

SECTION 7.0

FACILITY INSPECTION PROCEDURES

7.1 INTRODUCTION

GLOBALFOUNDRIES inspects the storage and treatment facilities and related systems regularly in compliance with 40 CFR Part 264.15 and Vermont Hazardous Waste Regulations Section 7-309 for malfunctions, deterioration, operational errors, and hazardous waste leaks that may lead to a release of hazardous waste to the environment or threaten human health. Records of these inspections are kept as part of the facility operating record for a minimum of three years.

7.2 INSPECTION SCHEDULE

Table 7-1 provides the written inspection schedule GLOBALFOUNDRIES has developed and follows for inspecting monitoring equipment, safety and emergency equipment, security devices, operating and structural equipment, storage equipment (tanks), and storage areas. The schedule includes inspections of the container storage areas in the Chemical Distribution Center (CDC), the Building 963 north tank, and the CDC tank farm.

7.3 CONTAINER STORAGE AREA INSPECTIONS

Container storage areas are inspected daily during regular business days for items listed in Table 7-1. Container storage area inspections are recorded on inspection logs or on an electronic version of the inspection logs entitled “Chemical Distribution Center Inspection Log,” “Flammable Waste Storage Area Waste Drum Inspection Log,” and “Transfer Room Inspection Log” which are attached in Appendix E.

Inspectors tour the container storage areas and check for proper container placement, storage height, evidence of container deterioration, aisle space, and leaking containers. The status of each inspection item is checked; appropriate remedial action is noted for inspection items with unacceptable status.

7.4 TANK INSPECTIONS

All GLOBALFOUNDRIES hazardous waste storage tanks are above ground. Six waste tanks are located in the Building 974 Chemical Distribution Center’s tank farm, and one waste tank is located at the north end of Building 963. Tank management practices are provided in Section 5.0. These tanks are protected by electrical heat tape, insulation, and metal jackets to ensure the wastes do not freeze. Because of this freeze-protection equipment, the exterior surface of the tanks is not visible for inspection. Tank wall integrity is determined by wall thickness measurements through ports provided for that purpose and internal tank inspections according to the procedure provided in Section 7.4.2, and through periodic inspections for leaks.

Tanks and secondary containment systems are inspected at least once each operating day as required by 40 CFR 264.195 for evidence of leaks at their exterior metal jackets, in containment areas, and at all aboveground pipes, valves, and fittings within the CDC Tank Farm. Overfilling is prevented by automatic liquid-level monitors and alarms. Liquid-level monitoring provides additional evidence of sudden drops in tank volumes. Operation of the liquid-level monitoring system and data generated by the system are checked at least once each operating day, and tank volumes are recorded. Proper operation of conservation vents and inspection of other tank-roof plumbing and catwalk areas are included in the inspection schedule listed in Table 7-1. Inspection results are recorded on an inspection log sheet or on an electronic version of the inspection log sheet attached in Appendix E.

7.4.1 Internal and External Tank Wall Inspections

General Solvent tanks 2 and 3 were replaced in 1997/1998, and the Building 963 north tank was replaced in 2009.

All waste tanks have had internal and external inspections performed under the direction of an independent professional engineer, following the procedures in Steel Tank Institute Standard SP001, "Standard for Inspection of Aboveground Storage Tanks" (4th Edition, 2006 or most recent). Tank interiors were inspected for wall thinning, scaling, pitting and corrosion of wall surfaces, butt-welded joints, and connections between tank walls and tank fittings. GLOBALFOUNDRIES also uses external tank wall thickness measurements to monitor loss of wall thickness and aid in the determination of the suitability for continued service of the tanks. The tanks were inspected most recently as follows:

- General Solvent tanks 1 and 4 were inspected in September 2007.
- The Deep UV tank was repaired, lined, and inspected in July 2010.
- The Mid UV tank was inspected in June 2014.
- Building 963 north tank was replaced in 2009, and the tank certification and associated inspection are included in Appendix A.
- General Solvent tanks 2 and 3 were inspected in 2011.

The above inspection reports are included in Appendix A.

Tank inspection reports will be retained in the facility operating record for a minimum of three years.

7.4.2 Future Tank Wall Inspections

Tank wall thickness tests (including both internal and external inspection) will be performed at a maximum interval of ten years on the hazardous waste tanks currently in use. The tests will be performed at this interval until the tests indicate that the next inspection should be performed sooner than the ten year test interval. When this condition occurs, the tanks with a recommendation

to perform an inspection prior to the ten-year test interval will be inspected based on the time interval recommended in the latest inspection report. Tanks that have been taken out of service due to a leak or being otherwise unfit for use will not be inspected, since they cannot be used until repairs and recertification are complete.

External tests will be performed by measuring the thickness of the tank through the inspection ports in the external insulation jackets, located on the sides of the tanks. Internal inspections will be performed by draining the tanks and entering the tank to monitor the interior thickness of the tank and to inspect the internal condition of the tank. By comparing the results of the previous tank thickness tests to the new data and looking at the internal tank condition, GLOBALFOUNDRIES and/or the independent professional engineer can determine the suitability for continued service of the tank and recommend when the next inspection should be performed.

If any tanks have to be replaced, the new tanks will be installed in accordance with the requirements of 40 CFR 264.192 - Design and Installation of New Tank Systems or Components. The testing schedule for new tanks will be conducted at intervals noted for existing tanks.

7.5 REMEDIAL ACTION

Equipment deterioration or malfunction observed during inspections will be remedied on a normal maintenance schedule when the observed problem will not result in the release of hazardous wastes and does not threaten human health or the environment. This will ensure that the problem does not lead to an environmental or human health hazard.

Where a hazard is imminent or has occurred, remedial action will be taken immediately following the procedures defined in the Contingency Plan. If necessary, notification of appropriate authorities will be made as described in the Contingency Plan. Every effort will be made to contain and remove any hazardous wastes that are released during an emergency. Affected areas will be decontaminated after the hazardous wastes are removed.

**Table 7-1
Inspection Schedule**

Area / Equipment	Specific Item	Types Of Problems	Frequency of Inspection
Monitoring equipment	Liquid level transmitters (tanks)	Transmitter signal	Daily
	High level alarm	High level alarm condition	Daily
Safety and emergency	55-gallon drums (steel, stainless steel)	Corrosion, structural damage	Daily
	Emergency shower and eyewash	Water pressure, leaking, drainage	Daily
	Fire extinguishers	Needs recharging	Monthly
	Fire alarm system	Power failure	Annual
	Telephone system	Power failure	In regular use
	Public address (PA) system	Power failure, speakers	Annual
	Emergency lighting system	Backup power failure	Monthly
	First aid equipment and supplies	Items out of stock or inoperative	Weekly/As used
Security devices	Fire mains	Flow	Annual
	Sprinklers	Pressure, alarm reporting	Quarterly
	Storage tank fence	Corrosion, damage to chain link fence	Daily
	Storage tank gate and lock	Corrosion, damage to chain link fence, sticking or corroding, lock unlocked , locks, doors open	Daily
	Door controls and alarms	Power failure, inoperative, damaged, tampered with	Daily
Operating and structural equipment	Tank structural supports	Concrete deterioration and cracking	Daily
	Piping and valves	Leaks, corrosion or deterioration	Daily

**Table 7-1
Inspection Schedule (continued)**

	Storage areas	Leaks, spills	Daily
Container waste storage room	Container placement and stacking	Aisle space, height of stack	Daily
	Sealing of containers	Open lids	Daily
	Labeling of containers	Improper identification, date missing, codes missing	Daily
	Containers	Corrosion, leaking, structural defects, bulging, dirty (soil)	Daily
	Segregation of incompatible waste	Storage of incompatible wastes in the same area	Daily
	Pallets	Damaged	Daily
	Base of foundation	Cracks, spalling, uneven settlement, erosion, wet spots	Daily
	Debris and refuse	Aesthetics, clogged drains	Daily
	Warning signs	Damaged, missing, illegible	Daily
	Incoming staging area	Trash, debris, visible signs of leaks	Daily when in use
	Lab packs	Improper identification, dates missing, labels missing	Daily
	Receiving area	Trash, debris, visible signs of leaks	Daily when in use
	Safety equipment	Missing, damaged	Daily
Flammable waste storage room	Container placement and stacking	Containers placed properly in pallets and on racks	Daily
	Sealing of containers	Open lids	Daily

**Table 7-1
Inspection Schedule (continued)**

	Labeling of containers	Improper identification, dates missing, codes missing	Daily
	Containers	Corrosion, leakage, structural defects	Daily
	Segregation of incompatible wastes	Storage of incompatible wastes in the same area	Daily
	Debris and refuse	Aesthetics, clogged drains	Daily
	Secondary containment pallets	Damage, corrosion, indication of leaks	Daily
	Housekeeping	Trash, debris	Daily
	Safety Equipment	Missing, damaged	Daily
Tank storage area	Base, foundation or containment area	Cracks, uneven settlement, buckling, corrosion, wet spots, leaks, debris	Daily
	Eye wash	Frozen, schedule checked	Daily
	Warning signs	Damaged, missing, illegible	Daily
	Pipes	Leaks, corrosion or deterioration	Daily
	Valves	Leaks, corrosion or deterioration	Daily
	Fittings	Leaks, corrosion or deterioration	Daily
	Pump pad	Leaks, corrosion	Daily
	Secondary containment system	Indication of releases or spills	Daily
	Alarms	Any alarms or monitoring data generated indicating operation problems (including high level alarms)	Daily
Tanks (externally)	Ladder	Damaged, structural stability	Daily
	Foundation / structural supports	Cracks, uneven settlement, buckling, corrosion, wet spots	Daily

**Table 7-1
Inspection Schedule (continued)**

	Pipe connections	External corrosion, cracks, distortion	Daily
	Tank cover	Malfunction of seals, corrosion	Daily
	Tank Bottom	Corrosion, discoloration, cracks, buckling	Daily
	Tank condition	Any indications of tank failure (corrosion) or spills of waste	Daily
	Tank walls	Loss of metal thickness	Per Section 7.4.2
	Anchor Bolts	Distortion, corrosion	Daily
	Nozzles	Cracks, corrosion	Daily
	Cat walks	Corrosion, distortion, grates out of position	Daily
	Tank closure devices	Organic emissions	Annual (see Section 11.0)
Tanks (internally)	Tank condition	Any indications of tank failure (corrosion)	Per Section 7.4.2
	Tank walls	Loss of metal thickness	Per Section 7.4.2
Tank System Ancillary Equipment	Pipes, Pumps, Valves, Fittings	Organic emissions	Per Section 11.0