

And Then There Were None (RAOs)

By Lisa Alexander

In the late 1980s and early 1990s, BWSC received reports about oil and hazardous material found “in the environment” from EPA, consultants, oil company personnel, homeowners, citizens and virtually anyone that could pick up a phone or write a letter indicating that they thought there was something for us to be concerned about. The reports varied based on odors, appearances of disturbed soil or soil piles, abandoned drums, stained soils, dead fish or visible sheens on surface waters. At the time, some had ERB (Emergency Response Branch) numbers, some were simply “Locations to Be Investigated” (LTBIs) and some were “confirmed” sites or spills, based on first-hand involvement or investigation by a BWSC staff person. For property owners who wanted to proactively move forward with their site assessments and cleanups, there was an option to get a Waiver of Approvals once BWSC could confirm certain criteria were met with regard to assessing and eliminating certain risks or site conditions. But sites were accumulating and the list (and backlog of possible sites) was growing.

In October 1993, the “new” MCP was published and the Licensed Site Professional program was instituted. And as BWSC prepares for another MCP overhaul, it is also looking back at the accomplishments over the last twenty years and analyzing what they mean. This month’s article is going to provide some of the figures and data we’re looking at with minimal commentary. Figure 1 shows the accumulated new notifications and Response Action Outcomes (RAOs) since 1993.

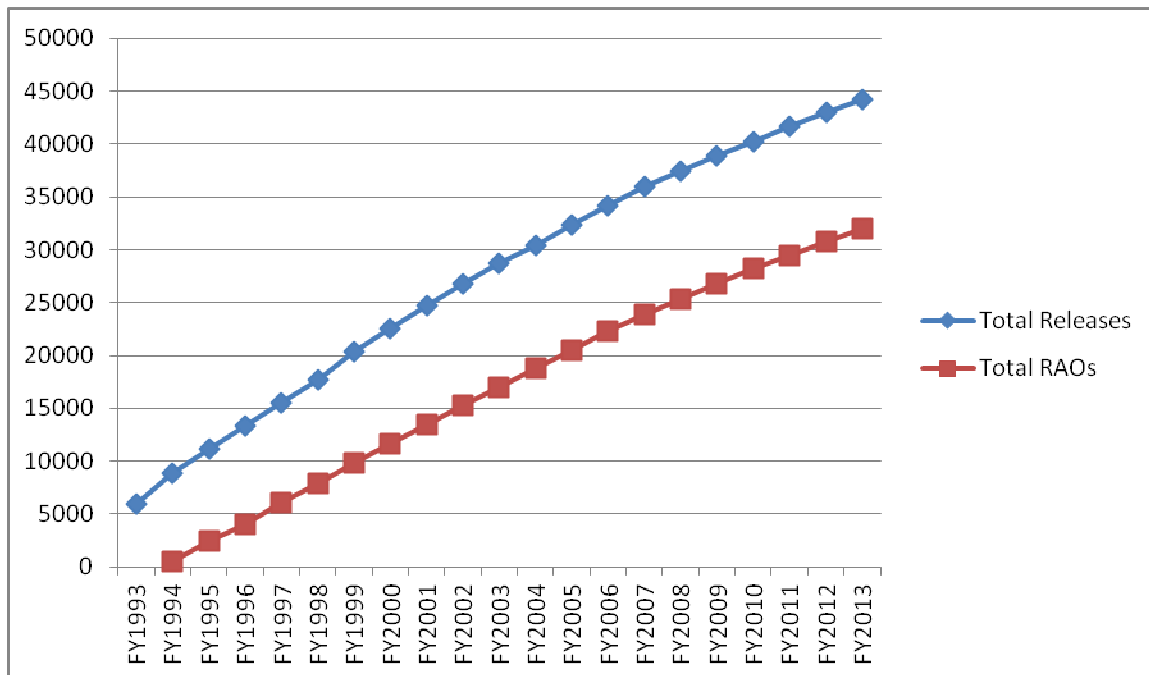


Figure 1. Total Releases in the BWSC database and Total RAOs, FY 1993- FY 2013.

It should be noted that the total number of releases in Figure 1 did not start a “0” in 1993, but rather, incorporated confirmed spills, sites and Waivered sites. Additional LTBI’s and ERB sites were evaluated later and either added to the database as active sites or determined to need No Further Action based on information in the files or gained through Requests for Information.

There was originally a statutory requirement to audit 20% of all fee paying sites within five years of RAO and, periodically, all AUL sites. Additionally, a portion of non-RAO sites were randomized and assigned for Level 3 audits (without initial Level 1 review). In order to address the growing universe of sites, a screening process used in the regions was standardized as the Level 1 Audit checklist. (You remember the checklist from its use in past Audit Case Study trainings.) The Level 1 form has certain risk based conditions designated as flags to determine sites that might be candidates for either a Level 2 Site Inspection Audit or a Level 3 Comprehensive Audit with site inspection. There are also non-audit Inspections of Preliminary Response Actions such as IRAs and RAMs, as well as treatment system inspections. Figure 2 shows the fiscal year counts of new Notifications, New RAOs, Level 1, 2, and 3 audits, non-audit Inspections and the resulting Low Level Enforcement and High Level Enforcement.

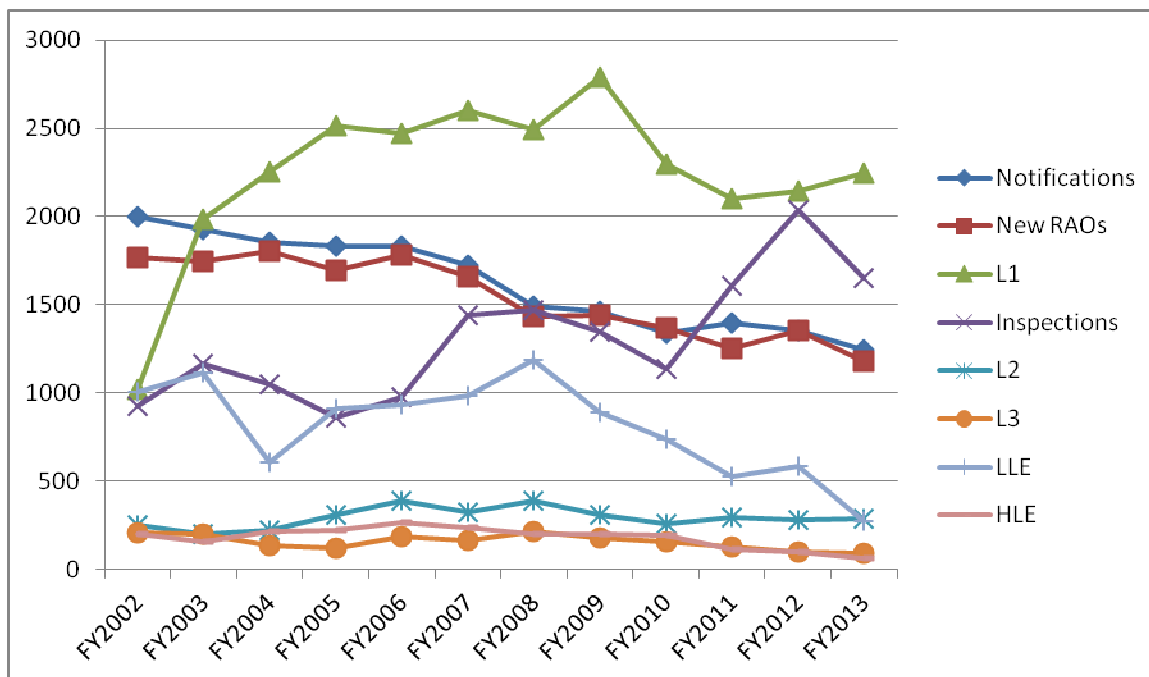


Figure 2. Notifications, New RAOs, audits by type, Inspections and resulting enforcement.

The spider web above shows that the number of Level 1 Audits annually exceed new notifications and new RAOs. In addition to RAO’d sites, BWSC periodically audits (or re-audits) AUL sites, DPS and non-RAO sites. Because it is easier to provide compliance assistance earlier in the process, current practice also includes Level 1 audits of preliminary response actions and Phase II submittals.

In the twenty years since 1993, nearly 36,000 new notifications had been made by the close of FY 2013. There have also been 31,944 RAOs of all types submitted.

RAOs as of FY2013	A-1	A-2	A-3	A-4	B-1	B-2	C	Total
Totals	9948	15923	1788	26	2759	435	1065	31944

Looking forward into the soon-to-be revised MCP, “RAOs” will be no more. However, from Figure 3, a pie chart of RAO types, one can see that the vast majority of current RAOs (89.6%) are suitable for unrestricted use (Class A-1, A-2 and B-1). These will soon become “Permanent Solutions.” Just over 7% (Class A-3, A-4 and B-2 RAOs) have been closed *with conditions*, able to be used with specified activity and use limitations. Finally, there are sites in the process of finding a solution or working toward a solution that aren’t there, yet. These Class C sites (3% of sites) may be further divided since the Class C-1 and C-2 were more fully defined (583 and 228 of each type, respectively). Depending on their specific circumstances, Class C sites will either find a way to become Permanent Solutions with conditions, or Temporary Solutions.

The different RAO types are shown in the pie chart in Figure 3. The twenty years of BWSC and LSP experience with the 1993 MCP will be reflected in many of the proposed regulation changes. Through initiatives in the last few years, BWSC learned that audits conducted earlier in the process (at preliminary response actions or Phase IIs) were found to lead to short term compliance assistance at a point where both LSPs and PRPs were more amenable to making changes in their plans and could also result in a better outcomes at closure. AULs will become the “conditions” to be maintained at sites that are otherwise Permanent Solutions at closure. Such “conditions” have long been accepted by the public, developers and investors and by the regulated community and are well understood by most. Overall, the regulatory changes due in Fiscal Year 2014 are a reflection of the way the program has evolved over the past two decades. RAOs will go away, but the program will continue.

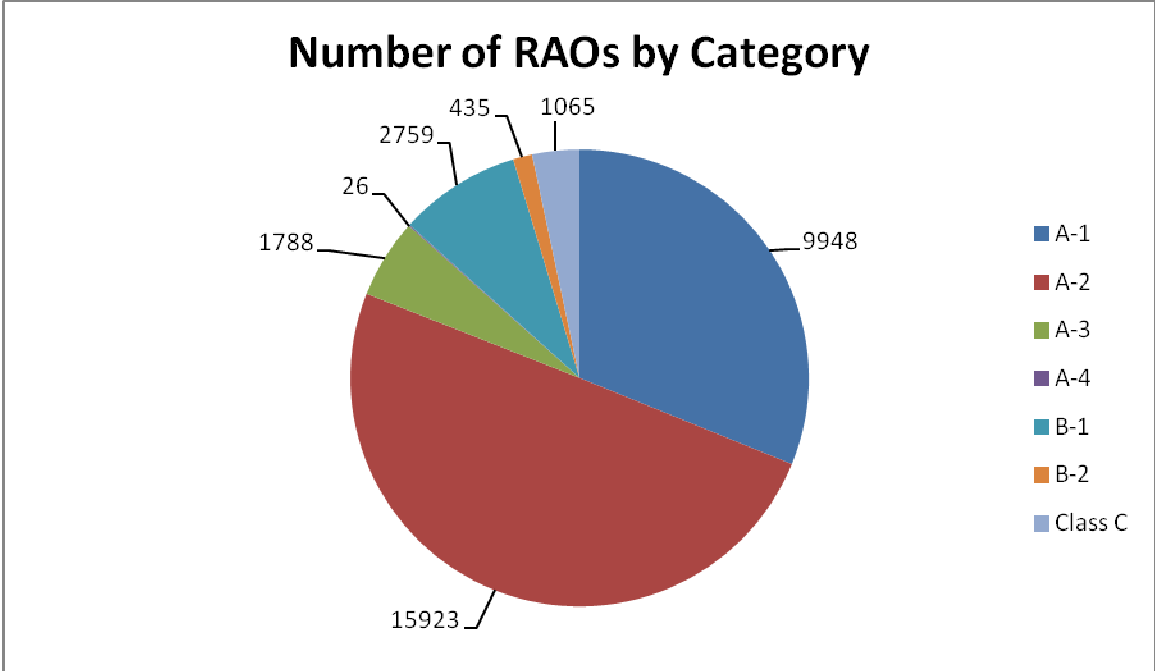


Figure 3. RAOs by Type at the end of FY 2013

For additional information on historic site notifications and closures, see:

<http://www.mass.gov/eea/agencies/massdep/cleanup/reports/21e-program-notification-statistics.html>

<http://www.mass.gov/eea/agencies/massdep/cleanup/reports/response-action-outcomes-table.html>