

## **NEWMOA Hazardous Waste Conference Call September 10, 2013**

### **Topic: Properly Estimating Closure Costs in Proposed Permits and Review of Financial Assurance Documents**

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#### **Participants**

Participants: CT DEEP (9 people); ME DEP (5 people); Mass DEP (6 people); NH DES (4 people); NJ DEP (1 person); NYS DEC (5 people); EPA Region 1 (2 people); NEWMOA (1 person)

Terri Goldberg began the call by going over announcements regarding upcoming NEWMOA activities. She then introduced the topic, Properly Estimating Closure Costs and Financial Assurance Mechanisms and Vermont took the lead on the rest of the call. Lynn Metcalf, VT DEC provided background on the topic and questions to cover during the call in a pre-call email.

States require permitted Treatment, Storage, and Disposal Facilities (TSDFs) to prepare estimates of the cost of closure (and post-closure, if applicable) in accordance with 40 CFR 264.142 and maintain financial assurance for closure (and post-closure, if applicable) based on the estimate. VT DEC feels that the estimates submitted by their permitted facilities have typically been reasonable, but also have been hearing from EPA for years that, in general (nationally), cost estimates (and therefore, the dollar amounts set aside for financial assurance) are far lower than what is necessary to complete closure/post closure.

Through Jeff Gaines at EPA Headquarters, Vermont received assistance from EPA's contractor, Industrial Economics, to review the closure plan and cost estimate submitted by a captive storage facility as part of its permit renewal application. Unfortunately, the feedback provided by the contractor was very general and did not help DEC evaluate the

reasonableness of the submitted cost estimate. DEC shared a copy of the report with the group prior to the call. DEC had a follow-up call with EPA Region 1, EPA HQs, and Industrial Economics to discuss the report and determined that the in-depth evaluation of costs that they had hoped for was much too expensive to provide given the resource constraints that EPA is facing.

Thus, DEC turned to fellow states for assistance. They would like to know how other states evaluate closure cost estimates including the following information:

- 1) How many permitted hazardous (or solid) waste facilities are there in your state that are required to submit closure cost estimates?
- 2) How do you assess closure cost estimates submitted by permitted facilities to determine if the estimated costs are reasonable? Keep in mind that the estimate must reflect “worst case/third party” costs.
- 3) Do you verify values of line items in the cost estimate (for example, disposal cost of various types of hazardous waste in inventory, disposal cost of wastes generated by closure, costs of various closure activities)? If so, how?

#### Vermont

VT has 6 TSDF's and as these facilities' license come up for renewal, they receive closure plans and cost estimates, as the other states do, but DEC is not certain whether the cost estimates are reasonable or reliable, for such activities as the disposal of wastes and decontamination of equipment. Steve Simoes of VT had contacted Jeff Gaines of EPA HQs on a particular facility undergoing license renewal and provided the closure cost estimates. VT worked with EPA's contractor Industrial Economics (IEc) and wanted feedback on whether the costs were adequate. Unfortunately, IEc did not provide as much detail as VT had hoped for. In a follow-up phone call with IEc, the contractor stated that it would be expensive for them to go over the cost estimate line by line so that level of review was not feasible. The following is their answers to the questions:

- 1) Vermont has six permitted hazardous waste facilities (two commercial storage facilities, three captive storage facilities, one closed landfill) that are required to maintain financial assurance for closure (and in one instance, post-closure).
- 2) VT DEC staff has checked with vendors for cost of drum disposal and are interested in how do other states do this?
- 3) VT compares the cost estimates with what are included in state contracts in VT.

Steve also stated that the other central issue for asking other states' input on this issue is that although VT has felt fairly comfortable with their work on reviewing cost estimates, they have learned from EPA HQ that in general, cost estimates provided by the facilities are actually too low, by as much as 50 percent of what they should be. VT DEC is wondering if they are being reasonable in its reviews, and also is curious how EPA HQs came up with their conclusion.

The call participants agreed to present their experiences and positions by going in order alphabetically.

#### Connecticut

Ross Bunnell began by framing their state's response in the context of RCRA facilities and introduced the former permit writer, but now inspection enforcement chief, Carmen Haltzman.

CT has 8 RCRA facilities - 3 commercial and 5 non-commercial. CT also has 8 more facilities that require closure cost estimates under a state statute pertaining to recycling facilities (where the Agency has authority to issue permits), as well as several solid waste sites and inactive RCRA sites with post closure permits requiring cost estimates.

Carmen stated that 7 active RCRA facilities are permitted with one more on the way. When she conducts the reviews of the closure cost estimates on the applications, she makes sure all activities, including removal, disposal, sampling, and characterization, as well as the number of drums and tanks, and loading and unloading areas were accounted for in line item format and had 3<sup>rd</sup> party costs associated with them. She basically follows the same procedure as VT. CT also requires a 15 percent contingency for engineering costs. If Carmen feels that the proposed costs are too low she makes sure the prices are updated in the estimate. She has used the EPA software, called Costpro, but found it too rigid and resulted in prices that were exceedingly high. She tries to be practical. She reviews in detail the number of containers, labor, and offsite disposal of waste. The recycling of tanks does not need to be in the costs. She also makes sure that financial assurance mechanisms (FAMs) (i.e., letters of credit and financial tests) are being maintained, which can be tricky when the type of FAM is being changed and checks in with the enforcement branch on these. She mentioned that disposal in CT is expensive at \$250/drum.

#### *Discussion*

A participant asked how detailed does CT get with respect to labor costs and the number of tanker trucks or drums required for disposal? Do they look at type of waste stream?

Carmen stated that they look at waste streams, including waste oil, even if it is intended to be recycled, because it may not ultimately be. They also examine the number of trips to dispose of type of waste.

Follow-up question - are PCB waste disposal costs required to be included too? Carmen responded that most permit reviews now are renewals so if PCB waste is a new activity then their disposal costs need to be included.

Follow-up question - does CT DEP actually ask for quotes? Carmen responded that sometimes they do, but generally not for permit renewals. Most TSDF's do not take PCB wastes. There was one case of a facility that did that resulted in a \$1 million dollar cleanup.

Follow-up question: How do you document labor costs? Carmen responded that the reviewer has to be practical when looking at the costs, such as if it costs \$45/hr for a laborer to drum up waste, the supervisor will be more expensive and something like \$55/hr.

Steve acknowledged that VT DES has asked facilities to provide quotes in the past, which has put the facilities in an awkward position to get quotes from other vendors. It is also uncomfortable asking for quotes for future work, not for current business activity. As a result VT has received push back from facilities and thus has relied on internal state invoices.

In Connecticut, they check with other TSDF's to see if the costs are within range, which they usually are because they are close knit group. CT checks spill contractors as well.

#### Maine

There are basically 3 TSDF's including 1 federal, 1 CMP (takes PCBS from other power generators), and 1 commercial. Closure costs are spelled out on the application and are reviewed,

including cleaning and removing containers, hourly work rates, and other line items. DEP uses technical staff engineers to review the applications. If they are satisfied with the application, the permit writers accept and approve them.

Follow-up question- what criteria do the engineers use? In Maine, they use their knowledge gained from past permit decisions and reference materials on the subject.

#### Massachusetts

Giles Steele-Perkins introduced MA permit writer, Al Nardone, who talked about their approach and was followed by Eric Fahle, an expert on FAM's.

MA has 11 commercial facilities of the Safety-Kleen variety, 1 noncommercial (Solutia) and 2 lamp recyclers who have recycling permits that require closure cost estimates but are not TSDF's in the true sense. Al was involved with the Clean Harbors of Braintree renewal application. The closure cost estimates that were provided were broken down in detail by waste type, cost per gallon of disposal, transportation cost and the destination facility of the material. For example, 15 percent of the waste by volume was solvent waste. During the technical review process, there was considerable back and forth discussions on the costs. MA was curious why some costs were lower than before in the original license application, such as price per gallon, and this was due to the bulking of wastes. MA has Costpro but does not use it. Basically, MA relied on Clean Harbors' line item costs but scrutinized them where warranted and made sure they were based on maximum volume where possible.

Eric Fahle pointed out that there are a number of interim status facilities in MA that are also subject to FAM requirements.

Al discussed the recent history with the closure plan and costs associated with General Chemical in Framingham. They had to revise their costs significantly from \$140,000 to \$1.8million due to clean up activities that were not anticipated. Al then spoke regarding the two lamp recycling facilities. A facility that has closed has had to incur much higher costs for cleaning of floors, walls, and equipment that the mercury had seeped into. The experience gained in the closure of that facility will be used to apply to the other facility when they are renewed.

Jeff Chormann reinforced the possibility that during facility closure, costs can go up quickly for decontamination and sampling. These need to be included in the closure plan.

Eric stated that MA requires FAM's for 86 solid waste facilities, including large C&D facilities, closed landfills, transfer stations, grading and shaping activities, compost facilities, combustion facilities, anaerobic digesters and transporters. The regional offices approve the closure plans.

Follow-up question – what are the terms of RCRA Facility Licenses for each state. The following summarizes the responses by state:

MA – 5 year

CT – 5 year commercial facility, 10 year non-commercial

VT – 10 year now, used to be 5 year

NJ – 10 year

NY – 5 year

Follow-up question - during the closure of the General Chemical, did they have to modify their plan, were contingencies built in? Al responded that contingencies were built in, at 15 to 20

percent above the calculated projected cost. They did not submit an actual modification to the license, but they did submit items for review as the costs began to rise during cleanout. With the lamp recyclers, MA is going one step at a time and will apply the knowledge gained to the other lamp recycler's closure plan during its renewal, to address all decontamination items.

Follow-up question - how long will closure take? Closure started in December 2012 and will continue for a few more months. Consultants, hygienists and others have been hired. They are looking at contamination below the floor level.

Follow-up question - are they setting aside funds? The funds (with the second lamp recycler) are staying the same at this time and DEP have not asked for more but will if needed (based on the closure cost of the closing facility).

### New Hampshire

Todd Leedberg gave a brief introduction for Linda Birmingham, who stated that there are no TSDF's in NH. Facilities that require closure cost plan and a FAM are 1 transfer station (Tradebe) and Large Quantity Universal Waste Handlers. Tradebe has lowered their cost estimates, which they are reviewing line-by-line in comparison with their previous plan. NH also has 37 solid waste facilities. These permits never expire, but facilities annually submit closure cost estimates. The permit reviews are completed by staff engineer by comparing current application information with previous ones. They make sure all materials are included, with a 10 percent contingency with each estimate. A line item review is not performed. As long as a 3<sup>rd</sup> party has documented the costs, NH will accept the plan and cost estimate.

NH does not use the Costpro software as they do not find it user friendly.

Vermont requires FAM for all facilities that offload. Does NH? The one RCRA facility in NH is just a transfer station that takes RCRA waste so no off-loading just transferring.

### New Jersey

New Jersey has 20 active RCRA facilities that are handled by an engineering staff and 140 closed and inactive facilities that their site remediation program handles. The staff's reviews are along the lines of what CT does. Scott Frau at (609) 984-2064 would be able to help with more detailed information. A 30 year life span for post closure may actually not be enough time because the contaminants are not going away. 50 year terms might be required for remediation sites. NJ has a 10 year permit for the active facilities. NJ also has many solid waste facilities with FAM's.

### New York

New York has 61 RCRA facilities, 33 of them are in closure. Their solid waste facilities are also required to have FAM's. She stated that when a facility changes the FAM to another type it can be logistical nightmare, because the new one has to be approved before the old one can be released. NY conducts an analysis every 5 years to scale up or down the number of years required for closure monitoring. The closure cost estimates for labor, equipment, and decontamination are all reviewed, as well as detailed items such as detergents used and number analyses. 15 percent contingency costs are applied to administrative costs; 15 percent and 25 percent contingencies are applied for other items for commercial and noncommercial facilities, respectively. They ask for quotes on everything or use standard costs from the Department of Labor.

### EPA Region 1

Steve Yee reported that there is an updated version of Costpro, at one copy per state or Region, and Bob Maxy was the contact for it. He also cautioned that states not approve quotes provided by facilities that may have come from sister facilities.

There may also be training available on Costpro but Steve Yee had not heard back from HQs, though in-person not likely due to budget cuts, possibly a webinar. Steve recognized training is needed for using Costpro, which has been used in a Region 4 state. Terri requested that NEWMOA be considered in any training plan for the software. The state participants on the phone would like to have the training. Steve Y. will check with Jeff Gaines on Costpro training.

### Wrap-up Discussion

Ross offered a possible useful reference document: "Estimating Costs for the Economic Benefits of RCRA Noncompliance", September 1997 and updated December 1997  
<http://www.epa.gov/osw/hazard/generation/f006/s0004.pdf>

He described another example of a facility that had enormous clean-up costs after closing. A precious metal recycler had contaminated surfaces and equipment everywhere with dust containing RCRA metals from the reclamation process. The facility was large at 1.1 million square feet. The company left, but fortunately a buyer was willing to clean-up the site at a cost of \$2 million. He noted that states are not limited to requiring closure cost estimates for just the hazardous waste storage areas.

Steve returned to the subject of EPA HQ's determination that closure cost estimates states are approving are too low. He wondered if EPA had information on what particular industry sectors or activities this might apply to.

Carmen noted that permit reviewers have to also consider the changing price of recyclable materials and of gasoline, which effects transportation and disposal costs. She also mentioned that CT DEEP also consults the Department of Labor information for costs.