PRELIMINARY
RCRA FACILITY ASSESSMENT
CORNING INCORPORATED
FALLBROOK PLANT
Work Assignment: R02040
(Ref. No.: 1-635-393)

Prepared for:
U.S. Environmental Protection Agency

Contract: 68-W9-0003

TRC
TRC Environmental Corporation

TRC formerly Alliance Technologies Corporation
TRC Environmental

291 Broadway Suite 1206
New York, NY 10007
☎ (212) 349-4616
Fax (212) 349 4648

December 3, 1993

Mr. Paul Counterman, P.E.
Chief, Bureau of Western Hazardous Waste Programs
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233

Reference: Contract No. 68-W9-0003, TES-6
Work Assignment No. R02040
Preliminary RCRA Facility Assessment
New York State
(Ref. 1-635-393)

Subject: Deliverable: Preliminary RCRA Facility Assessment for Corning Incorporated - Fallbrook Plant - EPA ID No. NYD000824425

Dear Mr. Counterman:

At the request of the U.S. Environmental Protection Agency, enclosed for your review is one copy of the Preliminary RCRA Facility Assessment Report for the above referenced facility. Comments and additional information should be submitted to Mr. John G. Nevius, U.S. EPA Work Assignment Manager. Due to contractual requirements between EPA and TRC, it is requested that your review be submitted by January 15, 1994. Any efforts by NYSDEC to meet this date would be greatly appreciated.

Mr. Nevius' address is as follows:

Mr. John G. Nevius
Work Assignment Manager
U.S. Environmental Protection Agency
Air and Waste Management Branch
(2AWM-HWF-Room 1037)
26 Federal Plaza
New York, NY 10278

Questions concerning this submission should be directed to Mr. Nevius at (212) 246-9578.

Very truly yours,

Michael F. Clark, P.E.

cc: John G. Nevius/EPA Work Assignment Manager (w/o)
Douglas Sullivan/TRC TES-6 Regional Manager (w/o)
Dixon Rollins/Region 8-Hazardous Substance Engineer (w)
TES ZPMO

PRELIMINARY
RCRA FACILITY ASSESSMENT
CORNING INCORPORATED
FALLBROOK PLANT
CORNING, NEW YORK

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Air and Waste Management Division
26 Federal Plaza
New York, New York 10278

Work Assignment No.:	R02040
EPA Region:	II
EPA Site/Facility I.D. No.:	NYD000824425
Contract No.:	68-W9-0003 (TES-6)
TRC Document No.:	NY-R40.R29
TRC Project No.:	1-635-393-3-2000-0
TRC Project Manager:	Michael F. Clark P.E.
Telephone No.:	(212) 264-9397
Subcontractor:	N/A
Subcontractor No.:	N/A
Subcontractor Project Manager:	N/A
Telephone No.:	N/A
EPA Work Assignment Manager:	John G. Nevius
Telephone No.:	(212) 264-9578
Date Prepared:	November 29, 1993

TRC ENVIRONMENTAL CORPORATION
291 Broadway, Suite 1206
New York, New York 10007
(212) 349-4616

TRC

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	FACILITY DESCRIPTION	1
3.0	FACILITY ACTIVITY/HISTORY	7
4.0	ENVIRONMENTAL SETTING	10
5.0	PRELIMINARY EVALUATION	10
6.0	SUMMARY	11
REFERENCES		12

Appendices

A	Completed Preliminary Review Checklist	A-1
B	Analytical Data	B-1
C	Closure Documents	C-1

TABLES

Number		Page
1	Areas of Concern	10

FIGURES

Number		Page
1	Site Location Map	3
2	Site Sketch	4

THIS PAGE INTENTIONALLY LEFT BLANK

1.0 INTRODUCTION

TRC Environmental Corporation (TRC - formerly Alliance Technologies Corporation) was requested by the U.S. Environmental Protection Agency (EPA) under EPA Contract No. 68-W9-0003 (TES-6), Work Assignment No. R02040, to perform a Preliminary RCRA Facility Assessment (RFA) of the Corning Incorporated - Fallbrook Plant, Corning, New York (EPA I.D. No. NYD000824425). Tasks were performed in accordance with the Preliminary RFA Scope of Work provided by EPA on June 8, 1993, and TRC's Work Plan, dated July 14, 1993.

The purpose of the Preliminary RFA is to identify, gather information on, and evaluate the potential for releases to the environment from areas of concern (AOCs), including solid waste management units (SWMUs), hazardous waste management units (HWMUs), and areas where releases may have occurred in the past. In addition, the Preliminary RFA will provide information for EPA use in the ranking of this facility using the National Corrective Action Prioritization System (NCAPS).

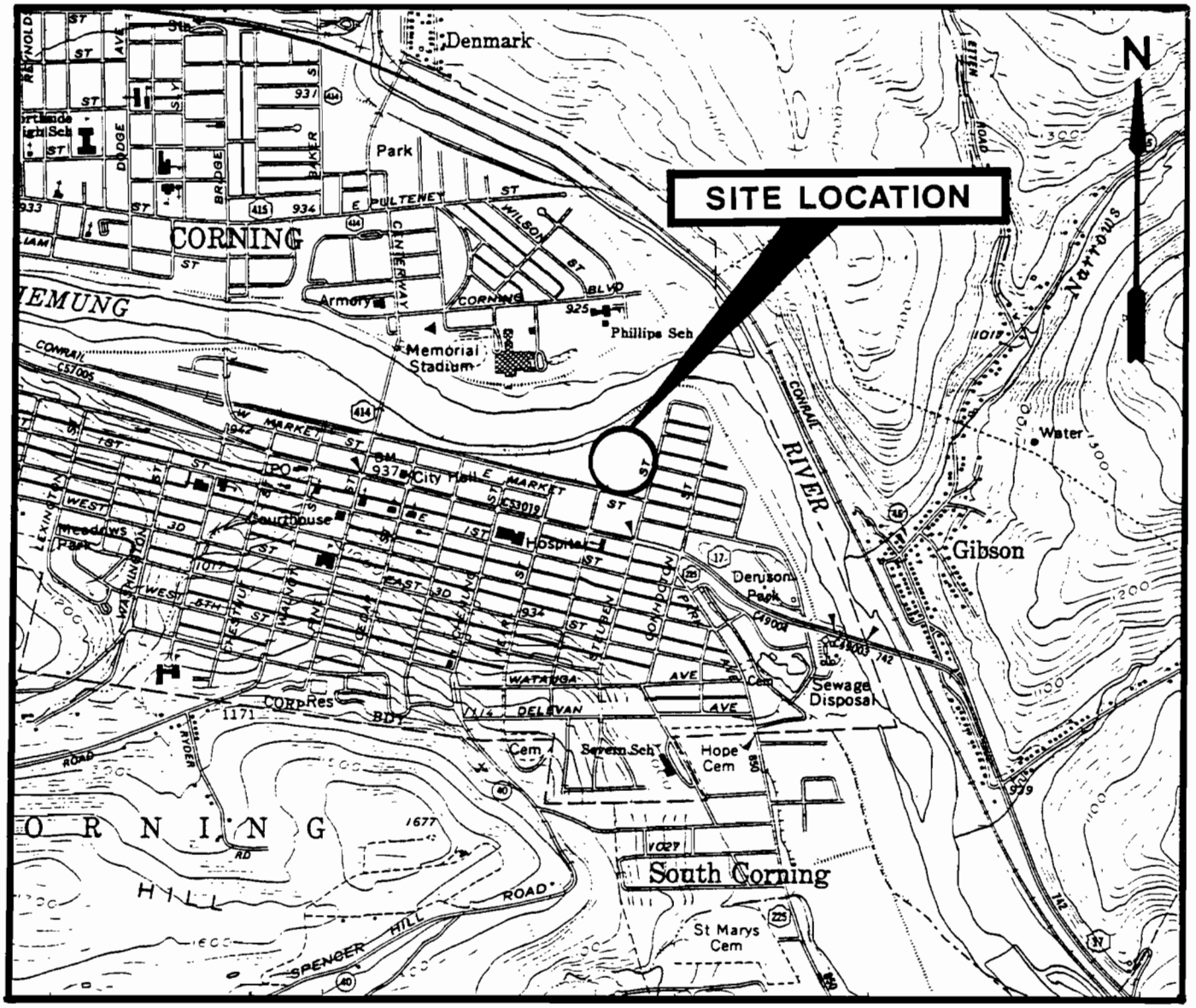
Background information for this Preliminary RFA Report was obtained through file searches conducted at the New York State Department of Environmental Conservation (NYSDEC), Albany, New York, Bureau of Hazardous Waste Facility Compliance, Bureau of Wastewater Facilities Design, and the Bureau of Air Application, Review and Permitting. TRC conducted a Visual Site Inspection (VSI) on September 29, 1993.

2.0 FACILITY DESCRIPTION

The Fallbrook Plant is located on Tioga Avenue, in the Town of Corning, New York. The facility primarily manufactures glass tubing used in products such as television sets, lighting accessories and thermometers.

The Fallbrook Plant is located between Steuben Street on the southeast border, and Tioga Avenue, on the southwest border. It is adjacent to the Corning Vitro Corporation Pressware Plant and the Chemung River flows northeasterly along the facility's northern property border. Figure 1 presents the Site Location Map. The surrounding area is zoned industrial/commercial and is characterized as urban. Across Tioga Avenue is a library and two apartment buildings. Two schools and associated school fields are located across the river (TRC, 1993).

TRC identified eight (8) AOCs during the file review and the VSI. These areas, including their spacial location, containment features, years of use, stored and release status, are described below and are summarized in Table 1. A Corrective Action Prior to Loss of Interim Status (CAPT LOIS) Inspection was conducted in 1989. Several SWMUs were identified during this inspection (CDM, 1990). During TRC's VSI,



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

QUADRANGLE LOCATION

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP QUADRANGLE, CORNING, N.Y.

TRC	TRC Environmental Corporation 18 Worlds Fair Drive Somerset, N.J. 08873
CORNING, INC. FALLBROOK PLANT TIOGA AVENUE, CORNING, N.Y.	
SITE LOCATION MAP	
Date: 9•9•93	Proj.# 1-635-393 / Fig. 1
WORK ASSIGNMENT NO. R02040	

TABLE 1. AREAS OF CONCERN

AOC No.	Area of Concern (AOC)	AOC Description	Operation Dates	Release Status	Reference	Medium/ Compound Detected	Off-site Migration Potential
1	Hazardous Materials Pen (HWMU, SWMU #1)	30' x 40' outdoor pen west of facility is bermed and surrounded by a fence.	1980-present	potential release	CDM, 1990 TRC, 1993	none	unknown; several cracks in concrete floor
2	Former Drum Storage Area	Asphalt pad has no containment and several cracks and holes in floor.	unknown-1990	potential release	TRC, 1993	soils; arsenic 13-26 ppm cadmium 0.62-6.6 ppm lead 130-1800 ppm 1,1,1-TCA 16-1200 ppb	unknown; extent of soil contamination not known
3	Former Underground Storage Tanks	3 USTs were located north of plant; area is now a concrete pad.	unknown-1980's	potential release	TRC, 1993	none	unknown; removal not documented
4	Waste Water Treatment Plant Sludge Storage Area (HWMU, SWMU #3)	Adjacent to WWTP. Roll-off containing hazardous sludge.	1980-present	no release	CDM, 1990 TRC, 1993	none	low; wastes well contained
5	Hazardous Waste Accumulation Pad (HWMU, SWMU #2)	Roll-off stored on 20' x 30' concrete pad.	1980-1990 1991-present	potential release	CDM, 1990 TRC, 1993	wipe samples; lead 1.7-8.7 mg/wipe	unknown; residual lead contamination on pad
6	Electrostatic Precipitators	Located in a small building adjacent to northern wall of plant.	1972-present	potential release	TRC, 1993	none	unknown
7	Baghouse Dust Collector	Located in a small building adjacent to northern wall of plant.	1992-present	potential release	TRC, 1993	none	unknown
8	Paint Shop Accumulation Area	Located in basement near eastern corner	unknown-present	no release	TRC, 1993	none	low; wastes well contained.

these SWMUs were verified. The Site Sketch (Figure 2) illustrates the relative locations of the AOCs.

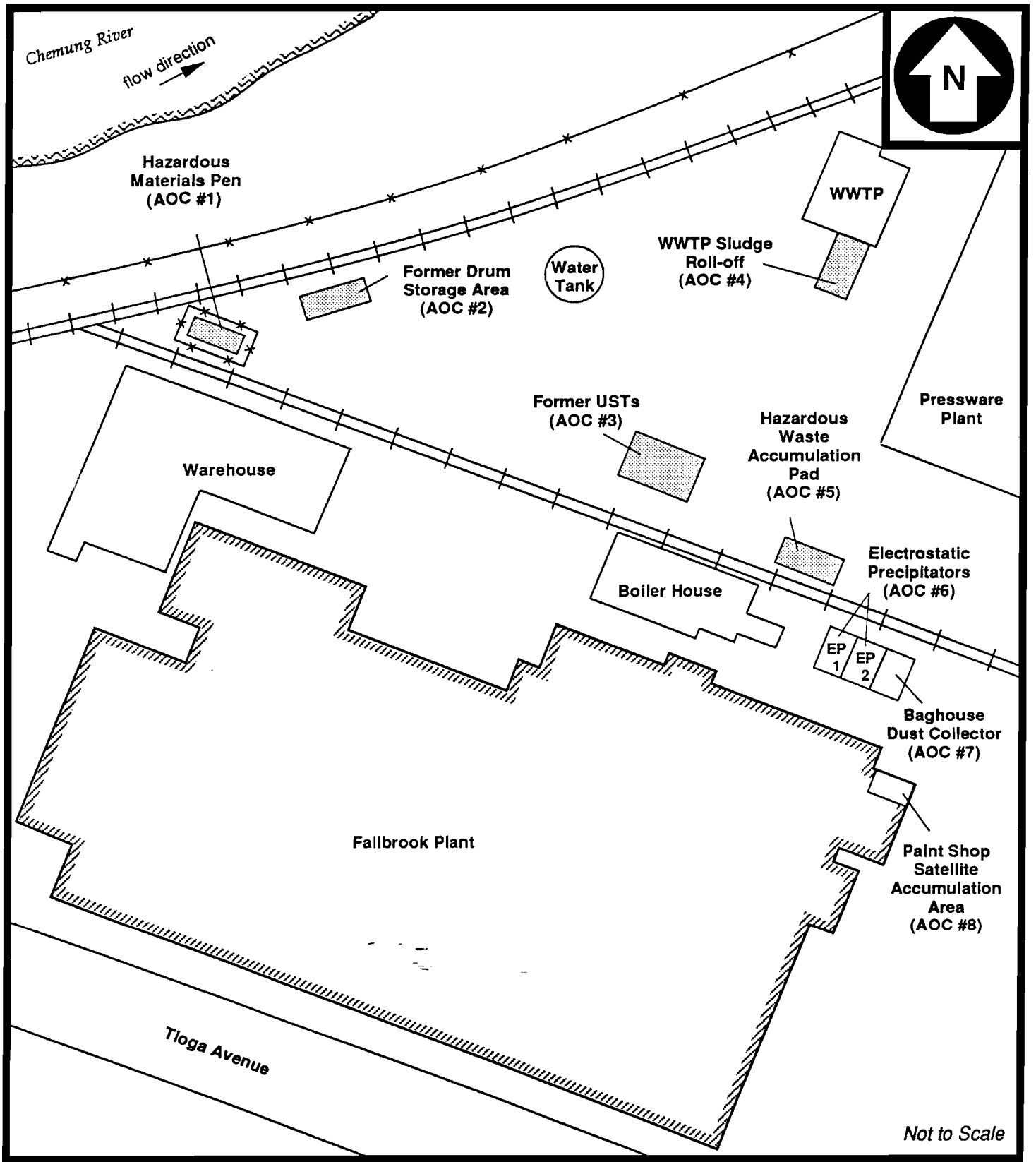
AOC #1, Hazardous Materials Pen (identified as SWMU #1 in the CAPT LOIS report), is located outdoors near the property boundary, northwest of the Fallbrook Plant. The area is approximately 30 feet by 40 feet and is surrounded by a locked fence. The capacity of the pen is 144 55-gallon drums. Drums are placed on pallets and are covered by a shed roof, but are still exposed to weather since there are no walls and little overhang. The floor is concrete and has a 6 inch asphalt berm. Observations during the VSI and the CAPT LOIS inspection conducted in 1989 revealed that the floor was cracked. A metal shed inside the area stores spill control equipment. Overpack salvage drums were also stored here (TRC, 1993; CDM, 1990).

The Hazardous Materials Pen has been used since 1980 to store both virgin hazardous materials and hazardous wastes. Virgin materials stored in this area during TRC's VSI included caustic soda, muriatic acid and acetone (TRC, 1993). It was noted during the VSI that two incompatible substances, caustic soda and muriatic acid, were stored directly next to each other. Waste materials are stored for less than 90 days. No evidence of release was observed during the VSI and Corning personnel did not know of any releases (TRC, 1993).

AOC #2, Former Drum Storage Area, is adjacent to the northern border of the Fallbrook Plant property. The area has not been used since 1987 and went through closure in 1990. Except for a cinderblock wall on the northern side, the drum storage area did not have any other containment features. The floor of the storage area was made of asphalt, and its integrity was reduced due to several cracks and small holes. There were no provisions for storm water drainage, therefore all storm water collected is in a low point just outside the pad. While the storage area was being used, a maximum of thirty 55-gallon drums were stored on wooden pallets, never more than two drums high (Corning, 1990). During the VSI, TRC confirmed that no hazardous wastes are presently stored in this area. No releases were documented in the available files, however, the presence of contaminants in the soils indicates that a release may have occurred.

AOC #3 includes three former underground storage tanks (USTs), which were located just north of the Fallbrook Plant. The three tanks were removed in the 1980s and were inspected by the NYSDEC at the time of removal. A concrete pad has been constructed where the tanks were once located. Other information regarding the size, type, material stored and integrity was not available. No information was found regarding these tanks in the preliminary file review (TRC, 1993).

AOC #4, Wastewater Treatment Plant Sludge Storage Area (identified as SWMU #3 in the CAPT LOIS report), is a covered roll-off hopper located adjacent to the waste water treatment plant (WWTP). This sludge storage area has been active since 1980.



Fence

Railroad

SITE SKETCH

CORNING, INC. - FALLBROOK PLANT
CORNING, NEW YORK

TRC

Figure 2.

MS75/1/U

All facility wastewater flows through floor drains in the manufacturing plant to the WWTP. Little information was available regarding the layout of the floor drain system. Waste waters treated by the WWTP are contaminated with lead from diamond cutting operations. Therefore, sludge generated from the waste water treatment process is considered hazardous due to its lead content.

The waste water treatment plant was built in two phases. Plant #1 was constructed in the 1970s and Plant #2 in the 1980s. All facility waste water, except sanitary and diode water, in initially treated Plant #2. Sludge then goes to Plant #1, where it is dewatered to approximately 35 percent solids using rotary vacuum filters. The dewatered sludge is then placed in the hazardous waste roll-off. The sludge is transported off site for hazardous waste disposal. Storage is less than 90 days (CDM, 1990; TRC, 1993).

AOC #5, Hazardous Waste Accumulation Pad (identified as SWMU #2 in the CAPT LOIS report), is a concrete pad with dimensions of 20 feet by 30 feet. AOC #5 has been active since 1980 and went through the closure process in 1990. It was reopened in 1991 as a less than 90 day hazardous waste accumulation pad. A covered, roll-off hopper filled with lead contaminated hazardous waste was stored on the pad at the time of the VSI. The pad is surrounded on three sides by a ditch, approximately 12 to 15 inches deep, which prevents run-off to the concrete pad onto the surrounding area.

The fourth side of the pad is adjacent to an asphalt strip which slopes up to a concrete wall, thus eliminating the need for a fourth trench (CDM, 1990; TRC, 1993).

During TRC's VSI, wastes stored in the roll-off included lead glass sweepings and cuttings as well as contaminated bricks and other debris from repairs to the lead glass melting tanks. No releases were evident at the time of this inspection and Corning Inc. personnel did not report any spills or releases (TRC, 1993).

AOC #6 includes two Electrostatic Precipitators (EP-1 and EP-2), which are located in a building adjacent to the north-eastern wall of the main plant. The electrostatic precipitators were installed in 1972 and each abates particulate emissions from separate glass melting tanks. EP-1 services a hot glass tank that mainly produces leaded glass, while EP-2 services a non-leaded glass tank. The precipitators pelletize the captured particulates. These pellets are temporarily stored in the EP building and are then reused in the glass making process. Both electrostatic precipitators exhaust to the same stack which is regulated under a NYSDEC air permit (TRC, 1993).

AOC #7, Baghouse Dust Collector, is located in a building adjacent to the Electrostatic Precipatators. The baghouse was installed in 1992. Particulates are collected in flex bags which are stored on wooden pallets in the baghouse building. The collected particulates are hazardous depending on the type of glass being made. When the dusts are considered hazardous, they are stored in the baghouse building

until there are enough bags to fill a roll-off hopper or until 90 days, which ever comes first (TRC, 1993).

AOC #8, Paint Shop Accumulation Area, is located in the basement of the Fallbrook Plant. The area is adjacent to the outside wall, near the eastern corner of the plant. The paint shop is fully enclosed with a concrete floor. During the VSI, TRC observed a 55-gallon hazardous waste drum containing rags contaminated with paint and mineral spirits. Paint was stored in a cabinet. There was no evidence to indicate that a release had occurred (TRC, 1993).

3.0 FACILITY ACTIVITY/HISTORY

The main manufacturing building at the Fallbrook Plant was built in 1938 on the site of the Fallbrook Railyard. The present Fallbrook computer operations center was originally built as the Fallbrook Railyard office in 1893. The plant currently employs approximately 400 people.

The facility produces glass tubing used in television sets, lighting accessories and thermometers. Types of glass tubing manufactured include silica glass, lead glass and glass which contains small amounts of arsenic. The glass batch raw materials are melted in either a cold crown or hot crown vermeil tank. These tanks are lined with refractory bricks which eventually degrade and require replacement. The glass tubing is manufactured using the Vello process. Air is blown through molten glass at the bottom of the tank to form a tube. This tube of hot glass is drawn by a tractor device along the length of the plant floor. While the tubing travels towards the end of the plant floor, it passes through an annealing oven for strengthening. By the time the tubing has reached the end of the line, it is cool enough to be cut to size. The glass tubes then go through various physical finishing processes such as fire polishing or shaping. Some of the glass is ground and sold as a powder (TRC, 1993).

Hazardous wastes generated at the Fallbrook Plant include:

- waste leaded glass from cutting processes;
- tank debris including contaminated refractory bricks from tank maintenance or decommissioning;
- particulates accumulated by the air quality control devices;
- sludge contaminated by lead and other metals generated by the waste water treatment plant; and
- wastes generated by the paint shop (TRC, 1993).

These wastes can be characterized as ignitable (D001), corrosive (D002), EP toxic (barium and lead), and arsenic oxide (P012) wastes (CDM, 1990).

In November 1980, Corning Inc. submitted a RCRA Part A Application to New York State Department of Environmental Conservation (NYSDEC) to operate as a Treatment, Storage or Disposal Facility (TSDF) (SBG, 1991).

In 1984, Corning began the process of reclassifying the Fallbrook Plant as a generator only. Revised/updated closure plans were submitted to NYSDEC in September 1984, November 1984 and October 1990. Formal approval of the closure plan was received by Corning Inc. in October, 1990 (SBG, 1991). The closure plan was implemented in early December 1990. On October 20, 1992, NYSDEC received the independent professional engineer's certification of RCRA closure for the facility. At this time, NYSDEC terminated Corning's authority to operate a as Treatment, Storage, and Disposal Facility (TSDF) at the Fallbrook Plant (NYSDEC, 1992).

Two areas of concern, AOC #2 and AOC #5 went through closure in December 1990. A discussion of closure activities and analytical results of samples taken during the closure is presented below. Analytical results for the closure samples are provided in Appendix B.

The Former Drum Storage Area (AOC #2) went through closure in December of 1990 and was officially closed in 1991. The asphalt storage area was cleaned with high pressure hot water which was vacuumed into drums. After cleaning, three wipe samples from the floor of the storage area and two asphalt chip samples were collected. Additionally, four soil samples were collected from areas where cracks in the asphalt floor were noted. Background soil sample and a rinse water sample were also collected (SBG, 1991).

Analytical results from the AOC #2 wipe samples were generally considered to be acceptable. Concentrations of metals (arsenic, cadmium and lead) in the asphalt chip samples were also acceptable since they were at or below concentrations detected in the background soil sample. All four soil samples contained quantifiable amounts of arsenic, cadmium, lead and 1,1,1-trichloroethane (1,1,1-TCA). Arsenic and cadmium concentrations ranged from 13 to 26 ppm, and 0.62 ppm to 6.6 ppm, respectively. These concentrations were not of concern since they were not significantly higher than concentrations found in natural soils. Both lead and 1,1,1-TCA were identified in all soil samples at elevated levels. The 1,1,1-TCA results ranged from 16 to 1,200 ppb while the lead results ranged from 130 to 1,800 ppm (SBG, 1991).

TCLP analyses for three of the four soil samples indicated lead leachate concentrations that were below the 5 ppm action level. The sample area that failed the TCLP lead test was determined to be a "hot spot." An area centered at the sampling location measuring eight feet by eight feet and one foot deep was subsequently excavated. A

further sample was collected from the bottom of the excavation. TCLP analyses of this sample revealed an acceptable lead leachate concentration of 2.9 ppm (SBG, 1991).

On December 11, 1990 a post closure inspection was performed by a NYSDEC representative. The inspection form dated November 7, 1991 did not cite the elevated lead and 1,1,1-TCA contamination detected in the soils (NYSDEC, 1991).

The Hazardous Waste Pad (AOC #5) also went through the closure process in December of 1990. The pad and the trenches surrounding it were cleared of debris and washed with high pressure hot water. Three wipe samples were collected from the pad and analyzed for arsenic, barium, cadmium, chromium, lead and selenium. Wipe sample concentrations of less than 1 mg/wipe were detected for all analytes except lead which ranged from 1.7 mg/wipe to 8.7 mg/wipe. The closure report stated that the lead wipe concentrations were not of concern because the lead would be bound by the concrete matrix of the pad (SBG, 1991). Despite the relatively high lead wipe sample results, NYSDEC declared the pad clean closed.

The Fallbrook Plant discharges waste water under SPDES permit number NY0003981 which will remain in effect until 1998. This permit is shared with the adjacent Pressware Plant and allows for effluent to be discharged to the Chemung River via Outfalls 002 and 003. The waste water treatment plant discharges approximately one million gallons per day of waste water to Outfall 003. Only non-contact cooling water from the Pressware Plant is discharged to Outfall 002. Parameters tested monthly include: temperature, pH, metals, oil and grease, total suspended solids, biological oxygen demand (BOD), and 1,1,1-trichloroethane. The permit allows discharges of up to 1.2 lb/day for lead, and 0.01 lb/day for cadmium. Copper, aluminum, iron, are also tested monthly. Metals tested quarterly include magnesium, manganese, nickel, zinc and boron. The existing SPDES permit was modified in 1990 to include effluent limits for chromium and manganese (NYSDEC, 1990b). The state had filed a consent order in 1985 with the facility regarding lead exceedences on a continual basis. Although arsenic is used in processes at the plant, the SPDES permit does not require arsenic to be tested.

The Fallbrook Plant has 29 air permits with NYSDEC (Corning, 1993). Most of these permits regulate particulate emissions from the plant. As discussed above, the Fallbrook Plant has three air quality control devices; two electrostatic precipitators and one baghouse dust collector. Depending on the type of glass being made, these abatement devices remove particulates which contain lead and/or arsenic. No information regarding air permit exceedences was found during the file review.

4.0 ENVIRONMENTAL SETTING

A well exists on site for process water; however, the facility receives its drinking water from the municipal water supply. The nearest drinking water well is 300 feet from the facility although its exact location was not provided in available files. The facility is not located over a single source aquifer and the distance to the Chemung River, the nearest surface water body, is 50 feet. This water is classified as class "C", recreational. The plant does not lie within the 100 year floodplain (Corning, 1987).

The facility has always been connected to the town sewer system for the disposal of sanitary waste. All process waste water flows through floor drains to the waste water treatment plant (TRC, 1993).

5.0 PRELIMINARY EVALUATION

Information regarding the eight AOCs identified through the file review and VSI is summarized in Table 1, AOC Summary. The summary checklists are provided in Appendix A, analytical results are presented in Appendix B and closure documentation is presented in Appendix C.

The Hazardous Materials Pen (AOC #1) is currently used as the hazardous waste accumulation area for the Fallbrook Plant. During the VSI, several cracks were observed in the concrete floor of the bermed pen. These cracks were also observed during the CAPT LOIS inspection during 1989. These cracks provide a potential migration pathway for released contaminants.

High levels of lead and 1,1,1-TCA were detected in soil samples collected during closure of the Former Drum Storage Area (AOC #2). An eight feet by eight feet by one foot area was subsequently excavated. TCLP lead results from a sample collected at the bottom of the excavation were determined to be acceptable and no further action was performed. However, the extent of lead and 1,1,1-TCA contamination in soils was not determined. Additionally, no ground water samples were collected at this location. Although there is no history of spills in this area, the presence of contamination in the soil cannot rule out the probability of a release.

Three USTs were removed from the location designated as AOC #3. Documentation regarding the tank removal is not available. These tanks were removed prior to the current regulation; therefore, any releases to the environment from the USTs is unknown.

A roll-off containing lead contaminated sludge is located in the Waste Water Treatment Plant Sludge Storage Area (AOC #4). The roll-off is covered and the hazardous waste appears to be well contained.

The Hazardous Waste Pad (AOC #5) was clean closed in 1990 and reopened shortly afterwards. Although wipe samples collected during the closure provided evidence of some residual lead contamination, the pad was declared clean closed by NYSDEC. Currently, a roll-off containing hazardous lead contaminated solid waste is stored on the pad. The roll-off is covered and the wastes appear to be well contained.

One of the two electrostatic precipitators (AOC #6) services a hot glass tank that produces leaded glass. Therefore, emissions of lead contaminated particulates to the environment are possible depending on the removal efficiency of the control device.

The baghouse dust collector (AOC #7) accumulates particulates from glass melting tanks. The particulates collected are considered hazardous depending on the type of glass being manufactured. Emissions of hazardous constituents from the baghouse are possible depending on the removal efficiency.

Hazardous wastes observed at the Paint Shop Accumulation Area (AOC #8) appeared to be well contained. There were no signs of release from this AOC.

6.0 SUMMARY

The Fallbrook Plant manufactures glass tubing that is used in products such as televisions, lighting fixtures and thermometers. The main raw material used in the manufacturing process is sand which may contain lead or arsenic oxide, depending on the type of glass being made. Wastes generated in the manufacturing process include waste leaded glass, contaminated tank debris, contaminated dust from air control devices, and contaminated sludge from the waste water treatment plant.

The Hazardous Materials Pen (AOC #1) is currently used as the hazardous waste accumulation area for the Fallbrook Plant. There are several cracks in the concrete floor which may provide a potential migration pathway for released contaminants.

Soil samples collected during closure of the Former Drum Storage Area (AOC #2) indicated concentrations of lead and 1,1,1-TCA that were well above background levels. An area of eight feet by eight feet by one foot deep was excavated and no further action was performed. The extent of lead and 1,1,1-TCA contamination in soils and ground water in the vicinity of AOC #2 is not known since no additional soil or ground water samples have been collected.

REFERENCES

CDM, 1990. CAPT LOIS Report prepared by Versar, Inc., from Pam Hillis, CDM Federal Corporation, to Margaret Emile, U.S. EPA, December 13, 1990.

Corning, 1984. Letter from J.L. Cherill, Corning, Inc., to G.W. Heitzman, NYSDEC. re: Fallbrook Closure Plan Submittal. July 3, 1984.

Corning Inc., 1987. Certification of Answers to Request for Information Regarding Solid Waste Management Units prepared by Norman E. Garrity, Corning Inc., Sr. Vice President, for U.S. EPA, Region II, March 11, 1987.

Corning, 1990. Closure Plan for Fallbrook Plant Revised August 1990.

Corning, 1993. Letter to TRC Environmental from Karen Gross enclosing information requested during site inspection October 11, 1993.

NYSDEC, 1983. Letter from Conrad Simon, NYSDEC, to George McClaren, Corning Glassworks, re: Part B application. November 14, 1983.

NYSDEC, 1984. Letter from John L. Middlekoop, NYSDEC, to Robert Perry, Corning, Inc. re: Reclassification to a Generator Status. September 27, 1984.

NYSDEC, 1985. Letter from Paul J. D'Amato, NYSDEC, to John L. Cherill, Corning Inc., re: Consent Order of SPDES exceedances. July 3, 1985.

NYSDEC, 1990a. NYSDEC Inspection Form prepared by Darshan R. Patel, Asst. Chemical Engineer, for NYSDEC, Division of Hazardous Waste Substances Regulation, June 20, 1990.

NYSDEC, 1990b. Letter from Jane Schmidt, NYSDEC, to Joseph F. Kane, Corning Inc., re: SPDES permit modification. November 28, 1990.

NYSDEC, 1991. NYSDEC Inspection form performed by Joseph Gavin, Environmental Engineer, for NYSDEC, Division of Hazardous Waste Regulation, November 11, 1991.

NYSDEC, 1992. Letter from Salvatore J. Carlomango, NYSDEC, Bureau of Hazardous Waste Regulation, to Karen Gross Corning, Sr. Environmental Control Engineer, re: Closure of Corning Inc., Fallbrook Facility. October 20, 1992.

NYSDEC, 1993. Letter to Ms. Karen Gross, Corning Inc., from Jane Schmitt, NYSDEC. re: SPDES permit. July 29, 1993.

Sear-Brown Group, 1991. Partial Closure Certification prepared by Sear-Brown Group for Corning Inc., June 1991.

TRC, 1993. Logbook for Visual Site Inspection. Completed by C. Fortin, TRC Environmental Corporation. September 29, 1993.

APPENDIX A

COMPLETED PRELIMINARY REVIEW CHECKLIST

PRELIMINARY RCRA FACILTY ASSESSMENT

PRELIMINARY REVIEW CHECKLIST

WORK ASSIGNMENT NO. R02040

KEY

P	PROVIDED
NP	NOT PROVIDED
A	ACCEPTABLE
NA	NOT ACCEPTABLE
Y	YES
N	NO
OR	OBSERVED RELEASE (DIRECT EVIDENCE)
SR	SUSPECTED RELEASE (INDIRECT EVIDENCE)
PoR	POTENTIAL RELEASE (POSSIBLE FOR A RELEASE TO OCCUR)
NR	NO RELEASE HAS OCCURRED (DIRECT EVIDENCE)
SWMU	SOLID WASTE MANAGEMENT UNIT
AOC	AREA OF CONCERN

RFA COMPONENT 1: PRELIMINARY REVIEW (PR)

A. General Manufacturing process description: ___P ___NP ___A ✓NA

Comments: Facility produces glass tubing for televisions, lighting accessories diodes and automobile devices. The actual process by which the listed is produced was not provided.

B. General Facility waste generation description: ___P ___NP ___A ✓NA

Comments: Hazardous wastes generated include ignitable (D001), corrosive (D002) EP Toxic (Barium and Lead) and arsenic acid wastes (P012). The process by which the listed are generated is not described.

C. Environmental/hydrogeologic setting description: ✓P ___NP ___A ✓NA

Comments: Some indication of this information is provided in an EPA Checklist dated 3/11/87. However, no maps or detailed physical description are available.

D. SWMU identification list: ✓P ___NP ___A ___NA

Comments: information located in EPA checklist 3/11/87, CAPT lists 12/13/90, and Partial Closure Certification 6/91

E. Was the SWMU subset of RCRA regulated units denoted? ___Y ___N ___A ___NA

Comments:

F. Were other AOC's (e.g. spills, leaks) listed? ___Y ✓N ___A ___NA

Comments:

G. Were potential off-site exposure pathways identified? (e.g. drinking water wells, irrigated farmland, swamps) ✓Y ___N ___A ✓NA

Comments: There is a river (Cherry River) on-site. Nearest drinking water source is within 300 ft. Ref. EPA Checklist There is no document containing this information in detail.

H. Detailed SWMU or AOC information:

SWMU # 1 or AOC Drum Storage Area

1. Is the unit located on a facility map? ✓Y ___N ___A ___NA

Comments: Active since 1980 for storage of D001 and D002 liquid waste. This unit was closed as part of the Partial Closure Certification of 6/91

2. Unit characteristics (e.g. design, liners, age, construction):
✓Y ___N ___A ___NA

Comments: 30 x 40 ft concrete pad with fencing and warning signs. The concrete is surrounded by a 6 inch berm. The pavement is cracked. A metal shed upon the area contains liquid equipment

3. Waste characteristics (e.g. types, volumes, classification):
✓Y ___N ___A ___NA

Comments: D001 & D002 waste (liq. ignitable and corrosive). Per CAPP Logs 12/13/90, only 2 drums were there containing waste oil and mineral spirits. Closure indicated 2-3 was the average. Capacity = 144 - 55 gallon barrels.

4. Waste migration pathways:

a. Air: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: [illegible]

b. Soil: ✓CR ___SR ___PoR ___NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: The pavement was cracked in this area per 12/90 CAPP log report. There was no evidence of any spills. Per Closure Certification 6/91 excessive levels of lead were detected in the soil and consequently action was taken. The soil was removed.

c. Ground water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: Per Partial Closure Certification 6/91 the soil conditions did not support that leaching had occurred

d. Surface water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ✓Y ___N

Comments: [illegible]

e. Subsurface gas: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:_____

5. Conclusions/Recommendations:

a. ___ No conclusion or recommendation provided.

___ Recommend no further action.

___ Recommend a sampling visit.

i. Was sampling performed as part of this RFA? __Y __N

ii. Will the sampling be conducted in a RFI? __Y __N

___ Recommend interim measures.

___ Recommend a RFI.

Comments:_____

b. Is the recommendation acceptable? ___Y ___N

Comments: [illegible]

- Per. Partial Closure Certification 6/91 corrective action has already been taken at this SWMU.

- Only one confirmatory sample was taken after excavation.

H. Detailed SWMU or AOC information:

SWMU # 2 or AOC Hazardous Waste Pad (Hopper Storage Area)

1. Is the unit located on a facility map? ✓Y ___N ___A ___NA

Comments: Officially closed per Partial Closure Certification of 6/91. Test data and results are available to support existing conditions.

2. Unit characteristics (e.g. design, liners, age, construction):
✓Y ___N ___A ___NA

Comments: 20 x 30 ft. A 20 yd³ hopper (steel roll-off) for storage of sludge and flex bags for dust storage are located here. The area is bermed by a ramp.

3. Waste characteristics (e.g. types, volumes, classification):
✓Y ___N ___A ___NA

Comments: Dust is contaminated w/lead. Sludge is collected from WW treatment. Per Capt Lis 12/90 there were 12-1 yd³ flex bags of dust, and the hopper is filled 75% to capacity.

4. Waste migration pathways:

a. Air: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: They do have an air permit. The file is pending review. We heard of any release. "Bags have not ripped in several years" per Capt Davis 12/90.

b. Soil: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: _____

c. Ground water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: _____

d. Surface water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:_____

e. Subsurface gas: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:_____

5. Conclusions/Recommendations:

a. ___ No conclusion or recommendation provided.

___ Recommend no further action.

___ Recommend a sampling visit.

i. Was sampling performed as part of this RFA? __Y __N

ii. Will the sampling be conducted in a RFI? __Y __N

___ Recommend interim measures.

___ Recommend a RFI.

Comments: Further information is needed to make a conclusion. Environmental setting is very important. A site visit may be warranted based on comments below

b. Is the recommendation acceptable? ___Y ___N

Comments: Closure procedure and test results are available per Partial Closure Certification of 6/91.

All wipe samples detected amounts of lead, arsenic, barium & cadmium. If these results are not quantifiable, how can it be concluded that the quantities indicated are not sufficient for further action? There is no mention of further action taken here. There is no discussion about the 63 parts per million of arsenic detected in the cleaning wastes.

H. Detailed SWMU or AOC information:

SWMU # 3 or AOC Wastewater treatment plant sludge Storage

1. Is the unit located on a facility map? ✓Y ___N ___A ___NA

Comments: 20 cubic yard steel roll-off hoppers adjacent to WWTP.

2. Unit characteristics (e.g. design, liners, age, construction):
✓Y ___N ___A ___NA

Comments: 20 yd³ hoppers, covered with a tarp when not in use.

3. Waste characteristics (e.g. types, volumes, classification):
✓Y ___N ___A ___NA

Comments: 32 cubic yards per week, Sludge contaminated with lead

4. Waste migration pathways:

a. Air: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:

b. Soil: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:

c. Ground water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments:

d. Surface water: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: ~~[illegible]~~ Nothing noted.

e. Subsurface gas: ___CR ___SR ___PoR ✓NR

i. Is documentation provided? ___Y ___N

ii. Does the documentation provide acceptable support for the determination (CR, SR, PoR, NR)? ___Y ___N

Comments: _____

5. Conclusions/Recommendations:

a. ___ No conclusion or recommendation provided.

___ Recommend no further action.

___ Recommend a sampling visit.

i. Was sampling performed as part of this RFA? __Y __N

ii. Will the sampling be conducted in a RFI? __Y __N

___ Recommend interim measures.

___ Recommend a RFI.

Comments: See below - A site visit may be warranted.

b. Is the recommendation acceptable? ___Y ___N

Comments: _____

The hopper is 20 yd^3. They generate 32 yd^3/week. How often is the sludge picked up? What kind of surface is the hopper stored on? Is it contained? Are there any pathways of mitigation if the sludge spills out (ex. soil)?

No reports or evidence of release have been reported here by CDM per 1990 CAPT IRIS. However, there are data gaps and there is no evidence that this area has been tested. A site visit may be warranted.

I. Did the PR identify any data gaps? ✓ Y ___ N ___ A ___ NA

a. If "Y", list the data gaps: no: Site location map, environmental/geologic setting info, process description, site history (minimal)

Note: See analytical data and discussion in the closure certification

Conclusions valid?

Comments: ______

J. Other comments on the PR: ______

There are two documents within the file that make reference to violations of wastewater discharge permit. 6/12/51 a letter was sent from county [illegible] they [illegible] exchanges & noting they were trying to correct the problem. 1/5/55 there is a cease violation form filed out against Co[illegible] for discharge into the [illegible] River.

In both cases there is no identification number on the documents. It is possible that they could be from another plant. This should be noted.

Discussion of usual results is contradictory. It states that wipe results are not used in quantitative interpretation in the discussion and concludes that the quantities of arsenic, chromium and lead are negligible.

Conclusions are not fully supported by discussion.

RFA Component 2: Visual Site Inspection (VSI)

A. General description of VSI activities: ✓P __NP __A __NA

Comments: The entire facility and surrounding property was inspected.

B. Site safety plan including the monioring of vapor emissions (respirators, chemically resistant clothing, etc.): ✓P __NP __A __NA

Comments: _____

C. Facility inspection:

1. Was each SWMU noted in the PR examined? ✓Y __N

Comments: Each SWMU was inspected although discrepancies were noted between the PR and VSI

2. Was each ACC noted in the PR examined? ✓Y __N

Comments: _____

3. Was the entire facility traversed in order to identify additional ACCs identify additinal SWMUs, complete data gaps from the PR, etc.? ✓Y __N __A __NA

Comments: _____

a. Were additional SWMUs and/or ACCs noted ? ✓Y __N

Comments: _____

4. Did the VSI include an inspection beyond the facility boundary? __Y ✓

Comments: _____

5. SWMU # 1 or AOC Hazardous Materials Pen

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Cracks in concrete pad.

ii. Visual evidence of waste characteristics (e.g. labels): ✓P ___ NP ___ Not applicable

Comments: All drums labeled.

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): ✓P __NP

Comments: Cracks in concrete

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments:

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments:

b. Documentation of SWMU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments:

5. SWMU # ___ or AOC #3 Former USTs.

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Area now covered by a concrete pad.

ii. Visual evidence of waste characteristics (e.g. labels): ___ P ___ NP ✓ Not applicable

Comments: _____

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: _____

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWMU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

5. SWMU # 3 or AOC #4 Waste Water Treatment Plant Storage Area

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Roll-off used to store hazardous lead containing sludge from WWTP

ii. Visual evidence of waste characteristics (e.g. labels): ✓P __NP __Not applicable

Comments: Sludge contaminated with lead

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: _____

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWMU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

5. SWMU # 2 or AOC # 5 Hazardous Waste Pad

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Used to store roll-off containing lead waste. Pad made of concrete and diked.

ii. Visual evidence of waste characteristics (e.g. labels): ✓P __NP __Not applicable

Comments: Leaded glass and lead contaminated debris.

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: Pad is diked on 3 sides - a wall is on the 4th side.

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWMU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

5. SWIU # ___ or AOC #6 Electrostatic Precipitators

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Located on north side of plant

ii. Visual evidence of waste characteristics (e.g. labels): ✓P ___ NP ___ Not applicable

Comments: Pelletized waste is labeled but to be recycled.

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: _____

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWIU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

5. SWMU # ___ or AOC # 7 Baghouse Dust Collector

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: Located in building next to EP (AOC #6) and near north wall of plant.

ii. Visual evidence of waste characteristics (e.g. labels): ✓P ___ NP ___ Not applicable

Comments: Bags of collected particulates stored in area.

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: _____

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWMU / AOC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

5. SWU # ___ or ACC #8 Paint Shop Accumulation Area

a. Documentation of field observations in logbook: ✓P __NP __A __NA

i. Visual evidence of unit characteristics (integrity, location): ✓P __NP __A __NA

Comments: located in basement of plant near eastern corner.

ii. Visual evidence of waste characteristics (e.g. labels): ✓P __NP __Not applicable

Comments: All hazardous waste labeled.

iii. Visual evidence of pollutant migration pathways (e.g. erosion, run-off): __P ✓NP

Comments: Cement floor and walls provide containment

iv. Visual evidence of release (e.g. discolored soils, dead vegetation): __P ✓NP __Not applicable

Comments: _____

v. Visual evidence of exposure potential (e.g. swamp, drinking water wells): __P ✓NP __Not applicable

Comments: _____

b. Documentation of SWU / ACC characteristics and potential migration pathways by photography? __Y ✓N

Comments: _____

6. Were the results of the VSI integrated with the PR to provide consistency, to complete any data gaps, and to provide the best recommendations? ✓Y __N

Comments: Some discrepancies between the two were noted. - AOC #1 & AOC #2 were combined as the same location.

D. Other comments on the VSI: _____

RFA REVIEW SUMMARY

A. List all SWMUs identified (inclusive of the PR and VSI):

#OL, 1	#	1	Hazardous Materials Pen	#	
2	#		Former Drum Storage Area	#	
3	#		Former USTs	#	
4	#	3	Waste Water Treament Plant Sludge Area	#	
5	#	2	Hazardous Waste Pad	#	
6	#		Electrostatic Precipitators	#	
7	#		Bag House Dust Collector	#	
8	#		Paint Shop Accumulation Area	#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	
	#			#	

B. List SWMUs known by reviewer but not included in the RFA:

	#			#	
	#			#	
	#			#	
	#			#	
	#			#	

C. List AOCs identified in the RFA:

# 2	Former Drum Storage Area	#	
# 3	Former USTs	#	
# 6	EPs	#	
# 7	Baghouse dust collector	#	
# 8	Paint Sludge Accumulator	#	

D. List AOCs known by reviewer but not included in the RFA:

#		#	
#		#	
#		#	
#		#	
#		#	

E. List SWMUs / AOCs which must be reevaluated due to inaccuracies in the PR, VSI, or SV:

#		#	
#		#	
#		#	
#		#	
#		#	
#		#	
#		#	
#		#	
#		#	
#		#	

F. List SWMUs / AOCs which have been assessed accurately to require no further action:

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

G. List SWMUs / AOCs which have been assessed accurately to require an RFI:

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

H. List SWMUs / AOCs which have been assessed accurately to require interim measures:

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

___ _____ # ___ _____

I. Summarize any inconsistencies found between the PR, VSI, and SV:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

J. Does the RFA summary report integrate the findings of the PR, VSI, and SV? __Y __

Comments: _____

K. Any additional / miscellaneous comments on the RFA: _____

APPENDIX B

ANALYTICAL DATA

4.0 ANALYSIS AND RESULTS

4.1 Hazardous Waste Hopper Storage Area

4.1.1 Confirmatory Samples

The approved closure plan required that all confirmatory samples be analyzed for the following parameters by the method indicated.

TABLE 1
ANALYTICAL METHODS, HAZARDOUS WASTE HOPPER STORAGE AREA

Analyte	Method
Arsenic	SW846-7061
Barium	SW846-7080
Cadmium	SW846-7131
Chromium	SW846-7191
Lead	SW846-7421
Selenium	SW846-7741

The following results were obtained from the analyses.

TABLE 2
ANALYTICAL RESULTS, HAZARDOUS WASTE HOPPER STORAGE AREA

Analyte	Wipe A	Wipe B	Wipe C
Arsenic	0.073 mg/wipe	0.4 mg/wipe	0.56 mg/wipe
Barium	0.16 mg/wipe	0.38 mg/wipe	0.14 mg/wipe
Cadmium	0.0051 mg/wipe	0.0004 mg/wipe	0.0003 mg/wipe
Chromium	0.0021 mg/wipe	0.0039 mg/wipe	0.0036 mg/wipe
Lead	1.7 mg/wipe	8.7 mg/wipe	3.0 mg/wipe
Selenium	0.0007 mg/wipe	<0.0001 mg/wipe	<0.0001 mg/wipe

All original laboratory results are presented in Appendix B.

4.1.2 Disposal Related Samples

The approved closure plan stated that the collected decontamination water would be tested to determine if it was a RCRA hazardous waste. To make this determination the decontamination water was analyzed for the same parameters as the other confirmatory samples. The following results were obtained from the analysis.

TABLE 3
DISPOSAL RELATED ANALYTICAL RESULTS
HAZARDOUS WASTE HOPPER STORAGE AREA

Analysis/Analyte	Sample/Location
Arsenic mg/l	63
Barium mg/l	<0.1
Cadmium mg/l	<0.1
Chromium mg/l	<0.1
Lead mg/l	0.44
Selenium mg/l	0.10
Corrosivity	Not Tested
Ignitability	Not Tested

All original laboratory results are presented in Appendix B.

4.1.3 Discussion of Results

The result of the analyses performed on the three confirmatory wipe samples are reported in milligrams per wipe. As with all wipe samples, the analytical results cannot be reduced to a unitless ratio, therefore, no quantitative interpretations can be made of these results.

All of the wipe samples showed quantifiable, but negligible, amounts of arsenic, barium, cadmium and chromium. Wipe sample A reported 0.0007 mg/wipe of selenium. Selenium was less than detectable for the other two wipe samples.

All of the wipe samples reported quantifiable amounts of lead, the actual result ranging from 1.7 mg/wipe to 8.7 mg/wipe. While these results do indicate the presence of residual lead, the quantity indicated does not appear to be sufficient to cause concern. This conclusion is based on the matrix involved, concrete, which will tightly bind up any residual lead; and the difficulty in evaluating the analytical results obtained for the wipe sampling technique.

4.2 Hazardous Waste Drum Storage Pad

4.2.1 Confirmatory Samples

The approved closure plan required that all confirmatory samples be analyzed for the following parameters by the method indicated.

TABLE 4
ANALYTICAL METHODS
HAZARDOUS WASTE DRUM STORAGE PAD

Analysis/Analyte	Method
1,1,1-Trichloroethane	SW846-8010
Arsenic	SW846-7061
Cadmium	SW846-7131
Lead	SW846-7421
Ignitability	SW846-1010
Corrosivity	SW846-1110

The following results were obtained from these analysis.

TABLE 5
ANALYTICAL RESULTS
HAZARDOUS WASTE DRUM STORAGE PAD

Analysis/Analyte	Sample/Location					
	Wipe A	Wipe B	Wipe C	Chip D	Soil F	Chip E
1,1,1-trichloroethane	N/A	N/A	N/A	<10 ppb	16 ppb	<10 ppb
Arsenic	0.005 mg wipe	0.015 mg wipe	0.028 mg wipe	5.9 ppm	13 ppm	6.0 ppm
Cadmium	<0.0005 mg wipe	0.0011 mg wipe	0.0021 mg wipe	0.3 ppm	1.3 ppm	0.5 ppm
Lead, Total	0.27 mg wipe	0.93 mg wipe	1.4 mg wipe	94 ppm	380 ppm	130 ppm
Ignitability	N/A	N/A	N/A	>60°C	>60°C	>60°C
Corrosivity	6.6 SU	7.1 SU	6.9 SU	6.7 SU	8.2 SU	6.2 SU
Lead, by TCLP	N/A	N/A	N/A	N/A	2.0 ppm	N/A

TABLE 5 (CONT.)

Analysis/ Analyte	Sample/Location				
	Soil G	Soil H	Soil I	Rinse R	Background, soil
1,1,1-trichloroethane	1,200 ppb	67 ppb	320 ppb	<1 ppb	N/A
Arsenic	19 ppm	26 ppm	15 ppm	N/A	11 ppm
Cadmium	0.62 ppm	6.6 ppm	2.2 ppm	N/A	<0.4 ppm
Lead, Total	1,800 ppm	1,100 ppm	350 ppm	N/A	130 ppm
Ignitability	>60°C	>60°C	>60°C	>60°C	N/A
Corrosivity	7.8 SU	8.3 SU	8.3 SU	N/A	N/A
Lead by TCLP	7.7 ppm	2.8 ppm	0.5 ppm	N/A	0.2 ppm

Notes
1) SU = Standard Units
2) N/A = Not Applicable

All original laboratory results are presented in Appendix B.

4.2.2 Disposal Related Sampling

The approved closure plan stated that the collected decontamination water would be tested to determine if it was a RCRA hazardous waste. To make this determination the decontamination water was analyzed for the following parameters by the indicated method. The following results were obtained from these analyses.

TABLE 6
DISPOSAL RELATED ANALYTICAL METHODS AND RESULTS
HAZARDOUS WASTE DRUM STORAGE PAD

Analysis/Analyte	Method	Results
Arsenic	SW846-7061	<0.1 mg/l
Cadmium	SW846-7131	<0.1 mg/l
Lead	SW846-7421	0.1 mg/l
Ignitability	EPA-1010	Non-ignitable
Corrosivity	EPA-1110	Non-corrosive

All original laboratory results are presented in Appendix B.

4.2.3 Discussion of Results

The results of the analyses performed on the three wipe samples are reported in milligrams per wipe. As with all wipe samples, the analytical results cannot be reduced to a unitless ratio, therefore, no quantitative interpretations can be made of these results.

All three wipe samples reported quantifiable, but negligible, amounts of arsenic and lead. Samples B and C also reported negligible amounts of cadmium, with sample A having less than detectable cadmium. Based on these results, no additional investigation or decontamination was considered necessary.

The asphalt sample analyses identified lead and arsenic in the asphalt, 94 ppm and 5.9 ppm respectively. Negligible cadmium, 0.3 ppm, was also identified. All of these levels are at or below the corresponding quantities identified in a background asphalt sample collected at the same time. Therefore, no additional investigation or decontamination is considered necessary due to the analytical results from the test performed on the asphalt.

All of the four soil samples analyzed showed quantifiable amounts of arsenic and cadmium. The levels of arsenic varied from 13 ppm to 26 ppm, as compared to the 11 ppm identified in a background sample collected at the same time. Given that the confirmatory sample levels do not significantly exceed the 11 ppm of arsenic found in the background sample, the confirmatory sample levels do not appear to be a concern.

The cadmium results varied from 0.62 ppm to 6.6 ppm. The USEPA reports an common range for cadmium in natural soils of 0.01 to 0.7 ppm (USEPA, HAZARDOUS WASTE LAND TREATMENT, SW-874, April, 1983). Given that the confirmatory sample levels for cadmium do not significantly exceed this range, the confirmatory sample levels do not appear to be a concern.

Both lead and 1,1,1-trichloroethane were identified in all four samples at elevated levels. The 1,1,1-trichloroethane results vary from 0.016 to 1.200 ppm, this analysis was not performed on the background sample. Concentrations of total lead in the soil samples ranged from 130 ppm to 1,800 ppm. These levels were sufficient to instigate additional work. This additional work is described in Section 5 of this report.

APPENDIX C

CLOSURE DOCUMENTATION

S.00 Calsan - fi

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

Thomas C. Jorling
Commissioner

October 20, 1992

Ms. Karen S. Gross
Sr. Environmental Control Engineer
Corning Incorporated
HPME01025AIO
Corning, NY 14831

Dear Ms. Gross:

RE: Closure of Corning Incorporated, Fallbrook Facility
EPA Identification Number: NYD000824425

This letter is to confirm the receipt of owner/operator and independent professional engineer's certification dated June, 1991, of RCRA closure for this facility. We now consider this facility officially closed. Your authority to operate as a Treatment, Storage, and Disposal Facility (TSDF) is terminated and you are released from the financial security requirements of Sections 373-2.8 and 373-3.8.

Please be advised that the United States Environmental Protection Agency has determined that the corrective action provisions of the Hazardous and Solid Waste Amendments (HSWA), Section 3008(h), apply to all TSDF's which have acquired interim status.

The New York State Department of Environmental Conservation has established a program to evaluate the corrective action measures necessary at closed and closing facilities within the State. Once the corrective action provisions of HSWA have been met by the facility or determined not to be necessary at the facility, the facility can have their interim status terminated.

If you have any questions regarding your closure or regulatory status, please contact Stephen Malsan at (518) 457-9361.

Sincerely,

Salvatore J. Carlomagno, P.E.
Chief, Waste Reduction & Program
Support Section
Bur. of Western Haz. Waste Programs
Division of Haz. Substances Regulation

cc: J. Gorman
J. Desai
M. O'Neil
D. Rollins - Region 8
S. Malsan
G. Belcher

SJC:scy

INSPECTION FORM

COMMERCIAL TSDF
OTHER TSDF X
TC GENERATOR
OTHER GENERATOR

Note - Only Closure Inspection At Corning Glory Reichold No Permits.

NEW YORK STATE INDUSTRIAL HAZARDOUS WASTE MANAGEMENT ACT has been ...
(Chapter 639, Laws of 1978)

Prepared for:

Commissioner
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Send to: Division of Hazardous Substances Regulation
Compliance Inspection Section
50 Wolf Road - Room 208
Albany, New York 12233-7252

EPA I.D. NUMBER: NYD000824425

COMPANY NAME (Corporate): Corning Incorporated

(Division): Fallbrook Facility

COMPANY MAILING ADDRESS: HO-ME-01-025

Corning Incorporated

City & State Corning, NY Zip Code 14831

COMPANY LOCATION ADDRESS: Tioga Avenue

(if different than mailing)

City & State Corning, NY Zip Code 14831

COMPANY TELEPHONE NUMBER: (607) 974-6565 Extension

FULL NAME OF COMPANY CONTACT: (Mr.) (~~Ms.~~) Joe Kane

TITLE OF COMPANY CONTACT: Project Engineer & Env. Control

INSPECTION DATE: 12/11/1990 TIME OF INSPECTION: (a.m.) 12:30 (p.m.)

INSPECTOR'S NAME: Joseph Gavin

TITLE: Environmental Engineer I

NAME:

TITLE:

REPORT PREPARED BY: Joseph Gavin DATE: 11-7-91

REPORT APPROVED BY: Dion Collins DATE: 11-8-91

TABLE OF CONTENTS

		Page No.
Part I	General Information and Classification of Facility	
	1. Identification of Hazardous Waste	I-1
	2. Status Identification	I-4
	3. Exemptions	I-5
Part II	General Inspection Section	
	1. Exempt and Small-Quantity Generator Requirements	II-1
	2. General Requirements	II-7
	3. On-site Accumulation of Hazardous Waste Prior to Shipment	II-7
	4. Manifest Records and Reporting	II-12
	5. Personnel Training	II-14
	6. Preparedness and Prevention	II-16
	7. Contingency Plan and Emergency Procedures	II-17
Part III	Comments, Conclusions and Recommendations	III-1

APPENDICES

(Need Not Attach If Not Required - Circle Attached Appendices)

		Page No.
Appendix A	Treatment, Storage and Disposal Inspection Section	A-1
Appendix B	Transportation Terminal Inspection	B-1
Appendix C	Groundwater Monitoring	C-1
Appendix D	Surface Impoundments	D-1
Appendix E	Waste Piles	E-1
Appendix F	Secure Landburial Facilities	F-1
Appendix G	Land Treatment	G-1
Appendix H	Incinerators and Energy Recovery Facilities	H-1
Appendix I	Thermal Treatment	I-1
Appendix J	Chemical, Physical and Biological Treatment	J-1
Appendix K	Underground Injection	K-1
Appendix L	Closure/Post Closure Inspection	L-1
Appendix M	Part B/Part 373 Permit Inspection	M-1
Appendix N	Requirements for Repeat Inspections	N-1
Appendix O	Requirements for Tanks	O-1
Appendix P	Requirements for Specific Hazardous Waste	P-1
Appendix Q	Elementary Neutralization Units/Wastewater Treatment Units	Q-1

Handler Name Corning Incorporated - Fallbrook Facility
EPA I.D. No. X X 2 C C D 8 2 4 4 2 5

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

APPENDIX L

Closure/Post Closure Inspection

1. For all facilities.

   A. The owner or operator has closed the facility in a manner that:

      (1) ____ Minimizes the need for further maintenance - 373-3.7(b)(1) ✓

      (2) ____ Controls, minimizes or eliminates post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the groundwater, or surface waters, or to the atmosphere - 373-3.7(b)(2) ✓

   B. ____ The owner or operator has completed closure in accordance with the approved closure plan - 373-3.7(d)(2) and ✓

      ____ Within 180 days after receiving the final volume of waste - 373-3.7 (d)(2) NA

   C. ____ All facility equipment and structures have been properly disposed of, or decontaminated by removing all hazardous waste and residues - 373-3.7(e) NA

   D. ____ The owner or operator has submitted, to the Commissioner, certification both by the owner or operator and by an independent, registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan - 373-3.7(f) ✓

2. For Disposal Facilities Only

   A. ____ The owner or operator of a disposal facility has submitted his post-closure plan to the Commissioner at least 180 days before the date he expects to begin closure - 373-3.7(h)(3) NA

Indicate:

X Violations

Indicate:

X Satisfactory
NA Not Applicable

B. ____ Within 90 days after closure is completed, the owner or operator of a disposal facility has submitted to the County Clerk and to the Commissioner a survey plat indicating the location and dimensions of landfill cells or other disposal areas with respect to permanently surveyed bechmarks - 373-3.7(i) NA

C. ____ The owner or operator has submitted to the Commissioner and to the County Clerk a record of the type, location and quantity of hazardous wastes disposed of within each cell or area of the facility - 373-3.7(i) NA

D. ____ The owner of the property on which a disposal facility is located has recorded a notation on the deed to the facility property - or on some other instrument which is normally examined during title search - that will inperpetuity notify any potential purchaser of the property that: (1) the land has been used to manage hazardous waste, and (2) its use is restricted under paragraph 373-3.7(g)(3). 373-3.7(j) NA

3. If access to the facility is not possible, what has been done to try and contact the company? Be explicit and give names, addresses and telephone numbers.

4. What were you able to see at the facility?

Facility appeared to have exacted approved closure plan.

4 pictures were taken at inspection: tipper storage area and storage pad that had been cleaned during the inspection.

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

PART III

Comments, Conclusions and Recommendations Section

Facility Name [illegible]

EPA I.D. No. [illegible]

Date of Inspection 12/11/90

General Comments and Conclusions (cite appropriate State regulations in violation and attach additional sheets and other information as required)

Inspection was done on Used Oil Input only

NOTE: P.E. CERTIFICATION RECEIVED 8/91

3/91

NOT FOR RELEASE TO COMPANY, PROTECTED INFORMATION

Recommendations EPA I.D. No. NYD008244425

___ No violations found. Thank you letter should be issued.

___ A warning letter should be issued.

___ A strong warning letter should be issued.

___ A complaint should be issued and a fine levied.

X Copy of this report has not been given to the handler(inspector submit two copies to C.O. and C.O. will send with reply)

___ Copy of this report has been given to the handler (inspector submit one copy to C.O.)

X Other (please explain)*

Follow up by ACO - Closure Section
Part III to Avon BECI on 11-15-91
Facility copy to CO on 11-17-91

___ Sample(s) have been taken.

Comments on sample results: _____

*Do not refer cases directly to the BECI unit. All BECI referrals will be made by the Central Office.

Certification Statement

We, The Sear-Brown Group and Corning Incorporated, do hereby certify that the hazardous waste management units located at Corning Incorporated's Fallbrook facility and identified in the attached partial closure certification document have been closed in accordance with the specifications in the approved closure plan addressing these units, except where specifically noted.

The Sear-Brown Group
John W. Hayden, P.E., Ph.D.
Vice President
Civil and Environmental Divisions

June 24 1991
date

Karen S. Gross
Corning Incorporated
Karen S. Gross
Sr. Environmental Control Engineer

7 Aug 91
date