

NEWMOA Hazardous Waste Conference Call September 9, 2014

Topic: E-Waste HW Regulatory Issues

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Participants: CT DEEP (13 people); Mass DEP (6 people); NH DES (4 people); NJ DEP (5 people); NYS DEC (6 people); VT DEC (3 people); NEWMOA (1 person)

Call leader: Connecticut DEEP

Connecticut

CT DEEP described the e-waste program and related RCRA enforcement issues that they have been experiencing. Under the state extended producer responsibility (EPR) law for e-waste, the electronics manufacturers pay for 100 percent of electronic devices collected and recycled. The law was adopted in 2007. Its purpose is to reduce the costs borne by municipalities for management of these products and to provide convenient drop offs for all residents. Products covered by the law include computers, lap tops, tablets, telephones with screens over 4.5 inches in size, monitors, televisions, and printers. The manufacturers pay invoices to the recyclers. They also pay a registration fee and have to register all covered products. There are approximately 100 manufacturers registered in CT. Towns designate free and convenient drop off locations. They select certified electronics recyclers (CER) from a list of approved firms. They must notify the Department about which CER they are using. The retailers are prohibited from offering for sale any product that is non-compliant with the requirements. DEEP has published a list of compliant and non-compliant products. Retailers are also required to provide recycling information at the point of sale. Many of them publish a phone number for recycling information on their receipts.

CT DEEP would like to expand the program's outreach in the future to help ensure that customers are aware of how to participate.

Recyclers need to seek reimbursement for the e-waste they collect and recycle. During the application process, the recyclers must disclose to the State who their down-stream partners are. This information is reviewed by the e-waste team at DEEP. The recyclers must provide a price per pound for collection and processing (which includes transportation costs and other eligible costs of operating). The State can reject their applications if the price is higher than a standard deviation above the mean for all recyclers. The DEEP review of recyclers covers the number of years in business, credentials, history, down-stream partners, and financial assurance information. DEEP is concerned about what happens down-stream to the materials. They want to ensure that there are procedures in plan to separate eligible materials properly for recycling. They are concerned about the consistency with the standards down to the residues. They also want to make sure the facility is secure and that they follow proper environmental procedures. Recycling applications are open in the late fall with approval in the spring. DEEP tries to approve applications in a 60 day time frame. They have received 10-15 applications per round and have gone through 3 rounds to date. Generally, about half make the cut and the rest do not.

Aside from its extended producer responsibility program (EPR) program, DEEP also issues two general permits related to used electronics--one for the collection of residential devices in the State and another for dismantling business generated used electronics in the State. They must have a solid waste permit or manage the e-waste in compliance with Connecticut's Universal Waste Rule for Used Electronics. DEEP issues disassembly permits. There are a small universe of these facilities – about 10 – mostly to process business-generated e-waste. Business-generated e-wastes are not eligible for collection through the program. The EPR program focuses on consumer electronics only. The disassembly permits require closure plans and financial assurance.

DEEP also issues general permits for household e-waste collected at satellite locations. Certified electronics recyclers that wish to conduct e-waste at satellite and one-day events need to get these permits. Presently, DEEP has issued about 15-16 of these permits. About 4 CER program recyclers have this general permit. They have a separate reporting requirement.

Under the CT Universal Waste (UW) Rule facilities are required to notify DEEP to accumulate or store more than 5,000 kg of universal waste. These include facilities that consolidate UW for transfer.

Of the permitted dismantlers of e-waste (different than CERs), DEEP found seven that were out of compliance during a series of 2011 inspections; three of these faced formal enforcement with penalties and four received Notices of Violation. They found broken used electronics and cathode ray tubes (CRTs) stored outdoors and uncovered. They found business and solid waste mixed with the covered e-waste. Some facilities were not managing used electronics as UW. They do not have any hard data on the results of their enforcement activities. They will be performing inspections of CERs and their partners, even those out-of-state in the future. They will keep NEWMOA's HW contacts informed about the results of these inspections.

They have faced issues with the administration of the program. They hope to do stepped up enforcement in the future focusing on retailers that are selling non-compliant products. There are challenges with getting non-compliant brands off of websites that sell them. There are also billing disputes between the manufacturers and the recyclers. A former recycler was over-billing due to a computer error, but that has been resolved. There is leakage in the program when eligible devices are not collected and processed and not ending up with a CER. They are trying to increase awareness and work with retailers to address these challenges. They want to get the manufacturers to be more involved.

They find that some materials are being collected by residents, which are then cherry-picked for the precious metals and valuables. Some residents are disassembling the products at home and selling the valuables for fundraisers. This is not legal under the law.

There are no CRT glass recyclers in CT. They have not found stockpiling of CRT glass in CT. The recyclers are sending their glass to India to be made into new CRT monitors/televisions. DEEP anticipates that stockpiling will be an issue in the future due to the dwindling market for CRTs.

Recently, a recycler in CT, Creative Recycling has filed for bankruptcy. DEEP does not have much information available on this recycler. The Agency is working with the bankrupt recycler to ensure proper cleanup and closure of the site. There are about 20-30 facilities in the U.S. that are part of this bankruptcy. The call participants from MA, NH, NJ, NY, and VT were not aware of any Creative Recycling facilities in their states. CT DEEP will share the names of the facilities that are affected by the bankruptcy with the state contacts. Not all of the facilities are called Creative Recycling, some go by another name. The Company is headquartered in Florida. The parent company is Creative Recycling Systems (CRS) of New England. They took in more CRT glass than they could handle, which is a reason for their bankruptcy.

The funding for CT's program is provided by the electronics manufacturers. They pay an administrative fee that covers DEEP's costs to administer the program. This is on top of the funding for the recycling companies. Recyclers provide DEEP with a cost estimate for managing the e-waste. The range is about \$0.28-0.34 / pound. The Original Equipment Manufacturers (OEM) pay the recyclers for responsible recycling of the materials. Since DEEP approves the prices paid to the CERs, they are under less pressure to cut corners and do things like stockpile CRT glass.

There is no quota or annual goal required for manufacturers in CT for e-waste collection in their law. Manufacturers are required to pay for the recycling of everything that gets collected by the program. Their goal is collection and proper recycling of 100 percent of the materials year round.

They have recycled more than 30 million pounds of material aggregated over 3 years; about 80 percent of this is CRT glass.

DEEP finalized its regulations three years into the program. They conducted a stakeholder process throughout the regulatory development and kept the manufacturers informed about the

rulemaking and involved in the deliberations. There were no major objections. They received feedback during the rulemaking and addressed concerns. CT's law was modeled after the one enacted in Maine. Maine's law was enacted in 2004, and by 2007 there were about seven states with e-waste laws.

There was one change from the original CT law. In 2008 the television OEMs lobbied the State legislature to make the current manufacturers of televisions responsible for the weight of their material in the recycling stream. The TV manufacturers are responsible for paying for recycling costs according to a market-share of the total weight collected. For example, Samsung has about 20 percent of the market, and they are responsible for funding recycling of that portion of the collected material.

DEEP breaks out the covered products into some categories and separates televisions from computers and other information technology (IT) products, such as computers, monitors, and printers. For example Ricoh is responsible for covering all Ricoh printers that are brought in for recycling. For IT products, the manufacturers are responsible for the orphan products – it's based on the market share percent of the total orphan share that's collected in the recycling stream. The material is categorized at the recycling facility. The recyclers are required to share their procedures for sorting. All sorting and weighing is done at the CERs and products are sorted by brands. The sorting and weighing of the IT products and TVs is computer automated and gross weights are recorded. CT DEEP does a mass balance to check on the recyclers' figures.

New Hampshire

There is no e-waste EPR law in effect in NH. They do not have much experience with these programs. They have a CRT processor and e-waste recyclers located in the State.

New Jersey

The ERP e-waste program in NJ has faced a number of significant challenges. Prior to enacting the CRT rule, the State had an infrastructure to address UW. The UW was collected by municipalities and was sent to permitted-facilities. The system worked well. After the EPR law was enacted, NJ copied the methodology adopted by other states. They did not realize that they had a structure to address the covered electronic UW.

The recycling facilities handle all UW, including TVs and computers. When the CRT glass had a market, there was no problem with the program. The manufacturers approved the recyclers to handle the activity on their behalf. When the CRT market bottomed-out, the recyclers started to experience a problem. The materials became a liability. Some approved recyclers told the municipalities that were collecting the e-waste that they would charge them to cover the higher costs for processing the materials – TVs based on market share and computers based on weight. The approved recyclers told the municipalities that they would have to pay for the recycling.

Recently, NJ DEP held a meeting of the manufacturers and approved recyclers for all of the major companies. They explained what was happening and how the program was supposed to work. The manufacturers were not aware of the issues and how the program was designed to work. They had been relying on the recyclers to handle the entire program. As a result of the

meeting, the manufacturers are interested and involved because they understand their liabilities and image challenges.

The Class D recyclers take in the material and mine it for all the valuable parts, including the copper, circuitry, and circuit boards. The approved recyclers are now only getting the carcasses of the e-waste with all of the valuables removed so there is no value left. As a result of the recent meeting, the recycling is free to the towns and residents. The manufacturers now understand that if the municipalities drop out, they would be forced to create drop off locations and develop the needed infrastructure.

The approved recyclers have told DEP that they have met the state quota for the year. However, DEP found that their data is incorrect. The market share information is based on purchased information not actual data. The manufacturers have never submitted the required plans to address this. DEP began to do enforcement against the manufacturers to address this issue. DEP can assess fines and can tell retailers to stop selling non-compliant products.

The biggest issue facing NJ is the CRT glass. Recyclers have had to ship 68 loads of CRT glass as hazardous waste. They were hitting up against their speculative accumulation limits. They were forced to remove the material as HW since the market is not available. The Indian market is closing fast. The lead is a liability now. The successful de-manufacturers can separate plate glass from the other glass, and the market for the non-lead glass is viable.

NJ DEP is planning another round of meetings with manufacturers and recyclers to lay out the final plans for the program. The manufacturers will have to pay more for the collection and recycling. The current prices are about \$0.18-25/pound in the State, which is lower than CT. Some of the CRT glass will have to be disposed of.

DEP estimates that for about 7-8 more years the old CRT wooden televisions will continue to be part of the e-waste stream. These are often dumped on the street and scavenged.

NJ has adopted the federal e-waste rule by reference. CT DEEP noted that they are considering whether to adopt the rule. NJ has one Class D approved recycler.

New York

NYS DEC held a summit in February with stakeholders to address problems with their EPR program for e-waste. The manufacturers stated that NY had the most rigorous and expensive program in the U.S. The issues facing the program are similar to those outlined by NJ. They have a market-share based system that is weight-based. The targets depend on how much electronics are sold in the State. In the first year, they set the number based on the population. In recent years, it has been based on a formula. This sets the minimum amount that the manufacturers are responsible for collecting. This is not the same as a goal.

The program is supposed to be convenient and free for consumers. The collection can be done through events, mail back, and “brick and mortar” locations. An issue is that the manufacturers

view the programs standards as a quota. They negotiated with the recyclers for that amount of material; once they hit these quotas they would stop collection. However, under the NY law the manufacturers are supposed to support continuous collection of their brand of electronics. The standard is a floor, not a ceiling. The manufacturers are not informed about how the program is intended to work. The manufacturers have not put much resources into it.

DEC has been inspecting some of the recyclers and found minor violations, particularly storage problems. They plan to continue to inspect them.

The New Life facility for processing e-waste has received the required permits from DEC to operate. DEC put limitations on the financial assurance required in the permits. They had several rounds of negotiation with them on the permits. New Life has moved a significant amount of CRT material to a location in PA to store until the NY site is operational. DEC will keep the participants in the call informed about the status of the facility as they learn more about when it will be operational.

Vermont

VT's program is modeled on Oregon's. They have a state plan that involves a state-approved e-waste recycling contractor. DEC chooses the subcontractor and recycler. If the manufacturer does not want to participate in the state program, they can opt out. In the current program year, about 18 percent of the manufacturers opted out of the state program. Those that opt-out have to submit a plan for review and approval by DEC. The private program has to be functionally equivalent to the state plan.

The programs must collect all covered products, including computers, monitors, printers, and televisions. They collect from residents and small businesses and schools. The products must be collected year round. There are goals in the law, but the parties are supposed to continuously collect materials even if they reach the goals. VT is struggling with the intermediate facilities that cherry-pick the valuable materials from the e-waste. The re-furbishers pull out the components and use them for refurbishing. When they sell the components in bulk or through e-bay, they send the remaining material to the recycler. The R2 or E2-certified recyclers have financial assurance.

Vermont has not adopted the federal CRT rule. They have had CRTs as a category of their UW. They are considering how to address the federal rule in their future state rulemakings.