APPENDIX XVI

SUBPART CC COMPLIANCE PLAN

FOR

SIEMENS WATER TECHNOLOGIES CORP.

PARKER REACTIVATION FACILITY

PARKER, ARIZONA

Revision 0
February 2007

Subpart CC Compliance Plan

Hazardous Waste Treatment, Storage and Disposal Facilities and Hazardous Waste Generators; Organic Air Emission Standards for Tanks, Surface Impoundments and Containers

Siemens Water Technologies Corp.
Parker, Arizona

January 2, 2007

Siemens Water Technologies Corp.
Subpart CC Compliance Plan
Table Of Contents

List Of Tables

List Of Appendices

List Of Figures

Siemens Water Technologies Corp.
Subpart CC Compliance Plan

1. Introduction

This document summarizes the applicable air emission standards that apply to tanks, surface impoundments and containers used to manage hazardous waste relative to the Siemens Water Technologies Corp., Parker, Arizona facility under the U.S. Environmental Protection Agency (EPA) final Subpart CC regulations, and provides the plan to assure compliance with these standards. As discussed below, the Subpart CC regulations specifically exempt waste management operations performed in tanks and containers that comply with the National Emission Standards for Benzene Waste Operations promulgated by the EPA under the Section 112 of the Clean Air Act - National Emission Standards for Hazardous Air Pollutants (NESHAP), codified at 40 CFR Part 61, Subpart FF.

2. Facility Description

A detailed description of the facility operations is provided in Section D of the facility's Part B application dated November 1995.

3. Management Summary of Rule Requirements

Under Section 3004(n) of the authority of the Resource Conservation and Recovery Act (RCRA), the EPA has established standards to control air emissions from hazardous waste treatment, storage and disposal facilities as may be necessary to protect human health and the environment. Briefly, the EPA has established air emission standards for the following hazardous waste management units:

- ***Process Vents*** - referred to as Subpart AA regulations (codified at 40 CFR §264.1030, *et seq*. For permitted Treatment Storage and Disposal Facilities (TSDF) and 40 CFR §265.1030, *et seq.* for TSDFs allowed to manage hazardous waste under interim status.)

- ***Equipment Leaks from Pumps, Valves and Compressors*** - referred to as Subpart BB regulations (codified at 40 CFR §264.1050, *et seq.* or permitted Treatment Storage and Disposal Facilities (TSDF) and 40 CFR §265.1050, *et seq.* for TSDFs allowed to manage hazardous waste under interim status.

- ***Tanks, Surface Impounds and Containers*** - referred to as Subpart CC regulations (codified at 40 CFR §264.1080, *et seq.* or permitted Treatment Storage and Disposal Facilities (TSDF) and 40 CFR §265.1080, *et seq.* for TSDFs allowed to manage hazardous waste under interim status.) [1]

None of the waste management units at the facility are subject to Subpart AA or BB. Briefly, the facility is not subject to Subpart AA as there are no process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping (§265.130). The facility is not subject to Subpart BB as testing data obtained in June, 1994 and January, 1995 demonstrate that the average VO concentration in process streams is below the applicability threshold of Subpart BB (§265.1050(b)). This compliance plan deals only with EPA Subpart CC standards that apply to tanks, surface impounds and containers that manage hazardous waste at the facility.

Relative to the Parker facility, the final Subpart CC regulations *exempt* all tanks and containers from *all* Subpart CC emission control, monitoring, sampling, testing, reporting and record keeping requirements *provided* the facility certifies that these waste management units are equipped and operated with air emission controls in accordance with the Benzene Waste Operations NESHAP (40 CFR §61.340, *et seq.*). The final standards, as amended on November 25, 1996 provide in pertinent part that:

> ***(b) The requirements of this subpart [Subpart CC] do not apply to the following waste management units at the facility:***
>
> * * * * * * * * * * * * *
>
> ***(7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the***

[1] Subpart CC regulations have a lengthy regulatory history. Briefly, the final standards were originally promulgated on December 6, 1994 (59 FR 69826). The final rule caused much confusion and met with substantial opposition from the regulated community. The effective date of the rule was extended on three separate occasions (60 FR 26828, May 19, 1995; 60 FR 56952, November 13, 1995 and 61 FR 28508, June 5, 1996); EPA issued three subsequent final interpretive ruling to clarify Subpart CC requirements and to request additional public comment (60 FR 41870, August 14, 1995 and 61 FR 4903, February 9, 1996 and 61 FR 59932, November 25, 1996).

requirements of an applicable Clean Air Act regulation codified under 40 CFR 60, 61 or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of §265.1085(I), except as provided in §265.1080(c)(5). [40 CFR §265.1080(b)(7)]

A tank or container for which all hazardous waste entering the unit has an average volatile organic (VO) concentration at the point of waste origination of less than 500 parts per million by weight (ppmw) is subject to Subpart CC, but is exempt from air emissions control requirements (§265.1082(c)). The average VO concentration is to be determined either by sampling and testing as directed by Subpart CC or by operator knowledge of the waste (§264.1084). If test data are used as the basis for knowledge, then the operator must document the test method, sampling protocol, and the means by which sampling and analytic variability are accounted for in determination of average VO concentration (§265.1084(b)(4)(ii)). Operators that rely on average VO concentration in a hazardous waste to exempt a unit from air emission controls must review and update, as necessary, this determination at least once every 12 months following the initial determination ((§265.1082(c)(1)).

Waste management units that contain hazardous waste with an average VO concentration greater than 500 ppmw (and are not subject to the Benzene Waste NESHAP) must comply with prescribed air emission control requirements, testing, monitoring and reporting provisions (§§265.1085-1088). Currently, there are no waste management units that are subject to air control requirements of Subpart CC. Therefore, this compliance plan does not address in detail these control requirements. The compliance plan will be updated in the future to describe these control requirements should the applicability or exemption status of units at the facility change.

4. Siemens Water Technologies Corp. Subpart CC Compliance Plan

The Subpart CC compliance plan for the Siemens Water Technologies Corp. facility identifies two types of waste management units:

- Waste management units that are exempt from Subpart CC requirements because they are otherwise regulated under the Benzene Waste Operation NESHAP; and

- Waste management units that have a volatile organic (VO) concentration less than 500 ppmw, and are therefore exempt from the Subpart CC air emissions control requirements ((§§265.1085-1087). However, record keeping and monitoring requirements under Subpart CC apply to these units §§265.1082(c)(1 and 1090(f)).

Compliance requirements for each of these categories of waste management units is discussed below.

4.1 Waste Management Units Not Subject to Subpart CC

Under the final Subpart CC regulations, tanks and containers that are equipped with and comply with the Benzene Waste Operations NESHAP (Subpart FF) are exempt from all Subpart CC requirements (see 40 CFR §265.1080(b)(7)). Therefore, the facility will demonstrate compliance with Subpart CC regulations by assuring that all tanks and containers at the facility used to manage hazardous waste are equipped with and operate in compliance with Subpart FF.

Listed below, in Table 1, are the waste management units at the facility that are potentially subject to Subpart CC requirements, together with the applicable Benzene NESHAP Subpart FF requirement:

Table 1

I.D. NO.	DESCRIPTION	APPLICABLE SUBPART FF STANDARD (40 CFR §)	COMMENTS
N/A	Spent Carbon Containers	§61.345	Subpart FF wastes are stored in drums and roll-off containers. All drums and containers received at the facility are managed as Subpart FF-affected wastes and meet DOT containers requirements.
N/A	Debris Bin and Associated Drums.	§61.345 §61.34(f)	All waste drums at the facility are managed as Subpart FF-affected wastes. Benzene wastes shipped offsite must meet container and offsite shipment requirements.
H-1 **H-2**	Spent carbon unloading hoppers, Nos. 1 and 2.	§61.348	Both hoppers H-1 and H-2 receive spent carbon from containers and are managed as Subpart FF-affected units. Emissions from these hoppers are directed to WS-2.

I.D. NO.	DESCRIPTION	APPLICABLE SUBPART FF STANDARD (40 CFR §)	COMMENTS
T-1	Spent Carbon Storage Tank	§61.343	Tank T-1 is managed as a Subpart FF-affected unit. Tank vapors are controlled by carbon adsorber (WS-1).
T-2	Spent Carbon Storage Tank	§61.343	Tank T-2 is managed as a Subpart FF-affected unit. Tank vapors are controlled by carbon adsorber (WS-1).
T-5	Spent Carbon Storage Tank	§61.343	Tank T-5 is managed as a Subpart FF-affected unit. Tank vapors are controlled by carbon adsorber (WS-1).
T-6	Spent Carbon Storage Tank	§61.343	Tank T-6 is managed as a Subpart FF-affected unit. Tank vapors are controlled by carbon adsorber (WS-1).
T-11	Scrubber/Recycle/Boiler and Cooling Tower Blow- Down Water Storage Tank	§61.342(c)	Exempt from treatment since benzene concentration is less than 10 ppmw.
RF-2 AB-2	Reactivation Furnace No.2 and Afterburner No. 2	§61.348	Regenerated carbon must contain less than 10 ppmw benzene and the unit must meet 99+% benzene destruction efficiency.
WS-1	Carbon Adsorber No.1	§61.349	Carbon canister, used to control volatile emissions from Tanks T-1, T-2, T-5, T-6, and T-9.
WS-2	Carbon Adsorber No.2	§61.349	Carbon canister, used to control volatile emissions from Hoppers H-1 and H-2.
WS-3	Carbon Adsorber No.3	§61.349	Carbon canister, used to control volatile emissions from Tank T-18.

As summarized above, all process units, debris bins and waste management containers at the facility are subject to the Benzene Waste NESHAPs with the exception Tank T-11. Tank T-11 collects scrubber water blow down, cooling water blow down, boiler blow down and recycle water that has been filtered through activated carbon, from Tank T-12. Tank T-

11 is therefore potentially subject to regulation under Subpart CC, as it is not regulated under the Benzene Waste Operations NESHAP.

4.2 Waste Management Units Exempt From Subpart CC Control Requirements

As summarized in Section 4.1, Tank T-11 is subject to Subpart CC because it is not is not regulated under the Benzene Waste Operations NESHAP, and not otherwise exempt under §265.1080. As demonstrated below, Tank T-11 is not subject to the Subpart CC air emission control requirements because the average VO concentration in the waste entering the unit is less than 500 ppmw (§264.1082(c)(1)). Tank T-11 is, however, subject to monitoring and record keeping requirements (§§265.1082(c)(1) and 1090(f)(1)), which are discussed below.

4.3 VO Concentration Determination Procedures

4.3.1 Initial VO Concentration Determination

Operator knowledge provides the basis to conclude that the average VO concentration of hazardous waste entering Tank T-11 is less than 500 ppmw from T-12. The following test data from sampling previously conducted confirm that the average VO concentration of waste entering Tank T-11 is less than 500 ppmw:

- On November 30, 1994, the facility sampled the recycle water that drains from Tank T-12 to Tank T-11. Samples were collected from the process line that connects these two tanks at the location indicated in Figure 1. This sampling point was selected to assure that the sample will be representative of the VO concentration at the point of generation. A sample cannot be obtained directly from T-11, as the tank also receives scrubber water blow down, boiler blow down and cooling tower blow down. Further, obtaining a sample from the process line assures that there will be no gravitational or phase separation of VO constituents, which may bias the sample.

- On February 22, 1994, December 19, 1994 and October 12, 1995, the facility sampled the water discharged from Tank T-11 prior to discharge, under permit, to the sanitary sewer. This sampling point was selected as representative of the average VO concentration at the point of discharge.

The sampling protocol used to obtain the sample, together with the Chain-of Custody for the sample is attached at Appendix A. The sample collection and handling procedures are in accordance with EPA Publication No. SW-846, “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods”, as amended by Update I, November 15, 1992. Briefly, screw cap VOA vials with Teflon lined silicone septa were used to collect the

sample. Care was taken to assure that no air bubbles were entrained in the vial prior to closure. Samples were preserved as required in the applicable methods, stored at 4° C, and analyzed within holding times. Concentration of VO constituents were determined by EPA Methods 8260 (volatile organics), 8270 (semi-volatile organics), 8080 (organochlorine pesticides and PCBs) and 8015 (GC/FID Alcohol Screen). The analytic methods and Standard Operating Procedures to perform these analyses are attached at Appendix C. These procedures are designed in part to address analytical variability in the methods.

Total VO concentration reported in each of these four sampling events are summarized in Table 2, below:

Table 2

Summary of VO Concentration Reported in Prior Sampling of Tank T-11

Sampling Event	Reported Total VO Concentration
November 30, 1994	519 µg/l
February 22, 1994	Below Detection Limits
December 19, 1994	22 µg/l
October 12, 1995	23 µg/l

4.3.2 Future VO Concentration Determinations

The facility must review, and as necessary, update this VO determination every 12 months (§265.1082(c)(1)). If the Facility staff determines that the initial VO concentration determination defined in Section 4.2.1 is no longer valid, additional waste determination sampling must be performed. Such sampling must comply with requirements outlined in (§§265.1084(a)(2) and (3), which are briefly summarized below:

- Must identify and record the point of origination for the hazardous waste (§265.1084(a)(3)(l)).

- Sampling must be performed pursuant to a sampling plan, and must meet the following requirements:

    - Identification of where in the process the samples are to be taken.

    - The appropriate averaging period to be used to determine the average VO

concentration in the sample. The averaging period cannot exceed one (1) year. Record the date, time and location that each sample is collected and maintain these data in the Subpart CC sampling plan.

- The sample collection method used to minimize volatilization of organic compounds contained in the sample. The sample collection method should follow the sampling and handling protocol included in Attachment A. A minimum of four samples must be taken.

- The analytic methods used to determine concentrations of volatile organic compounds. Acceptable analytic methods include: Method 25D, Methods 8260(B) and 8270(B)as defined in SW-846, Methods 624, 625, 1624 and 1625 as defined in 40 CFR Part 136. If any method aside from Method 25D is used, the facility must demonstrate that all target compounds in the sample are included amount those compounds listed by the EPA as ones for which the method is considered appropriate. If target compounds are not on this list, additional requirements will apply to the analytic methods (see §265.1084(a)(3)(iii)). The sampling plan must include a quality assurance plan to document the specific procedures used to minimize loss of VO compounds due to volatilization, reaction, biodegradation, or sorption during the sample collection, storage, and preparation steps, and a measurement of the overall accuracy and precision of the specific procedures. Further, if analytic methods other than Method 25D are used, THE FACILITY may exclude those organics with a Henry's Law constant values less than 0.1 mole-fraction-in-the-gas-phase/mole-faction-in-the-liquid-phase. A list of all such compounds is included in Appendix VI to the final Subpart CC regulations.

4.4 Monitoring Requirements

Provided the VO concentration of liquids contained in Tank T-11 remains below 500 ppmw, the facility must perform the following monitoring of its operations:

- Assure that the facility complies with all applicable requirements as defined in the Benzene Waste Operations NESHAP - Subpart FF.

- Review the waste determination for Tank T-11 on an annual basis, no later than December 4 of each calendar year (see §265.1083(c)(1)).

This section must be updated should either the exemption status of T-11 change or if the applicability determinations for Subpart FF are modified.

4.5 Record Keeping Requirements

The Facility must maintain the following records as part of the Subpart CC Plan:

- Maintain the sampling data attached in Appendix A ((see §265.1090(f)(1).

This section must be updated should either the exemption status of T-11 change or if the applicability determinations for Subpart FF be modified.

4.5 Reporting Requirements

Under the final regulations promulgated on November 25, 1996, Subpart CC applicability was amended to exempt any hazardous waste management unit that the facility certifies is equipped with and operating air emission controls in accordance with the Benzene Waste Operations NESHAP (Subpart FF). The notification and reporting provisions included in the final Subpart CC regulations do not specifically require that the facility send such a certification to the U.S. EPA (see §265.1090). However, to assure compliance with this revised applicability standard, THE FACILITY has made this certification in letter to the U.S. EPA, Region IX. A copy of this letter is attached at Appendix A.

Under 40 CFR Part 270, facilities that manage hazardous waste under interim status must amend their Part B permit application to define the inspection and control systems employed at the facility to comply with Subpart CC requirements. As discussed above, no such inspection or control requirements apply to the facility, as all waste units are either exempt under §265.1080(b)(7), or are exempt from control requirements under §265.1083(c). Thus there is no requirement to modify the Part B permit application for the facility. The letter certifying compliance with Subpart CC advises EPA Region IX that no such modification to the Part B permit application is required for the facility.