

## **Notes**

### **NEWMOA Hazardous Waste conference call**

**December 11, 2012**

**Topic: Properly Managing Waste from Firing Ranges: LDRs, Remediation Wastes & Contaminated Soils, & Distinguishing between Debris & Soil**

### **Disclaimer**

NEWMOA organizes regular hazardous waste monthly conference calls or webinars so its members, EPA Headquarters, and EPA Regions 1 and 2 can share information and discuss issues associated with the implementation of the Resource Conservation and Recovery Act (RCRA), compliance assistance, enforcement, and other topics. Members of the group prepare draft notes of the calls for use by those members that were unable to participate and for future reference by the participants. These notes are intended to capture general information and comments provided by the participants and are not a transcript of the call. NEWMOA provides the participants on the calls with an opportunity to review drafts of the notes prior to posting them on the members' only area of the hazardous waste page on the NEWMOA website. NEWMOA staff makes all recommended corrections to the notes prior to posting.

Any comments expressed by participants should not be considered legal opinions or official EPA or State positions on a particular rule, site-specific matter, or any other matters. Participants' comments do not constitute official agency decisions and are not binding on EPA or the States. For exact interpretations of a State's or EPA's RCRA regulations, rules, and policies, NEWMOA recommends that readers of these notes contact the appropriate hazardous waste program in the State's environmental agency or EPA Headquarters or EPA Regional RCRA staff.

Participants: CT DEP (6 people); ME DEP (5 people); Mass DEP (7 people); NH DES (8 people); NJ DEP (9 people); NYS DEC (22 people); VT DEC (3 people); EPA Region 1 (3 people); EPA HQs (1 person); NEWMOA (1 person).

Todd Leedberg, NH DES prepared the notes with assistance from Terri Goldberg, NEWMOA.

Terri opened the call with introductions and a review of the agenda. She noted that she followed up on the discussion during the last conference call about taping them. She reported that she spoke with Jim O'Leary of EPA HQs on how he tapes calls for the Regulatory Implementation Network (RIN) calls. Jim transcribes the tapes, which he reported takes him a long time. To mimic Jim's efforts, Terri created disclaimer language to use with the summary notes. She proposed that she conduct a survey of call participants on whether to tape future calls or not. The states participants agreed with the proposal to conduct a survey. Terri will report on the results during the next call.

Michelle Ching, NYS DEC introduced the topic for the call and the context for the issues. She reported that the Agency often receives calls from firing range operators or concerned citizens about non-military shooting ranges in the State, and there are a

number operating and historical military ranges. NYS provides guidance to range operators undergoing periodic range maintenance. They would like input from others states on the following questions:

***1. Does your state have any formal requirements, such as notification and range clearance, for small arms ranges that are closing or recently closed?***

Responses:

NY- No, really “hit-or-miss”. When the range is to be sold for development, or a complaint comes in, NYS DEC will hear about it.

CT – No, same as NY. No notification unless receive a complaint, or if potential buyer of the range site wants information on the property from the State.

ME – Same as NY. ME has hazardous waste closure requirements that would potentially apply.

MA – They have no formal notification since there is no permitting process. MA has done some compliance and technical assistance outreach to a number of shooting ranges.

NH – No formal requirement specific to shooting ranges. However, if environmental site assessment is performed and contamination found, reporting requirements may pertain.

DES has developed a guidance sheet for a “Regulatory Approach for Outdoor Shooting Ranges,” which outlines the administrative rules that may apply if a range closes and a site investigation is necessary. A few years ago, DES sent a letter with BMPs to 35 ranges (worked with NH Fish & Game, and NH State Police to identify them).

NJ – No formal rules for operating and closed ranges. When they communicate with ranges, they suggest the use of the ITRC sheet of BMPs. Most notifications come in from potential buyers conducting due diligence soil sampling. Have found antimony, lead, arsenic, and PAH contamination at sites where they have conducted testing. The PAHs are from the clay pigeons.

VT – No formal requirements. May get involved with complaints or when a property transaction occurs.

A few years ago NH DES sent a letter to known established gun clubs (~35). They put together a list from police department records and other sources. They focused on active ranges that are more than a local sandpit. They included guidance. They got responses to visit some ranges. They don’t routinely visit sites unless there is a complaint or are asked to visit.

Beginning in the late 1980’s, MA reported that they did something similar to NH. They sent a letter to the gun clubs (well over 100) and visited some. They told them about the BMPs. At closed ranges, the site remediation program gets involved. At active ranges some of the lead can be managed as scrap metal.

***2. Other contaminants that are found on small arms ranges: any experience or data on the contribution of clay target material and other wastes like shell casings, paper wads, etc.?***

Responses:

NY – Some sites that have been tested had copper contamination from the shells.

CT – Found elevated levels for lead, copper, and arsenic. They did not test for PAHs. The samples were taken to support enforcement action.

ME – Few sites tested had lead.

MA – For active sites, have not sampled. For closed sites, testing has found lead and arsenic.

NH – DES had determined that the waste material from ranges is a solid waste, unless it meets a hazardous waste determination. DES has found that the older clay targets that were made of limestone and a petroleum based pitch (binder) have the ability to degrade into the surface water with PAHs sometimes present. Shell casings, paper wads, and targets and the clay targets are usually managed as solid waste. Have found that some ranges recycle casings made of brass and lead shot.

NJ – Have found antimony, arsenic, copper, lead, and PAHs. Removed 2-4 million pounds of lead from one site. Has seen over 2,000 samples where the TCLP for lead was far exceeded (unsure if the sample was screened or not screened of bullets). Try to recycle the lead from sites. Bullet pellet size depends on the pH of the soil and acid rain. Has seen lead contamination in surface water that contaminated geese and ducks.

VT – Only one range is in the state remedial program. Limited data collected on soils.  
EPA Region 1 – Defer to the EPA Corrective Action Program. EPA has shut down an existing Massachusetts Military Range on Cape Cod because it was over the aquifer.

The group discussed available information on tungsten as a substitute for lead. In some cases, the tungsten has been found to be more toxic and mobile than lead. It also appears to be able to mobilize the existing lead in the soil.

The group discussed the recycling of automotive lead acid batteries into bullets, and the potential for cross contamination from arsenic, cadmium, and silver that is used to make the batteries stronger.

The group discussed an Arizona suit to prevent lead from being used in bullets as condors are shown to eat carnage and die from lead contamination.

***3. Do you know of any uses or reclamation processes for soil from ranges, if soil must be removed from a closed range (for instance because the range will be used for residential type use following range closure)?***

Responses:

NY – Is interested in alternatives to disposal of the soil, and how to clean up the soil that is left behind.

CT – No experience with hazardous soils. Allows soil from smaller ranges to be moved to areas on active sites.

ME – Soils from firing ranges that fail TCLP for lead are regulated as hazardous waste and taken offsite.

MA – At one location had a washing reclamation system that went well; they used a closed loop system that is described in the available guidance. At a trap range that had for years shot off property and onto a vacant lot, lead was discovered in the soils of the residences once the site was developed into house lots. The contaminated soils were removed from the backyards and used to construct a berm on the gun club property. For wetlands remediation projects, the question is whether the lead should be removed (potentially causing more environmental damage) or left in place.

NH – At an inactive or permanently closed range, remediation standards would apply if soil is above soil remediation standard of 400 ppm and is to be removed from the site.

Has a site that where a large reclamation is planned. Process to involve screening of the lead shot, bullets and fragments for off-site recycling. Remaining soil to be treated on site to stabilize the lead particles that may have attenuated to the soil particle surfaces. TCLP on the soil to see if it goes or stays. Allows soil to be reconfigured on the site if it is an active range (e.g., move soils from marsh to uplands).

NJ – Had one site that used physical separation of the bullets, then a hydrocyclone. Fines were separated and handled as hazardous waste. Expensive operation.

VT – At one reclamation site they allowed the site to put back the soil.

***4. What are the state experiences with aqueous soil washing – efficacy; environmental considerations? Aqueous methods are fairly popular in western New York State for active ranges, but might this also be an effective method for closing or closed ranges?***

Responses:

NY – Require a storm water permit for disturbances greater than an acre; or potentially a State Pollutant Discharge Elimination System (SPDES) permit depending on site and project specific factors. Proposal would require screening onsite, stabilization, and testing for TCLP.

CT – No experience with soil washing.

ME – No experience.

MA – Had a site that used washing and reclamation of lead shot; where the soil was then deposited into lagoons. Need for a discharge permit was discussed but has yet to be determined.

NH – DES has not had experience with soil washing at outdoor shooting ranges.

***5. How do states deal with complaints?***

Responses:

NY – Complaints or questions from the public about specific ranges generally call for a site visit by DEC to assess. They ask: is the range in good condition? Any signs of poor housekeeping, any signs of munitions landing off-range, any firing over or into water bodies or wetlands? In tandem, they get back to the person to let them know that they are assessing the information and to give them the background on the regulations and links to publications like EPA's best management practices manual, which has more regulatory information. The ITRC case study dealt with wetlands contaminated by firing ranges and which ones to leave in place and which ones to remediate. DEC uses this information in examining site.

CT – Address all complaints.

ME – Investigate complaints.

MA – They are finding more lately and focusing on wetlands issues. They tell the clubs that people cannot shoot in wetlands. They have been evaluating whether wetlands should be reclaimed and the shot removed. They are addressing this on a case-by-case basis. Concerned about whether to disturb or not the wetland adjacent to or on the range that may be contaminated. About 10 years ago, held workshops with the Fish and Wildlife agency for firing ranges.

NH – DES essentially does something similar. Investigate complaints and provide information as appropriate. The information usually includes a discussion of the previously mentioned guidance sheet. Most complaints come in the fall, as well as requests for technical assistance. They do not approve stewardship plans for ranges. They have worked on BMPs and developed fact sheets.

NJ – Many complaints from municipal officials and residents. Many are wetlands-related because of shooting is over water. Working with an old range that was a sportsman's club that has become a Superfund site. DEP has received more complaints from residents and municipal officials on this site than any other site they have worked on.

VT – Receives 5-10 complaints/year. Work with State Fish & Wildlife Department to do seminars. Work with gun clubs to create Environmental Stewardship plans.

Other comments:

In the past, EPA Region 2 examined stewardship plans from ranges and provided recognition but they do not do this anymore.

Range operators filled out a form and certified that they were doing BMPs. EPA Region 2 issued certificates based on these applications. They decided to stop the program because of funding issues.

**Next Call – January 8 at 10:30 on dry cleaner waste, specifically focusing on evaporators and separator water.**