2).

9. The old ground rod needs to be removed as it is a tripping hazard.

10. The Chlorine Ton cylinder at the cooling tower is covered by OSHA Standard 1910.119 Process Safety Management.

Stockroom

1. Fire extinguisher missing seal.

2. Extension cord with metal box as the female connection. Needs to be provided with proper female connection. Refer to OSHA Standard 1910.303(b)(2).

3. Trailer restraints are required at B/455. GEON Company Safety Standard SA-131 has a January 1, 1994 deadline for installing trailer restraints.

November 16, 1993

ALTC Maintenance

1. Southeast exit through the Aerospace slide test room has the access to the exit partially blocked with stairs. The minimum width of any way or exit access is 28 inches. Refer to OSHA Standard 1910.37(f)(6).

2. Auger has an improper metal box for the start/stop switch on the flexible cord. Refer to OSHA Standard 1910.303(b)(2).

3. Electrical cord with improper metal box for the female connection. Refer to OSHA Standard 1910.303(b)(2)

4. Sprinkler system control valve in the stockroom is blocked with a cardboard box.

5. Overhead electrical cords above the work benches have metal handy box in place of the female connection. Refer to OSHA Standard 1910.303(b)(2).

6. Two extension cords in the welding area with metal handy box used in place of the female connection. Refer to OSHA Standard 1910.303(b)(2).

7. The propane cylinder on the No.5 Yale forklift is not mounted properly on the index pin. The proper position of the propane cylinder should be part of the daily checklist. Refer to OSHA Standard 1910.110(e)(4)(iii).

Polymer Process Building

1. Is the balance and electrical adapter suitable for the Class II Area? Also the electrical box with the adapter must be mounted. Refer to OSHA Standard 1910.307(b) and 1910.303(b)(2).

2. The checking of the safety interlock on various equipment and the check of the mill stop before operating the equipment should be documented.

3. Handy box used as the female connection on extension cord and the cord is not currently inspected. Refer to OSHA Standard 1910.303(b)(2).

4. Ice packs are missing from the box setup for storing them.

5. Mill drills need to be conducted monthly as required by GEON Company Safety Standard SA-117, Lab Mills.

6. The piping to the press needs to be insulated. Also the back side of the press should be guarded or posted with warning signs.

7. The fire extinguishers and the eye baths in MPL have not been inspected in September and October. Refer to OSHA Standard 1910.157(e)(2).

Pilot Plant

1. Electrical cover above breaker G-23A water wash needs to be reinstalled. Refer to OSHA Standard 1910.303(g)(2)(i).

2. Two electrical seals in the breaker room, on recently installed Estane equipment, have not been poured with Chico. Refer to OSHA Standard 1910.307 (b).

3. Compound gaylord boxes are being used to ship PVC Resins. The boxes have a compound warning label. Need to verify the VCM Cancer Suspect statement is applied. Refer to OSHA Standard 1910.1017(1)(4).

4. The handrail on the windows in the stairway need a midrail or a screen.

5. The relief valves on the VCM spheres are being inspected on a 5 year frequency instead of 3 years as required by GEON Company Safety Standard SA-132.

Laboratories

1. The drill press used as a mixer needs to be secured to the lab bench surface. Refer to OSHA Standard 1910.212(b).

2. Respirator needs to be properly stored. Refer to OSHA Standard 1910.134(f)(1)(iv).

3. Lab has extension cord with double outlet with metal handy box. Refer to OSHA Standard 1910.303(g)(2)(i).

November 17, 1993

B/441 Compound

1. The top section covering hazardous communication on a contractors work authorization permit was not signed in as required by plant procedure SA-40.

2. At various times when PVC resin is put into compound gaylord boxes, the compound warning label needs to be removed. The PVC Resin label, stating that PVC contains Vinyl Chloride and is a cancer-suspect agent, needs to be installed. Refer to OSHA Standard 1910.1017(1)(4).

3. Extension cord with metal handy box as the female connection needs to be provided with the proper female connection. Also the cord does not have the current inspection tape. Refer to OSHA Standard 1910.303(b)(2).

4. Observed an employee riding the elevator without any material being moved. The plant policy on riding/not riding elevators in Class II areas needs to be defined.

5. The exit signs inside the stairwell should be removed.

6. The storing of combustible material such as Calcium Stearate should be discontinued in the stair tower.

7. Electrical cord on scale needs repair.

8. Water left standing in front of exit door on the second level needs to be removed and the leak repaired.

9. Trailer restraints have not been installed at the loading docks of this building.

10. The safety shower and eyebath inside the cuber room is blocked.

11. The WPS does not state the requirement to add the Tin warning label on compound containing Tin or adding the WHMIS label for compound shipped to Canada.

12. The operating procedures and clean-out procedures need to be finalized.

B/452

1. The light glare on the computer screens need to be eliminated to allow the lights to be left on in the control room.

2. Work platform on the upper level needs to have a gate on the ladder instead of a chain. Refer to OSHA Standard 1910.23(a)(2).

3. The dust explosion vents should be on a P.M. similar to a rupture disc. Spares with the proper relieving pressure should be stocked.

4. The exit signs and direction to exits need to be improved in this building.

5. A vessel entry rescue line is draped over sprinkler piping. Also the saddle clips on the rescue line are incorrectly installed.

6. Observed contractors in two situations working from an elevated platform without the required body belt. Refer to OSHA Standard 1926.556(b)(1)(v).

7. Questioned why yellow warning tags were on the electrical breakers B-2,3,4 & 5 oil heaters as the breakers are in the "on" position.

8. Observed an employee riding the elevator without freight. The policy on riding/not riding freight elevators needs to be clarified.

9. Conduit electrical cover missing in the warehouse area. Refer to OSHA standard 1910.305(b)(2).

10. Trailer restraints have not been installed at the truck docks in this area.

ALGC Maintenance Shop

1. Pipe sticking out of the floor near the lathe is a tripping hazard.

2. The terminals on welder II 435 need to be covered. Refer to OSHA Standard 1910.254(b)(4)(iv).

November 18, 1993

3. Need to rope off the open trench where a contractor has removed the grating for cleaning purposes. The present roped off area does not include the complete area where grating has been removed.

4. Electrical cord to work bench light is frayed and needs repair.

B/438

1. The hot lines in the corner near the scale system on the 3rd floor should be insulated.

2. The door stops on the 2nd and 3rd floor stairwell needs repair as the doors stick open. These doors are required to be kept closed. Refer to OSHA Standard 1910.37(b).

3. Cover has been removed from a breaker inside the breaker room. Refer to OSHA Standard 1910.303(g)(2)(i).

4. The hot condensate lines inside the cuber room should be insulated or guarded.

5. The guard rails in the new mix tower need to be reviewed for removing of the screw.

6. Propane cylinder on forklift not properly installed on the index pin. This item should be added to the daily forklift inspection checklist. Refer to OSHA Standard 1910.110(e)(4)(iii).

7. Trailer entry checklist did not have the trailer number included. This would allow the individual to use this checklist for any trailer on this date.

8. The jackstands had an 8" gap. They should be adjusted to be snug under the trailer.

9. The handrail supports on the outside stairs need repair. Refer to OSHA Standard 1910.23(e)(5)(iv).

10. Observed forklift #61 exiting the trailer. The operator did not have a completed trailer entry checklist and did not check the jackstands or trailer restraint from outside of the building.

11. Cover missing on breaker under 15" F-Line scale. Refer to OSHA Standard 1910.303(g)(2)(i).

12. Observed contractor standing on ventilation ducts to work on overhead piping.

13. Cold packs need to be replaced.

14. Gum/nut vending machine is blocking fire extinguisher near lunchroom. Refer to OSHA Standard 1910.157(c)(1).

15. Observed the in-plant switch engine connecting to a railroad hopper car. The brakeman walked across the track with only a distance of approximately 5' between the hopper car and switch engine.

ADEL

1. Two fire extinguishers in the offices need to be mounted. Refer to OSHA Standard 1910.157(c)(1).

2. Seal missing from fire extinguisher.

3. Food being kept in refrigerator with chemicals.

4. The bowl to the eyebath needs to be cleaned.

5. Air nozzles, used for blowing, need to be reduced to less than 30psi. Refer to OSHA Standard 1910.242(b).

6. Chain slings are required to be thoroughly inspected on a frequency not greater than 12 month. Refer to OSHA Standard 1910.184(d)(3)(i).

7. Wood pallets store next to the building present a fire hazard and need to be relocated away from the building.

<u>Color Lab</u>

1. The hot oil lines and steam lines near the air valve need to be better guarded or insulated on mill #4. Other hot lines should be reviewed.

2. A hot warning sign should be posted on the press.

3. Better documentation needs to be kept on the mill drills.

4. The mill safety control test performed prior to each use needs to be documented.

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AVON LAKE SAFETY AUDIT

NOVEMBER 15-19, 1993

V. HOUSEKEEPING RATING

ALTC Maintenance Shop	9	Exceeds Requirements
ALGC Maintenance Shop	9	Exceeds Requirements
Resin Pilot Plant & Labs	8	Exceeds Requirements
B/438 Compound	7	Exceeds Requirements
Polymer Process Building	7	Exceeds Requirements
B/441 Compound	6	Meets Requirements
B/452 Compound	6	Meets Requirements
AEDL	4	Meets Requirements

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