



# STATE OF CONNECTICUT

## DEPARTMENT OF ENVIRONMENTAL PROTECTION



July 6, 2010

Hamilton Sundstrand Corporation  
One Hamilton Road  
Windsor Locks, CT 06096-1010  
Attn: Mr. Esau Gardner, Director, Mechanical Operations

**Re: Water Reuse System and Wastewater Treatment Facility Modifications  
RCRA/Hazardous Waste Management Compliance Plan**

Dear Mr. Gardner:

This letter is written in response to your May 24, 2010 request for the Bureau of Materials Management and Compliance Assurance, Waste Engineering and Enforcement Division ("DEP") to confirm Hamilton Sundstrand Corporation's ("HSC") understanding of the state's regulations governing hazardous waste management at facilities that reduce or eliminate permitted discharges through enhanced wastewater treatment and reuse systems. It also details DEP's review of HSC's proposed plan for complying with such requirements during its testing of the wastewater treatment facility ("WTF") modifications and water reuse system ("WRS") recently constructed at HSC's Windsor Locks plant.

DEP concurs with HSC's assessment of certain sludges and similar treatment residuals generated by its WTF and WRS as F006 listed hazardous waste. Specifically, these wastes include metal hydroxide sludge and spent filters, filter media, and resins currently generated by HSC's treatment of electroplating wastewater in its WTF, as well as the waste brine concentrate/waste brine, spent granulated activated carbon, spent ion exchange resins, used cartridge filters, spent reverse osmosis membranes, reverse osmosis reject, and ion exchange backwash solids to be generated by HSC's secondary treatment of electroplating wastewater in its WRS. HSC's interpretation that the management of such wastes for off-site disposal as listed hazardous waste is independent of the permitting status of the unit in which the wastes are generated is consistent with DEP's interpretation and application of the state's hazardous waste management regulations and guidance issued by US EPA.<sup>1</sup> For example, a tank that is exempt from RCRA permitting requirements as a wastewater treatment or recycling unit can still produce a sludge or treatment residual that is a hazardous waste, as the exemption applies only to the tank as a hazardous waste management unit, not the waste that is treated or managed within the unit or removed from the unit.

DEP understands that on a contingency basis, HSC will utilize a wastewater pretreatment permit to discharge treated process wastewaters and groundwater from its WTF and WRS, as well as reverse osmosis reject from its WRS, to a publicly owned treatment works ("POTW"). Discharge to the POTW is expected to occur either by truck or sewer. In order for HSC to ship the reverse osmosis reject or mixture of reverse osmosis reject and other wastewaters to any POTW under its discharge permit, HSC must ensure that such receiving facility meets the "permit-by-rule" provisions of 40 CFR 270.60(c) as incorporated by the Regulations of Connecticut State Agencies ("RCSA") Section 22a-449(c)-110. Those provisions require the POTW to (1) have a NPDES permit; (2) comply with that permit; (3) obtain an EPA identification number; (4) use the manifest system; (5) report manifest discrepancies; (6) comply with 40 CFR 264.73(a) and (b)(1) for operating records; (7) submit biennial reports, as necessary based on generator status; (8) comply with 40 CFR 264.76 for unmanifested waste reports; and (9) for NPDES permits issued after November 8, 1984, comply with 40 CFR 264.101 (corrective action for solid waste management facilities).

<sup>1</sup>US EPA RCRA Online Letter from Sylvia Lowrance to Ted A. Hopkins, Aug. 15, 1990. Faxback#11551, PPC 9483.1990(02).

The waste must also meet all federal, state, and local pretreatment requirements which would be applicable to the waste if it were being discharged into the POTW through a sewer, pipe, or similar conveyance. In addition, the POTW would be required to manage sludge generated from its treatment of the accepted waste as hazardous waste if it either exhibits a characteristic of hazardous waste or is the result of treatment of a listed hazardous waste. HSC has indicated that any hauling of the reverse osmosis reject to a POTW will be deferred until the company completes a full review of these requirements.

The discharge of reverse osmosis reject or mixture of reverse osmosis reject and other wastewaters to the POTW via the POTW's sewer system is excluded from RCRA regulation under the domestic sewage exemption of 40 CFR 261.4(A)(1), as incorporated by RCRA Section 22a-449(c)-101, upon entering the sewer. RCRA does not require the POTW to meet the permit-by-rule requirements outlined above for a direct discharge of hazardous wastewaters to the sewer. Because the domestic sewage exclusion does not apply to the wastewater until it enters the sewer pipe, all applicable hazardous waste management regulations will apply to the waste until it is discharged.

DEP concurs with HSC's proposal to operate the WRS's waste evaporation tanks (WET-1 and WET-2), waste brine collection tank (WBT-1), and ancillary equipment associated with these tanks in accordance with the generator requirements of 40 CFR 262.34, tank requirements of 40 CFR 265 Subpart J, and DEP's policy regarding generator treatment of hazardous waste in accumulation containers and tanks, as long as those tanks continue to receive hazardous waste.<sup>2</sup> As described in HSC's specifications for the WRS, WET-1, WET-2, and WBT-1 are designed to receive and treat or accumulate F006 listed hazardous waste in the form of reverse osmosis reject and waste brine. According to the information provided in HSC's proposed compliance plan, those tanks have been certified by a Connecticut licensed professional engineer to meet the new tank requirements of 40 CFR 265 Subpart J. HSC has indicated that compliance with the air emission standards of 40 CFR 265 Subparts AA, BB, and CC for those units and the ancillary equipment associated with those units will be assessed through sampling and laboratory analysis during the WRS test period.

As described in HSC's specifications for the water reuse system, the WRS's pH control tank (PCT-1) and evaporator surge tank (EST-1) are designed to receive and treat or accumulate F006 listed hazardous waste in the form of reverse osmosis reject prior to evaporation. In the case where PCT-1 and EST-1 operate as part of the WRS, maintaining at least intermittent or contingency discharges regulated under the Clean Water Act, DEP concurs with HSC's application of RCRA's wastewater treatment unit exemption to those tanks. This interpretation of the exemption is consistent with its application to the WTF.

Concerning HSC's proposed use of a series of "frac" tanks to collect treated wastewaters and reverse osmosis reject prior to discharge to the POTW, DEP disagrees with HSC's interpretation that such tanks are eligible for RCRA exclusion as wastewater treatment units because their sole purpose is to accumulate and store waste that is pending disposal, post treatment in the WTF and WRS. DEP recommends that, because the frac tanks are designed to be temporary mobile devices, they be managed as containers pursuant to the requirements of 40 CFR 262.34 and 40 CFR 265 Subpart I as incorporated by RCRA Section 22a-449(c)-102. Alternatively, if the frac tanks do not receive the F006 reverse osmosis reject or any other listed or characteristic hazardous waste, they will not need to be managed pursuant to RCRA. HSC has indicated that any use of the frac tanks to accumulate F006 listed hazardous waste will be deferred until the company completes a full review of these regulatory requirements.

<sup>2</sup>CT DEP Memorandum from Bet Flores and Christie W. Flowers to David Nash, "Small/Large Quantity Generator's, Treatment in Accumulation Containers and Tanks", Oct. 3, 1991.

DEP understands HSC plans to proceed with start-up and testing of its WTF modifications and WRS by mid-July. No formal approval from the Waste Engineering and Enforcement Division is required for that process to begin. Modifications being made to HSC's Integrated Contingency Plan as a result of that process and long term use of the WRS as part of operations at the Windsor Locks plant will be addressed through a compliance schedule in the company's RCRA Part B Permit renewal to be public noticed by July 21, 2010.

I hope this letter answers your questions regarding this matter. Should you have any additional concerns please contact Michelle Gore of my staff at (860) 424-4160.

Sincerely,



Robert C. Isner, Director  
Bureau of Material Management and Compliance Assurance  
Waste Engineering and Enforcement Division

RCI/mlg

w/o  
Encl.

cc: Charles Nezianya, CTDEP-PED (via e-mail)  
Chris Beyus, HSC (via e-mail)  
Robert Melvin, Robinson & Cole (via e-mail)

**REMEMBER TO REDUCE, REUSE, AND RECYCLE;** it's a first step towards a more sustainable world and in Connecticut it's the Law. To learn more about what you can do, go to [www.ct.gov/dep/swmp](http://www.ct.gov/dep/swmp), or call (860) 424-3365.