STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

March 25, 2008

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GAR

GAR Electroforming Division
Electroformers, Inc.
P.O. Box 340
Danbury, CT 06813-0340

Attn: Russell Richter
Vice President/General Manager

Re: Department of Environmental Protection, RCRA Inspection
January 16, 2008

Dear Mr. Richter:

Enclosed for your review and information is a copy of the report prepared by Paul Hassler, Environmental Analyst 3 with the Bureau of Materials Management and Compliance Assurance's Waste Engineering and Enforcement Division, following his inspection of GAR Electroforming at 11 Augusta Drive in Danbury, CT on January 16, 2008.

This report is currently under review by staff of the Bureau of Materials Management and Compliance Assurance's Waste Engineering and Enforcement Division, along with your February 5 and 7, 2008 submittals to Mr. Hassler.

Please contact Justin Williams at (860) 424-3113 if you have any questions concerning the inspection report.

Yours truly,

Peter Ploch

Peter Ploch, P.E.
Supervising Sanitary Engineer
Waste Engineering and Enforcement Division
Bureau of Materials Management and Compliance Assurance

PP:np

Enc.

cc: Justin Williams, DEP/WEED

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

GAR Elect. (form #5

RCRA (HAZARDOUS WASTE) INSPECTION REPORT
TREATMENT/STORAGE/DISPOSAL FACILITY

RECEIVED
MAR 2 8 2008
GAR

Name(s) of Inspector(s): Hassler.

Date(s) of Inspection: January 16, 2008 Complaint Number: NA.

Previous RCRA inspection: November 15, 1996 Active RCRA enforcement: None.

SITE INFORMATION

EPA ID Number: CTD064834914.

Site Name: GAR Electroforming Division, Electroformers, Inc.

Street Address: 11 Augusta Drive, Danbury, CT.

Mailing Address: P.O. Box 340, Danbury, CT, 06813-0340.

Contact Name(s) and Title: *Russell Richter, Vice President/General Manager; George Ray, President.*

Contact Phone Number: 203-744-4300 Date established at present location: 1974.

Property owned/leased: Leased from GAR Realty Previous occupants of site: None known.

STATUS (actual-operating)

___ CESQG
___ SQG
_X_ Lg. Quantity Generator
___ Transporter
___ Recycle/Reclaim
___ Used Oil Processor/Re-Refiner
___ Universal Waste Destination Facility

___ Storage
___ Treatment
___ Disposal
_X_ Post Closure Units

___ Interim Status
___ Permitted Facility
___ CT Regulated Facility
___ Commercial Facility
___ Small Quantity Universal Waste Handler
___ Large Quantity Universal Waste Handler

Notified as: Large quantity generator and post-closure facility (for two, F006 metal hydroxide sludge surface impoundments that were closed in 1988).

Any discrepancies between notification/Part A/B & actual operations: ___ Yes _X_ *No:* ___.

If yes, has a status change been requested: ___ Yes ___ No: NA.

Comments: .

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TYPES OF WASTE HANDLED

X Ignitables (D001)	X F or K listed wastes	X Used Oil
X Corrosives (D002)	X P or U listed wastes	X CT Regulated Waste
X Reactive (D003)	___ Precious Metals	___ Haz. Scrap Metal
X TCLP (D004 – 43)	X Universal Waste (list type): **Spent mercury-containing lamps.**	

___ Other: _____.

HANDLING METHODS

X Containers	___ Containment Building	___ Waste Piles
___ Aboveground Tanks	___ Wastewater Treatment	X Landfill
___ Underground Tanks	___ Incinerator/Thermal Treatment	___ Drip Pad
___ Surface Impoundment	___ Chemical, Physical, Biological Treatment	

___ Other: _____.

SITE DESCRIPTION

Proximity to residential areas/surface water/recharge zone, etc: **Located in an industrial park. The Still River is located about 400 feet west of the facility.**

Water supply (if wells, give approximate locations): **City water.**

Types of waste/water discharges: **Sanitary wastewater to city sewer; roof drains to galley system.**

Evidence of on-site disposal: X Yes ___ No (if yes, give specifics): **In 1988, GAR closed two F006 metal hydroxide sludge surface impoundments. Nickel contamination of the groundwater, caused by releases from the surface impoundments, has decreased significantly since the closure and for the past several years has been below the Connecticut Remediation Standard Regulations criteria for GB areas. Trichloroethylene and tetrachloroethylene contamination was determined to have been from off-site sources.**

Groundwater monitoring wells on-site: X Yes ___ No. Groundwater classification: **GB**.

If yes (briefly describe why installed and any information available): **GAR samples six groundwater-monitoring wells on a semi-annual basis.**

Comments: _____.

SITE ACTIVITY

Number of employees/shifts: ~30 on one shift. Type of activities: Electroforming job shop.

Products: Electroformed parts (e.g., heat shields) for aerospace applications.

Describe processes (particularly those that involve chemical and generate waste): Electroforming involves plating metal onto mandrels (aluminum molds) over long periods of time (days to weeks), depending upon the desired thickness of the part. Mandrels are sometimes made on site and sometimes received from off site.

A) MACHINING: General machining is performed, using ~ 15 machines, six of which are computer numeric controlled ("CNC") machines. Machining includes milling, drilling, grinding and turning of mandrels (aluminum) and electroformed parts (primarily nickel, lesser amounts of copper and brass, trace amounts of gold and silver). The CNC machines use water-soluble coolants. The other machines are used dry or sometimes with small amounts of petroleum coolants applied by hand.

B) CLEANING: Parts are cleaned in an alkaline cleaning line, or sometimes in a vapor degreaser. The alkaline cleaning line consists of three, 100-gallon bath tanks and various rinse tanks. The heated cleaning baths are mildly alkaline (pH 10 to 11). Rinse waters are reused as make-up water in the cleaning baths, replenishing water lost to evaporation. The vapor degreaser uses trichloroethylene and has an associated distillation unit. The vapor degreaser is used only about once per week, solely to remove wax from mandrels and electroformed parts.

C) MASKING: Wax, tape, plastic shielding, and/or plastisol coating ("Thermo-Coat") are used to mask sections of parts that do not need electroforming. Maskants are used only on parts being electroformed in nickel or copper solutions and are not used on parts dipped in chromium, gold or silver-bearing solutions. Wax is stripped off in the vapor degreaser. The other types of maskants are removed manually and disposed in the trash as non-hazardous waste.

D) ELECTROFORMING DEPARTMENTS: Parts are electroformed in nickel or copper plating baths. The main electroforming room has six, 900-gallon tanks of nickel sulfamate; a 10-gallon tank of chromic acid; a 35-gallon tank of copper sulfate; two, 30-gallon tanks of nitric acid; a 60-gallon tank of sodium dichromate (for irriditing); five, 400-gallon tanks of nickel sulfamate; and four, 900-gallon tanks of copper sulfate. Ammonium persulfate is used as an activator. The copper and nickel-based electroforming solutions are filtered (to extend their life) through activated carbon to remove organic impurities. Several stagnant rinse tanks are associated with these electroforming tanks, although parts are often rinsed by spraying them with water directly over the electroforming and drag-out tanks. The main electroforming room has a "wet floor" (unsealed concrete) that receives rinse waters and spillage, which are then piped to the wastewater treatment system. Since the 1996 RCRA inspection, a new electroforming room was added to house four, long and narrow, ~ 600-gallon tanks of nickel baths (sulfamate, cobalt or "Woods" nickel) to accommodate helicopter blades. The new room also has a 600-gallon tank of sulfuric acid etchant. Prior to electroforming, some parts are dipped in a tank of copper-cyanide strike bath. In another (small) room, parts are

electroformed in two, 5-gallon tanks of gold-cyanide, a 30-gallon tank of silver-cyanide or two, 5-gallon tanks of rhodium-based bath. Some parts are bright-dipped in tanks of hydrochloric/chromic acid and nitric/hydrofluoric acid. Tanks of nitric acid are used to passivate parts and strip racks. No air scrubbers are associated with any above-noted processes.

E) ETCHING: Aluminum mandrels are etched in a 400-gallon tank and three, 20-gallon tanks of sodium hydroxide. This process completely destroys the mandrel, leaving behind only the finished, electroformed part. Spent sodium hydroxide is collected in 275-gallon and 330-gallon totes for off-site disposal as hazardous waste.

F) MISCELLANEOUS: 1) Spray painting is performed in a small (bench-top) paint spray booth that is not equipped with filters. Certain electroformed parts are spray-painted using a lacquer-based, silver paint. The contacts stated that the booth does not require filters because it is only used about once per week , each time for less than an hour. 2) Grit blasting is performed in one unit, using a wet pumice solution. Over-spray of the water/pumice solution is collected in a 200-gallon, in-floor, concrete pit. Pumice settles out in the pit and the wastewater drains to the wastewater treatment system. Periodically, the pumice is removed from the pit and placed in drums for off-site disposal as non-hazardous waste. 3) Some parts are hand-polished (no buffing wheels) using silver cream and chrome polish. 4) A small maintenance department performs mechanical repairs of machines. This department has a small tank of mildly alkaline solution for cleaning parts. About eight years prior to this inspection, GAR eliminated a petroleum naphtha-based parts washer. 5) The building is heated using five small heating units that burn natural gas. No in-ground tanks are located on site.

G) WASTEWATER TREATMENT SYSTEM: GAR has no wastewater discharge from their wastewater treatment system. Instead, they treat dilute rinse water from the electroforming and alkaline cleaning lines in a "cold vapor distillation" (evaporation) unit that operates under a vacuum (no heat applied) to lower the boiling point of water. Non-cyanide rinse waters gravity drain to a 600-gallon holding tank that feeds the cold vapor distillation system. Vapors off this system are condensed using cooling coils, with the condensed water collected in another 600-gallon tank for reuse as rinse water in the electroforming and cleaning departments. GAR no longer plates-out metals (for sale as scrap metal) from the concentrate off the cold vapor distillation process. Instead, the concentrate is collected in drums or totes and shipped off site for disposal as hazardous waste. GAR also no longer performs cyanide destruction of cyanide-bearing rinse waters, instead collecting them in drums for off-site disposal as hazardous waste. NOTE: During this inspection, the cold vapor distillation system was off-line due to equipment malfunction. Instead, a heating coil in the 600-gallon holding tank was being used to evaporate the rinse waters.

WASTE PROFILE

WASTE STREAM	WASTE CODES	ESTIMATED GENERATION RATE	HANDLING METHOD	TRANSPORTER	DESTINATION FACILITY
Haz. waste liq. (concentrate from cold vapor distillation)	D007	550 gal. in 2007	Totes	Enviro-Safe Corporation	Eviro-Safe Corporation, Lowell, MA
Waste ammonium persulfate (activator)	D001	1 dr. (55 gal.) in 2007	Drums	Enviro-Safe Corporation	Eviro-Safe Corporation, Lowell, MA
Waste corrosive liq. (spent copper baths)	D002	715 gal. in 2007	Drums & totes	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste corrosive liq. (irridite w/HCl)	D002, D007	7 dr. (885 gal.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI; Mich. Waste Disposal Plant, Belleville
Waste corrosive liq. (nitric acid strip)	D002, D007, D008	2 dr. (110 gal.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste corrosive liq. (ammoniated strip)	D002	2 dr. (110 gal.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste corrosive liq. (NaOH etchant)	D002, D010	990 gal. in 2007	Drums and totes	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste corrosive liq. (alkaline cleaners)	D002	6 dr. (330 gal.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste flam. & corrosive liq. (zincate bath)	D001, D002	1 dr. (55 gal.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Waste cyanide sol. (Au strip for reclaim)	F007, D003	7 cans (35 gal.) in 2007	Cans	Hazmat Environmental Group	Technic, Inc., Cranston, RI
Waste trichloroethylene	F001	55 gal./2005; none since.	Drum	Metal Recovery Transportation	Jones Environmental Services, Lowell, MA
Waste cyanide sol. (obsolete CuCN bath)	F007, D003	2 dr. (110 gal.) in 2007	Drums	Enviro-Safe Corporation	Eviro-Safe Corporation, Lowell, MA
Waste haz. solid (sludge & soil from closed pumice lagoon)	F006	~ 240,000 lbs. in 2007 (remediation job)	Roll-off dumpsters	New England Disposal Technologies	Stablex Canada, Inc., Blainville, Quebex
Spent mercury-containing lamps	Universal waste	1450 lbs./2007 (shop re-lamped)	Boxes	Northeast Lamp Recycling	Northeast Lamp Recycling, East Windsor
Spent nickel &	CR05	3 dr. (1450 lbs.)	Drum	Oil Recovery	E.Q. Detroit, Inc.,

copper filters		in 2007		Corporation	Detroit, MI
Spent maskant (nickel & copper)	None used	25 to 50 lbs. per month	Trash dumpster	Automated Waste Disposal, Danbury	Danbury municipal trash facility
Spent pumice (vapor blast)	CR04	2 dr. (1800 lbs.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Floor sweeps	CR05	2 dr. (975 lbs.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Spent carbon	CR05	1 dr. (450 lbs.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI
Used oil	CR02	8 dr. (430 gal.) in 2007	Drums	Oil Recovery Corp.; United Ind. Services	E.Q. Detroit, Inc., Detroit, MI; United Oil Recovery, Meriden, CT
Lab packs (old lab & process inventory)	Various (see comment)	6 dr. (350 lbs.) in 2007	Drums	Oil Recovery Corporation	E.Q. Detroit, Inc., Detroit, MI

Comments: 1) Lab Packs: On January 30, 2007, GAR shipped the following lab-packs to E.Q. Detroit:

- 30 lbs. D006, D008 waste toxic solid (Cd oxide, Pb oxide)
- 50 lbs. P104, D002 waste toxic liq. (AgCN, KOH)
- 30 lbs. D001, D007 waste oxidizing solid (chromic acid, potassium permanganate)
- 20 lbs. D002 waste caustic liq. (amines, NaOH)
- 200 lbs. U134, D002, D007, D008, D011 waste corrosive liq.
- 20 lbs. U154, F005, D001, D035 waste flam. liq (MEK, methanol)

40 CFR 262.11; 262 40(c) **HAZARDOUS WASTE DETERMINATIONS** (GHW) 22a-449(c)-102(a)

Determination conducted for all waste streams: _____ Yes __X__ No (explain): GAR did not have any written waste profiles or waste analyses on file. It appears that hazardous waste determinations had been made, based upon generator knowledge (e.g., maskant used only on parts dipped in electrolytic nickel and copper baths, with no lead or cadmium stabilizers or lead anodes used on site) and detailed waste descriptions on the manifests (e.g., six variations of waste corrosive liquid were described). However, without written waste profiles or waste analyses, the accuracy of the waste descriptions could not be assessed, especially for wastes with variable constituents (e.g., floor sweeps, vapor blast) or for instances when the manifests contained conflicting information. For example, two of the waste descriptions on the manifests included references to RCRA metals, although the applicable EPA waste codes were not on the manifests, and another waste description included a RCRA metal that the contacts believed was inaccurate. Specifically:

- On June 26, 2007, two drums (110 gallons) of "D002", "waste corrosive liquid, n.o.s. (chromium, lead)" were shipped, but the waste code "D008" (for lead) was not on the manifest. The contacts stated that GAR did not have any known lead source and did not use lead anodes on site.
- June 26, 2007, two drums (110 gallons) of "D002", "waste corrosive liquid, n.o.s. (mercury, nickel)" were shipped, but the waste code "D009" (for mercury) was not on the manifest. The contacts stated that aside from mercury-containing lamps, GAR did not have any known source of mercury on site.
- On August 20, 2007, six drums (330 gallons) of "waste corrosive liquid, basic (caustic solution)" were shipped with the waste codes "D002" and "D010" (for selenium). The contacts stated that GAR did not have any known source of selenium on site.

Determination updated annually (documentation on-site): ___ Yes _X_ No: See above.

Comments: On February 11, 2008, GAR submitted copies of 32 waste profiles (attached) that they obtained from the receiving facility, EQ Detroit, immediately following this inspection. According to information in the waste profiles, the floor sweeps and vapor blast wastes had been characterized as non-hazardous (vapor blast was tested for chromium and barium), selenium was found at 7.3 parts per million ("ppm") in a corrosive, alkaline liquid waste, lead was found at 7 ppm in a corrosive, acidic (nitric acid) liquid waste, and no mercury was detected above 0.2 ppm in the two waste streams for which it was tested.

40 CFR 262.20-23; 265.70-77; 40 CFR 273.18, 38 & 39 & 279.56

SHIPPING RECORDS (DMR)

22a-449(c)-102(b)(3); 105(a); 22a 449(c)-113(a)(1) & 119(a)(1)

Date/months of shipping records reviewed: All 2007 shipments.

Manifests used for all hazardous waste shipments: _X_ Yes ___ No (explain): _____

Shipping records used for universal waste: _X_ Yes ___ No (explain): _____

Shipping records used for used oil: _X_ Yes ___ No (explain): _____

Appropriate copy(ies) on-site: _X_ Yes ___ No (explain): _____

Any exception (generators), discrepancy or unmanifested waste reports (facilities): ___ Yes _X_ No: _____

Comments: _____

WASTE MINIMIZATION PROGRAM

Is a program in place: _X_ Yes ___ No (if written program, obtain a copy)

If yes, briefly describe the elements of the program, identify waste types and any reduction achieved: Although GAR does not have a written waste minimization plan, in the early 1990s, they installed an evaporator and closed-loop recycling process that eliminated the discharge of treated metal finishing wastewater to the sanitary sewer. In addition, rinse waters from the zincate line and alkaline cleaning lines are reused as make-up water in the concentrated baths.

If no, did the inspector recommend that the company:

Assess their processes and waste streams for potential reductions in waste quantities: ___ Yes ___ No

Assess their raw materials for less hazardous alternatives: ___ Yes ___ No

Assess their water usage for potential reductions: ___ Yes ___ No

Assess their energy usage for better efficiency: ___ Yes ___ No

Evaluate the potential for closed loop processes: ___ Yes ___ No

Comments: Identify specific areas for further assessments: _____.

40 CFR 268 **LAND DISPOSAL RESTRICTIONS** (GLB) 22a-449(c)-108

Has the generator determined whether the waste __ **meets** _X_ **doesn't meet** the treatment standard(s) by

___ testing the waste _X_ using knowledge of waste: _X_ Yes ___ No: _____.

If the waste or contaminated soil **does not meet** the treatment standard(s), has the generator sent a one-time written notification (or subsequent notification(s) if the waste changes) to each receiving facility: _X_ Yes ___ No ___ N/A (explain):

If the waste or contaminated soil **meets** the treatment standard(s) at the original point of generation, has the generator sent a one time certification (or subsequent notification(s) if the waste changes) to each receiving facility: ___ Yes ___ No (explain): __NA_____.

If the generator's waste is subject to a case-by-case extension, no-migration petition, or national capacity variance, has the generator sent a one time written notification (or subsequent certification(s) if the waste changes) to each receiving facility:

___ Yes ___ No _X_ N/A (explain): _____.

If the generator is managing and treating a restricted waste or contaminated soil in tanks, containers, or containment building to meet applicable treatment standards, has the generator sent a one time notification (or subsequent certification(s)) if the waste changes) to each receiving facility: ___Yes ___ No _X_ N/A (explain): _____.

Has the generator retained on-site a copy of all LDR documentation for 3 years: ___ Yes ___ No – **see comment.**

Comments: **__GAR did not have copies of the initial notifications on file for five shipments of hazardous waste made in 2007 to EQ Detroit. Immediately following this inspection, GAR obtained copies (unsigned and undated) of LDR notifications from EQ Detroit (copies enclosed).**_____.

If site is a treatment facility, complete and attach, "Attachment H: Land Disposal Restrictions – Treatment Facility Requirements".

40 CFR 265.75 **BIENNIAL HAZARDOUS WASTE REPORT** (DEX) 22a-449(c)-105(a)(2)(M)

Reports filed on a biennial basis: _X_ Yes ___ No. Date received at DEP: **__March 6, 2006.**_____.

Comments: _____.

40 CFR 265.17 **IGNITABLES/REACTIVES/INCOMPATIBLES** (DSC) 22a-449(c)-105(a)(1)

Ignitable & reactive wastes separated from sources of ignition or reaction & handled per 265.17: _X_ Yes ___ No

"No Smoking" signs posted in areas of ignitable or reactive hazardous waste: _X_ Yes ___ No

Comments: _____.

40 CFR 262.34(c)(1) **SATELLITE ACCUMULATION** (DMC) 22a-449(c)-102(a)

Approximate number of satellite storage areas: **Two**.

Less than 55 gallons (or 1 quart acutely hazardous waste) per waste stream per satellite accumulation area: _X_ Yes ___ No

Containers marked and contents described: _X_ Yes ___ No. Containers closed when not in use: _X_ Yes ___ No

Comments: **1) 55-gallon drum of waste nitric acid; 2) two-gallon can of spent gold stripping solution.**

40 CFR 264.175(b); 40 CFR 265.170-178; 40 CFR 273.13 & 273.33 for transport vehicle/vessel **CONTAINER MANAGEMENT** (DMC) 22a-449(c)-102(a); 105 (a), (b); 22a-449(c)-113(a)(1)

Number of areas: **Two.**

Location(s): **1) All wastes, except for universal wastes, are stored in the southeast portion of building, in the same room as the wastewater treatment system. 2) Universal wastes are stored in a box trailer in the rear parking lot.**

Impermeable base: **Uncertain; containers of hazardous waste were stored over an open metal grate, beneath which is a basement room that houses the wastewater treatment system. The floor of the basement was unsealed concrete. NOTE: On February 1, 2008, Mr. Richter informed me that since the inspection, GAR has purchased and installed containment pallets, upon which the drums of hazardous waste are now stored.**

Secondary containment: **See the comment above, and the email described in the comment below.**

Approximate number & sizes of containers: **Eight, 55-gallon drums of "copper/cyanide bags & filters", "floor sweepings", "acid copper bags & filters", "nickel sulfamate" (spent bath), "nickel sulfamate bags & filters", "iridite solution", "Alumon-En" (spent zincate bath), and "Ebanol-C" (caustic blackening agent). The contacts were uncertain which of these wastes were hazardous and which were non-hazardous. For more information, see "Pre-Transport Requirements", below. In addition, one drum of used oil and two, empty, 275-gallon totes (used to stored spent corrosive liquids) were stored with the other eight drums. Twelve, eight-foot spent mercury-containing lamps were stored loosely (stacked in a corner, not in a container) in a box trailer in the rear parking lot.**

Type(s): _X_ steel _X_ poly ___ fiber ___ bag/sack ___ lab pack ___ roll-off, Other: _____.

Management of containers:

Condition (leaks, ruptures, corrosion, heat, pressure): **Good.**

Containers closed when not in use: **Yes.**

50 foot buffer zone for ignitable and reactive waste: **Yes.**

Incompatibles separated by dike/wall, etc.: Unable to determine, because the contacts were uncertain which of the eight drums held hazardous wastes and which drums held non-hazardous wastes.

Storage less than 90 days (LQG) **(hazardous waste):** Yes, per accumulation dates and manifests.

Storage less than one year **(universal waste):** Yes.

Does the generator storing **F006** hazardous waste for up to 180 days follow 262.34(g): ___ Yes _X_ No

Does the generator storing **F006** hazardous waste for up to 270 days follow 262.34(h): ___ Yes _X_ No

Comment: On February 5, 2008, GAR submitted an email (with photographs) indicating that all containers were now stored on spill containment pallets. The purchase orders for the containment pallets were enclosed in a letter submitted by GAR on February 11, 2008 (attached).

40 CFR 262.30 – 34 **PRE-TRANSPORT REQUIREMENTS** (DPT) 22a-449(c)-102(a)

Packaging: Good, except for universal wastes, which were not packaged.

Labeling (if applicable, DOT hazard class): NA until shipped.

Marking (Words "Hazardous Waste", generator name & address, manifest document number if being shipped): No. The 12 spent lamps were not marked "universal waste lamps", Eight, 55-gallon drums were marked "Hazardous Materials" and with other identification of contents, but the contacts did not know which of these wastes were hazardous and which were non-hazardous. The contents were identified as "copper/cyanide bags & filters", "floor sweepings", "acid copper bags & filters", "nickel sulfamate" (spent bath), "nickel sulfamate bags & filters", "iridite solution", "Alumon-En" (spent zincate bath), and "Ebanol-C" (caustic blackening agent). According to the descriptions on manifests for previous shipments, the spent zincate baths (Alumon-En), spent iridite baths and possibly spent blackening agents (Ebanol-C) were hazardous wastes. I informed the contacts that GAR must determine which of the wastes in storage were hazardous and mark them "Hazardous Waste." NOTE: During this inspection, as a precaution until hazardous waste determinations were completed, Mr. Richter hand-marked each of the eight drums "Hazardous Waste." Also see the comment, below.

Contents described (e.g. chemical name): See comments (above and below).

Proper DOT shipping name: NA until shipped.

Accumulation date: Yes, for all wastes (hazardous and non-hazardous).

Inventory system (universal waste): Shipping records indicated less than one year storage, although the spent mercury-containing lamps were not dated.

Comments: On February 5, 2008, GAR submitted an email (with photographs) indicating that all containers had been re-marked with the appropriate wording.

40 CFR 265.190-202 & 40 CFR 262.34(generators) **WASTE TANKS** (DTR) 22a-449(c)105(a)(1); 105(a)(2)(S)-(W); 22a-449(c)105(e) & 113(a)(1)

Tank inventory/description (note above/underground, location, age, construction, ancillary equipment, capacity & waste type): NA; no waste tanks.

Adequate secondary containment for tanks and ancillary equipment: ___ Yes ___ No _X_ N/A: _____.

Describe leak detection system (including ancillary equipment): NA.

Describe corrosion protection system: NA.

Special requirements for ignitable and reactive waste: ___ Yes ___ No _X_ N/A: _____.

Labeling:

Hazardous waste tanks, words "Hazardous Waste" and description of contents: ___ Yes ___ No _X_ N/A

Universal waste tanks, marked to describe contents (pesticides): ___ Yes ___ No _X_ N/A

Storage less than 90 days (LQG); ___ Yes ___ No: NA.

Storage less than one year for universal waste: ___ Yes ___ No _X_ N/A: _____.

Evidence of releases/leaks: ___ Yes ___ No: if yes, describe: NA.

Was release reported: ___ Yes ___ No: if yes, date (if known): NA.

Certification of major repairs to tank: ___ Yes ___ No _X_ N/A. Any out of service tanks: ___ Yes _X_ No: if yes, describe: _____.

Comments: _____.

Existing Tank Systems (installed before January 12, 1987)

Written tank integrity assessment on-site(P.E. certified): ___ Yes ___ No _X_ N/A

Does assessment address all required items: ___ Yes ___ No: if no, explain: _____.

New Tank Systems (installed after January 12, 1987)

Written tank design, construction/installation assessment on-site (P.E. certified): ___ Yes ___ No _X_ N/A

Does assessment address all required items: ___ Yes ___ No: if no, explain: _____.

Documented installation & tightness test on-site: ___ Yes ___ No

Comments: _____.

40 CFR 279 Subpart C **USED OIL-GENERATOR REQUIREMENTS** 22a-449(c)-119(a) & (b)

Does the facility generate used oil at this site: _X_ Yes ___ No

Does the facility generate used oil at other sites in CT: ___ Yes _X_ No (if yes, list other sites in "Additional Comments" section)

Is the generator's used oil mixed with other waste(s): ___ Yes _X_ No

If yes, what type of waste is it mixed with: ___ Listed ___ Characteristic ___ Non-hazardous waste

If mixture is with characteristic hazardous waste, is the combined waste tested for characteristics: __ Yes __ No

Explain: NA

Has the total halogen content of the used oil been determined: ___ Yes _X_ No

Was the total halogen content determined by ___ Testing or ___ Generator knowledge – **no halogen determination.**

Does generator retain documentation demonstrating the halogen content for at least three years: ___ Yes _X_ No

Are the total halogens: ___ less than 1,000 ppm ___ greater than 1,000 ppm – **unknown.**

If the total halogens are greater than 1,000 ppm, did the generator:

___ Manage as a hazardous waste, or ___ adequately rebut the presumption of mixing with hazardous waste

Explain: _____

Is used oil accumulated on-site in: _X_ Container(s) ___ Aboveground tank(s) ___ Underground tank(s)

Describe type method and storage: **55-gallon drums.**

Are containers and tanks in good condition and not leaking: _X_ Yes ___ No

Are tank(s) and/or container(s) marked with the words "Used Oil": _X_ Yes ___ No

For each container or above-ground tank storing greater than 55 gallons of used oil:

Stored on an impervious surface: _X_ Yes ___ No

Stored within an enclosed building: _X_ Yes ___ No

If not stored within an enclosed building, has adequate secondary containment been provided: ___ Yes ___ No

Comments: _____

Are all underground tanks for used oil registered with DEP's UST Program: ___ Yes ___ No - NA

Does the facility store more than 1320 gallons of oil or other petroleum products in above-ground tanks, process equipment, or containers that are over 55 gallons in size: ___ Yes _X_ No

If yes, does the facility have an SPCC plan: ___ Yes ___ No

Has the facility had any known releases of used oil: ___ Yes _X_ No

If yes, did the generator: ____ Report the spill to DEP, and ____ Comply with "response to release" requirements

Explain: _____

Does the generator ship used oil via transporters that are permitted and that have notified EPA: _X_ Yes ___ No

If no, Explain: _____

List off-site destination(s) for used oil generated at this site: **See "Waste Profile", abo**

If facility is a Used Oil Processor or Re-Refiner, they are also responsible for complying with the standards, regarding used oil, in the following sections of this report: Preparedness & Prevention, Contingency Plan, Shipping Record, Waste Analysis Plan, Operating Records and Closure.

40 CFR 262.34(a)(1) **SUBPART BB APPLICABILITY** 22a-449(c)-102(a)(1)

40 CFR 265.1050 & 265.1064(k) 22a-449(c)-105(a)(1)

Does the generator have equipment (valve, pump, compressor, flange, pressure relief device, sampling connection system, or open-ended valve or line) that contacts hazardous waste with greater than 10% organic concentration: ___ Yes[1] _X_ No _____.

If yes, does the generator claim that any of this equipment is exempt from Subpart BB due to <300-hour annual use, being in vacuum service, or operating as a recycling unit: ___ Yes ___ No[1] NA _____.

If an exemption is claimed, does the generator have documentation to support this claim, in accordance with 265.1064(k): ___ Yes (describe) ___ No _X_ N/A _____.

Has the facility implemented a leak detection and repair (LDAR) program required by the Clean Air Act:

___ Yes ___ No _X_ N/A _____.

If yes, has the facility chosen to demonstrate compliance with Subpart BB by documenting compliance with the *Clean Air Act, in accordance with 265.1064(m):* ___ *Yes* ___ *No* _X_ *N/A*

[1] If the answer to question 1 is YES and the generator does not claim any exemptions, complete and attach the Subpart BB Checklist

40 CFR 262.34(a)(1) **SUBPART CC APPLICABILITY** 22a-449(c)-102(a)(1)

40 CFR 265.1080 – 265.1090 22a-449(c)-105(a)(2)

Tanks:

Does the generator manage hazardous waste with volatile organic concentrations ≥ 500 ppm/wt (on an average annual basis) in tanks: ___ Yes[2] _X_ No _____.

If yes, does the generator claim any exemptions from the requirements of this subpart: ___ No[2] ___Yes (explain):

[2] If the answer to question 1 is YES and no exemptions are claimed, complete and attach the Subpart CC Checklist.

Containers:

Does the generator manage in **containers (>26 gallons in size, non-satellite)** hazardous waste with volatile organic concentrations equal or greater than 500 ppm/wt (on an average annual basis): ___ Yes[3] _X_ No _____.

Do the containers meet Department of Transportation ("DOT") requirements: ___Yes[3] ___ No NA _____.

Are the containers closed: ___ Yes[3] ___ No NA _____.

[3] If the generator manages this waste **only in containers** and the containers are closed and meet DOT requirements, **stop here.** Otherwise, **complete and attach** the Subpart CC Requirements Checklist

40 CFR 262.34(a)(4); 265.30 – 37; **PREPAREDNESS & PREVENTION** (DPP) 22a-449(c)-102(a); 105(a);

40 CFR 273 Subpart A, B, C & 279.52 22a-449(c)-113(a)(1) & 119(a)(1)

Arrangements with local authorities: Yes; Tier II reporting and fire department.

Immediately accessible to internal communications/alarm system: Yes; evacuation alarm.

Telephone/hand-held two-way radio: **Yes; phones & page system.**

Emergency equipment (fire extinguisher/control, spill control, decontamination equip.): **Yes; spill control and personal protective equipment, fire extinguishers**

Equipment maintenance: **Uncertain; GAR had no inspection schedule and their inspection logs did not indicate what items were inspected.**

Access to emergency equipment: **Good.**

Adequate aisle space: **Yes.**

Source of water in the event of a fire: **City hydrant; building equipped with sprinklers.**

40 CFR 265.14 **SITE SECURITY** (DSS) 22a-449(c)-105(a)

Is claim made that contact/disturbance of waste would not cause injury/violation of 40 CFR 265.14(a): ___ Yes _X_ No:

If no, is there: ___ 24-hr surveillance system or _X_ barrier completely surrounding active portion

Means to control entry: _X_ Yes ___ No – **fenced with locked gate.**

"Danger – Unauthorized Personnel Keep Out" signs posted: _X_ Yes ___ No

Comments: **Security is required as part of post-closure maintenance of two, closed, surface impoundments.**

40 CFR 265.15 **INSPECTION SCHEDULE & LOG** (DIS) 22a 449(c)-105(a)

Does contact claim inspections are conducted: **Yes.**

Written inspection schedule: **None –see comment.**

Inspection log (comment on adequacy of contents: date, time, Items inspected, corrective action): **Partial; daily inspections are recorded on logs that include the date, time of inspection and initials (not full name) of the inspector, Dave Pitchard. However, the logs did not indicate what items were inspected, nor did GAR have an inspection schedule that might identify the items inspected. Instead, each log was a single-item check-off that an inspection had been performed. See comment, below, regarding a revised inspection log.**

Documentation:

Daily

All Loading/unloading areas subject to spills (when in use): **Uncertain; the logs did not indicate what items were inspected.**

Tanks Containment, detection, ancillary equipment: **NA**

Trtmt Treatment equipment: **NA**

Weekly

Containers Physical condition: **Uncertain; the logs did not indicate what items are inspected.**

Containers Containment system: **Uncertain; the logs did not indicate what items are inspected.**

Batteries Storage area: NA.

Other

All Safety and emergency equipment (monthly): Uncertain; the logs did not indicate what items are inspected.

Tanks *Cathodic protection (within six months, then yearly)*: NA.

Tanks Impressed current (every other month): NA.

Comments: On February 11, 2008, GAR submitted a completed copy of a revised inspection log (enclosed), which included a schedule, a space for the full name of the inspector, and the specific items inspected. However, the log and schedule did not indicate that inspections were required of safety and emergency equipment.

40 CFR 265.16 **PERSONNEL TRAINING RECORDS** (DPR) 22a-449(c)-105(a)

Training conducted: ___ Yes _X_ No: Initial training had been provided, GAR but lacked annual update training for 2007; see comment.

Last annual review (date): June 14, 2006; see comments. New employees: Yes.

Written description of training: The June 14, 2006 training session was attended by 28 employees and reviewed the contingency plan.

Job title, description and name of employee: Yes.

Records maintained on-site until closure/3 years for former employees: Yes.

Comments: On May 4, 2007, one new employee, Patrick Cranney, Lab Chemist, received RCRA hazardous waste training provided by Loureiro Engineering (certificate on file). However, neither the person who conducts hazardous waste inspections nor any of the five emergency coordinators were provided RCRA training in 2007. In 2007, GAR did have monthly safety meetings that addressed such items as the need to report unsafe working conditions or when safety equipment was needed. On February 11th, GAR submitted a letter (attached) indicating that RCRA training was provided on January 30, 2008. However, documentation for this training has not yet been submitted.

40 CFR 265.50-56; 262.34(a)(4) & 279.52(b) **CONTINGENCY PLAN** (DCP) 22a-449(c)-102(a); 105(a) & 119(a)(1)

Plan on-site: _X_ Yes ___ No. Date of plan: December 3, 2004 revision. Prepared by: Lancy Laboratories Division

Plan sent to local authorities: (police, fire, hospital, emergency response teams): Contacts uncertain; no documentation. The contacts were only familiar with the Tier II reporting requirement.

Emergency procedures (fire, explosions, releases/spills): Yes; address spill & fire procedures, coordinator duties, reporting, etc.

Emergency coordinator(s) name, address, home and office phone: Yes; the primary coordinators were identified as Todd Ray, Russell Richter and Guy Rosato. The alternate coordinators were identified as George Ray and David Strout.

Emergency equipment list location, description, capabilities: Yes; appeared complete.

Evacuation plan (signal, primary and alternate routes): Yes; description and site diagram.

Comments: The contacts stated that GAR had no spill reports in the past three years.

40 CFR 265.73 & 279.57 **OPERATING RECORDS** (DRR) 22a-449(c)-105(a)(2)(I) & (J) & 119(a)(1)

Are the following records maintained on-site:

Wastes received from off-site: NA Wastes from on-site: NA

Waste description: NA

Waste quantity: NA

Methods of and dates of storage/treatment/disposal: ___ Yes ___ No: NA

Waste inventory (including type, volume & location):

in storage: NA

disposed of on-site (recorded on map): Yes; post-closure controls in place for closed surface impoundments.

cross-referenced to specific manifest: NA

Analytical results for:

permitted waste: NA

monitoring wells: Yes; have site diagrams showing well locations and submit annual groundwater monitoring reports.

trial test (to assure compatibility with tanks, impoundments, or waste piles): NA

Report/summary of any incidents requiring implementation of the contingency plan: NA

Records and results of inspections: Yes.

Closure/Post Closure cost estimates: Yes.

Does the facility maintain a copy of the LDR notification or certification for each waste received: ___ Yes ___ No - NA

Comments: GAR does not treat, store or dispose of hazardous waste, but are in post-closure care for two closed, RCRA surface impoundments.

40 CFR 265.13(b) & 279.55 **WASTE ANALYSIS PLAN** (DWA) 22a-449(c)-105(a)(2)(f) & 119(a)(1)

Plan on-site: ___ Yes ___ No Date of plan: NA Prepared by: ___

Does plan include:

Testing parameters: ___ Yes ___ No: NA

Test methods: ___ Yes ___ No: NA

Sampling methods: ___ Yes ___ No: NA

Testing frequency: ___ Yes ___ No: NA

Copy of results on-site: NA

Comments: GAR does not treat, store or dispose of hazardous waste, but are in post-closure care for two closed, RCRA surface impoundments.

40 CFR 265.110-116 & 279.54(h) **CLOSURE PLAN** (DCL) 22a-449(c)-105(a)(1)(F)-(I) & 119(a)(1)

Have any regulated units closed: X Yes ___ No: _____.

If yes, is closure certified by owner/P.E.: X Yes ___No Date of closure certification: July 22, 1988.

Is closure certification on-file at the DEP: X Yes ___ No

Closure plan on-site: ___ Yes ___ No Date of plan: NE Prepared by: NE.

Status of closure plan (approved and date): Jointly approved by EPA and the Department on September 29, 1987.

Does plan include all regulated units (compare plan with Part A & on-site operations): NE.

Does plan include (indicate presence/absence, comment on adequacy):

Estimate of maximum inventory: ___ Yes ___ No: NE.

Description of how each unit will be closed & methods to be used during closure: ___ Yes ___ No: NE.

Description of steps needed to remove/decontaminate equipment/structures/soil: ___ Yes ___ No: NE.

Schedule for closure of each unit & for final closure (time-frames & milestones): ___ Yes ___ No: NE.

*Estimate of expected year of final closure: ___ Yes ___ No ___ N/A: NE.

Comments (e.g., operations do not match plan, amendments needed): Two metal hydroxide sludge surface impoundments were closed in 1988. On July 12 & 20, 2007, the Department performed a financial records review of GAR's post-closure financial assurance coverage, which included a review of the amount of sludge and underlying soil removed from the impoundments during closure, and an assessment of the post-closure controls in place.

* Only needed for facilities without approved closure plans and for facilities, using a trust fund for financial assurance whose remaining operating life is < 20 years

40 CFR 265.117-121 **POST CLOSURE PLAN** (DCL) 22a-449(c)-105(a) (1) (J) – (L)

Plan on-site: X Yes ___ No Date of plan: August 1987 Prepared by: Pace, Inc.

Status of Post-Closure plan (e.g., approved & date): On September 29, 1987, the Department approved the post-closure plan. On September 15, 1992 and September 29, 1997, the Department approved reductions in the groundwater monitoring frequency and post-closure cost estimate, respectively.

Does plan include description & frequency of:

monitoring activities: X Yes ___ No: Plan denotes quarterly monitoring (reduced to semi-annual in 1992).

maintenance & inspection activities (e.g., integrity of cap, ground water monitoring): X Yes ___ No : _____.

name, address, telephone number of post-closure contact: X Yes ____ No: Identified by job title instead of person's name, with GAR's address and phone number provided.

length of post-closure period: X Yes ___ No: 30 years.

Certification to the Commissioner that notation on deed has been recorded: X Yes ___ No: _____.

Record sent to the Commissioner of the type, location & quantity of hazardous waste disposed of in each cell/disposal unit: X Yes ___ No: _____.

Comments: **In May 2002, staff of the Department performed a post-closure controls review of GAR's post-closure groundwater monitoring program. The review concluded that GAR was subject to RCRA corrective action, had achieved stabilization for the applicable RCRA environmental indicators, and had approved controls in place.**

FINANCIAL REQUIREMENTS (DFR)

40 CFR 265.142 — CLOSURE COST ESTIMATE — 22a-449(c)-105(a)(1)

Estimate on-site: ___ Yes ___ No. Amount of estimate: $ NA. Date of most recent adjustment: _____.

Comments: **The surface impoundments were P.E. certified closed on July 22, 1988.**

40 CFR 265.143 — FINANCIAL ASSURANCE FOR CLOSURE — 22a-449(c)-105(a)(1) & 105(a)(2)(O)

Amount of coverage: $ NA. Comments: **Impoundments P.E. certified closed on July 22, 1988.**

40 CFR 265.144 — POST-CLOSURE COST ESTIMATE — 22a-449(c)-105(a)

Estimate on-site: X Yes ___ No. Amount of estimate: $33,692.40. Date of most recent adjustment: 2006.

Comments: **February 20, 2006 cost adjustment based upon 11 remaining years of post-closure groundwater monitoring. The Department does not have on file a post-closure cost update for 2007.**

40 CFR 265.144 — FINANCIAL ASSURANCE FOR POST-CLOSURE — 22a-449(c)-105(a)(1) & 105(a)(2)(P) & (R)

Type of mechanism: **Irrevocable letter of credit ("LOC") no. 800310 with Webster Bank.**

Amount of coverage: $48,510. Comments: **LOC extended to November 10, 2008.**

FINANCIAL REQUIREMENTS (DFR)

40 CFR 265.17 — LIABILITY INSURANCE — 22a-449(c)-105(a)(1) & 105(a)(2)(R)

Sudden accidental occurrences (all TSDF's) – NA; **see comment.**

Type of mechanism ___ trust fund ___ surety bond ___ letter of credit ___ insurance ___ financial test/corporate guarantee

Does the financial mechanism provide at least $1 million coverage per occurrence with at least an annual aggregate amount of at least $2 million: ___ Yes ___ No

Non-sudden accidental occurrences (impoundments landfills & land treatment facilities) – **NA; see comment.**

Type of mechanism ___ trust fund ___ surety bond ___ letter of credit ___ insurance ___ financial test/corporate guarantee

Does the financial mechanism provide at least $3 million coverage per occurrence with at least an annual aggregate amount of at least $6 million: ___ Yes ___ No

If the owner/operator must meet both liability standards and chooses to combine both coverage levels, does the financial mechanism provide at least $4 million coverage per occurrence with an annual aggregate of at least $8 million: ___ Yes ___ No

Comments: **In a letter dated May 21, 2002, the Department approved the certification of closure and released GAR from its obligation to maintain financial assurance and liability coverage for the surface impoundments. GAR continues to perform post-closure groundwater monitoring and maintain post-closure financial assurance.**

40 CFR 263 & 273 Subpart D **HAZARDOUS WASTE TRANSPORTATION** (TOR) 22a-449(c)-103; 113(a)(1); 22a-449(c)-11

Does the handler transport waste: ___ Yes _X_ No

Does the transporter have a 22a-449(c)-11 permit: ___ Yes _X_ No

If a permit is not required:

Shipping documents maintained on-site (**hazardous waste**): NA

Less than 1,000 kg/mo shipped using handler's vehicle (**hazardous waste**): NA

Universal waste transported to: ___another handler ___ destination facility ___ other: NA

Comments: _____

PHOTOS TAKEN (include: number taken, location, brief description or attach copy of photo log)

None.

SAMPLES TAKEN (attach copy of lab invoice and chain-of-custody form and describe sample collection below)

None.

COMMENTS ON OTHER AREAS OF ENVIRONMENTAL CONCERN

Noted in report.

ATTACHMENTS

(If the facility's operations include the following regulatory areas, please check-off the appropriate subject and attach to report)

_X_ **NO ATTACHMENTS APPLICABLE**

EXIT MEETING

Closing meeting held at conclusion of inspection: _X_ Yes ___ No

List attendees and their titles: Russell Richter, Vice President/General Manager; George Ray, President.

Areas reviewed: 1) GAR did not have documentation on file of their hazardous waste determinations. However, based upon generator knowledge and the detailed shipping names on the manifests, it appeared that the determinations had been made. On February 11, 2008, GAR submitted copies (attached) of 32 waste profiles that they obtained from the receiving facility immediately following this inspection. 2) GAR did not have LDR notifications on file for five shipments made in 2007 to EQ Detroit. Immediately following this inspection, GAR submitted unsigned and undated LDR notifications (attached) from EQ Detroit. 3) Eight containers of waste were marked "Hazardous Materials". The contacts were uncertain which wastes were hazardous and which were non-hazardous, and therefore which wastes should have been marked "Hazardous Waste". On February 11, 2008, GAR submitted copies (attached) of 32 waste profiles and photographs demonstrating that the appropriate containers were now marked "Hazardous Waste". 4) The eight containers were stored on an open grate above a basement room that had an unsealed concrete floor. On February 11, 2008, GAR submitted a letter, purchase order, and photographs (attached) indicating that all containers are now stored on spill containment pallets. 5) GAR did not have an inspection schedule. 6) The inspection logs did not indicate the items inspected or the full name of the inspector. On February 11th, GAR submitted a revised inspection log and schedule (attached). However, the documents did not indicate that safety and emergency equipment are to be inspected. 7) GAR did not know (and had no documentation demonstrating that copies of the plan had been sent – see attached) whether or not the contingency plan had ever been sent to the local authorities. 8) In 2007, GAR did not provide annual RCRA training to any employees. On February 11th, GAR submitted a letter (attached) indicating that on January 30, 2008, they provided RCRA training. However, documentation of this training has not yet been submitted.

Field citation issued: ___ Yes _X_ No, if yes, citation number: _____

INSPECTOR: Paul Hawley **DATE:** 2/13/08

Revised: 2/29/08

Revised: 3/20/08