ATTACHMENT VI

CLOSURE PLAN

CLOSURE PLAN

1.0 INTRODUCTION AND GENERAL REQUIREMENTS

1.1 The purpose of this Closure Plan is to outline the procedures necessary to completely close GCC's facility at the end of its intended operating life, and leave the facility proper in an uncontaminated condition.*
Closure of the solvent recycling operation was completed in 2004 as a partial facility closure.

1.2 GCC will maintain a copy of the closure plan (and all revisions thereto) until the certification of closure completeness has been submitted to and accepted by the Massachusetts DEP. GCC will notify DEP at least 45 days prior to the date final closure is expected to begin. Upon completion of closure, GCC will submit to the Director of DEP a certification, by both the owner and an independent registered Professional Engineer, that the facility has been closed in accordance with the specifications and procedures in the approved Closure Plan and applicable DEP regulations.

2.0 CLOSURE PERFORMANCE STANDARD

The GCC facility has been designed and is operated in a manner which minimizes the potential for contamination of the facility structures, equipment and surrounding property. Waste storage and handling activities are limited to specific areas, each of which has a containment system of berms or dikes designed and maintained in order to prevent any releases from reaching the environment. The GCC facility design, coupled with frequent inspection and facility maintenance, provides environmentally safe daily operation and minimizes the amount of clean-up and decontamination required in order to accomplish closure.

3.0 MAXIMUM WASTE INVENTORY

3.1 Hazardous Waste

The maximum permitted storage of hazardous waste is 37,000 gallons in storage tanks and 22,000 gallons in containers. For purposes of designing this Closure Plan, it is assumed that the maximum hazardous waste inventory will be on-site at the time closure activities begin, but that much of the waste will be consolidated into tanks or roll-offs so as to minimize the number of drums for disposal.

* **Facility closure is independent of activities associated with soil and groundwater corrective action, which is otherwise regulated.**

3.2 Non-Hazardous and Universal Waste and Regulated Recyclable Oils

For the purpose of estimating closure costs, it is assumed that 6500 gallons of recyclable fuel oil, 12000 gallons of non-hazardous wastewater, and 5000 linear feet of Universal waste bulbs will be present when closure activities begin. Provisions have also been included for other unregulated waste.

4.0 CLOSURE PROCEDURES

4.1 Containerized Waste Areas

Closure of Buildings No. 1 and 2 will be performed as follows:

1. **All waste suitable for consolidation will be placed into appropriate tanks or roll-offs. Containers for "drum–out" disposal will be loaded onto van trailers, and roll-offs onto roll-off trailers for shipment to approved waste treatment or disposal facilities. All empty waste containers, including those with waste residues, will be removed and transported to a drum reconditioner or an appropriate waste treatment or disposal facility.**

2. **Floors and other surfaces will be swept clean and accumulated debris will be placed in containers for removal to an approved treatment or disposal facility.**

3. **All potentially contaminated surfaces will be cleaned with water flush followed by a high-pressure steam wash. All contaminated condensate or wash water will be controlled and containerized for removal to an approved treatment or disposal facility.**

4. **All waste handling areas and equipment (e.g., forklifts) will be washed with a suitable cleaning solution.**

5. **Containment floors, sumps and curbing will be scrubbed to ensure adequate cleaning. All waste cleaning solutions will be controlled and containerized for removal to an approved treatment or disposal facility.**

4.2 Storage Tank Area

4.2.1 Closure of each waste storage tank will involve removal of all wastes, followed by decontamination of the tank, its associated process equipment and piping. The contents of each storage tank will be pumped into tank trucks and shipped to approved off-site treatment or disposal facilities.

4.2.2 All pumps, valves and piping will be drained and flushed with an appropriate cleaning solution, which will be disposed of in the same manner as the waste contained in the storage tanks.

4.2.3 Each waste storage tank will be decontaminated as follows:

1. Access hatches will be opened and any remaining sludge will be removed and containerized.

2. The tanks will be re-closed and steam-cleaned. Sufficient steam will be added to the tank to raise its shell temperature to 170°F (76-77°C) as specified in API Publication 2015, "Cleaning Petroleum Storage Tanks." This temperature should be sufficient to remove any oil and/or solvent residues.

3. The tanks will be purged and water flushed. Condensate and water will be controlled and collected for appropriate off-site disposal. The tank will then be inspected visually to ensure all residues have been removed. Steam cleaning will be repeated if any contaminated residues remain.

4.2.4 The floor of the tank farm and the bulk waste unloading area will be cleaned with water flush followed by high-pressure steam wash. All wash water will be controlled and collected for off-site treatment or disposal.

4.3 Waste Management

4.4.1 To the greatest extent possible, the sampling and analysis of outgoing waste will be performed by GCC personnel, using the GCC facility laboratory and procedures described in the Waste Analysis Plan.

4.4.2 All closure wastes will be properly categorized as hazardous or non-hazardous, General Chemical Corporation will become the "generator", and the waste will be managed in accordance with 310 CMR 30.00.

4.4 Certification of Closure

Closure will be certified after all facility equipment and structures have been properly disposed of or decontaminated. Certification that the facility has been closed in accordance with the approved closure plan will be submitted to DEP within 60 days of completion of closure. This certification will be signed by General Chemical and by a Massachusetts registered professional engineer.

5.0 SCHEDULE FOR CLOSURE

GCC is not planning final facility closure in the foreseeable future. However, for general planning, a closure date of 2050 is arbitrarily assumed.

Closure operations would be scheduled over a 180-day period, per the following schedule:

Shipments of all wastes off-site	**Day 1 - 30**
Facility decontamination	**Day 30 – 180**
Closure completed	**Day 180**
Closure certification to DEP	**Day 240**

6.0 AMENDMENT OF CLOSURE PLAN

In accordance with 310 CMR 30.583, GCC will apply to DEP for approval to amend the Closure Plan whenever changes in operating plans or facility design affect the Plan, or whenever there is a change in the expected year of closure. Whenever GCC requests a permit modification to authorize a change in operating plans or facility design, the company will review and if necessary, submit a modification of the Closure Plan.

7.0 POST CLOSURE PLAN

GCC's Closure Plan calls for the removal of all hazardous waste and/or hazardous waste residues. Therefore, the requirements of 310 CMR 30.590 do not apply and no post-closure plan is required.

8.0 NOTICE OF CLOSURE ON DEED

8.1 Within 60 days of certification of closure, GCC will record in the Registry of Deeds, a notice including the following:

- **(a) the land has been used to manage hazardous wastes, and**
- **(b) the land's use is restricted pursuant to 310 CMR 30.592(5), and**
- **(c) the survey plat and record required by 310 CMR 30.586 have been recorded in the Registry of Deeds and copies have been submitted to DEP and the Framingham Board of Health.**

8.2 GCC will submit to DEP a certified copy of each notice, including the date, and book and page numbers of recording of such notice, within 30 days after receiving the recorded notice from the Registry.

9.0 CLOSURE COST ESTIMATE

Exhibit VI-1 contains the current itemized cost estimate for closure.