

# Site Remediation

## Background

In the late 1970s and early 1980s, growing public support for coordinated cleanup efforts and innovative state and federal laws enabled DEP to establish a progressive program to address New Jersey's many contaminated sites. Beginning with the passage of the New Jersey Spill Compensation and Control Act (Spill Act, N.J.S.A. 58:10-23.11 et seq.) in 1976, the State initiated the first program in the country to cleanup, or remediate, contaminated sites that posed a danger to human health and the environment. The federal government then enacted the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) in 1980, a program that provided the financial aid and technical guidance needed to clean up the nation's more seriously contaminated sites. This program, more commonly known as Superfund, was strengthened in 1986 by the Superfund Amendments and Reauthorization Act (SARA).

Remediation of a contaminated site includes identifying the source, nature, and extent of contamination at a site, and, if necessary, conducting appropriate cleanup work. Remediation addresses a wide variety of site conditions, ranging from leaking underground home heating oil tanks to large abandoned industrial sites with widespread environmental contamination. Remedial actions most often involve removing the source of contamination and decontaminating soil and water to protect human and ecological health. At times, the remediation involves capping the contaminated area with an impervious material for containment purposes, restricting future use for that property, or both. New Jersey's cleanup program has become a national model, and serious efforts are ongoing to reverse the effects of decades of industrial, commercial, and household waste mismanagement that has resulted in discharges of hazardous substances into the environment.

As the universe of known contaminated sites in New Jersey increased, DEP expanded its cleanup efforts to meet the challenges posed by a variety of pollution problems. The passage of several key state laws facilitated these endeavors, including the Environmental Cleanup Responsibility Act (later replaced by the [Industrial Site Recovery Act](#), N.J.S.A. 13:1K-6 et seq.) and the Underground Storage Tank Act (N.J.S.A. 58:10A-21 et seq.). The [Brownfield and Contaminated Site Remediation Act](#) of 1998 (N.J.S.A. 58:10B-1 et seq.) further refined the overall remedial process and stimulated cleanup and reuse of additional brownfield sites.

Faced with the challenge of ensuring that up to 20,000 active cases in New Jersey

were properly remediated in a timely manner, DEP worked closely with the New Jersey Legislature and stakeholders to develop legislation to dramatically change the process used to conduct environmental investigations and cleanups. In May 2009, the [Site Remediation Reform Act, N.J.S.A. 58:10C-1 et seq.](#) (SRRA) was signed into law. The legislation that created SRRA also amended other statutes such as the Brownfield Act and the [Spill Act](#). The amendments to the Brownfield Act included establishing an affirmative obligation on persons to remediate any discharge for which they would be liable pursuant to the Spill Compensation and Control Act (see N.J.S.A. 58:10B-1.3).

SRRA established a program for the licensing of Licensed Site Remediation Professionals (LSRPs) who have the responsibility to oversee environmental investigations and cleanups. DEP approval is no longer required to proceed with a remediation being carried out by an LSRP except for a few, limited circumstances. There was a three-year phase-in until May 2012, after which SRRA became fully effective. As of May 2012, remediating parties were required to use the services of an LSRP to proceed with the cleanup of their site.

While the law changed the process of how sites are remediated, it still ensures the same stringent standards required for cleanups remain in effect. DEP retains significant authority over the remediation process and ensures that LSRPs comply with all applicable regulations, but the day-to-day management of the site remediation process is overseen by LSRPs. When a remediation subject to SRRA is completed, rather than the DEP issuing a No Further Action (NFA) letter, the LSRP issues a Response Action Outcome (RAO).

SRRA also established the Site Remediation Professional Licensing Board (SRPL Board). The SRPL Board issues licenses to qualified individuals to conduct the remediation of sites in New Jersey. LSRPs are bound by a strict [code of ethics](#). A violation of the code of ethics could result in the assessment of penalties as well as suspension or revocation of the LSRP's licenses.

SRRA also granted the DEP the authority to establish mandatory remediation timeframes for the completion of key phases of site remediation. SRRA requires the DEP to maintain direct oversight in cases where the remediating party is recalcitrant in conducting timely cleanups for those sites that pose the greatest risk to public health and the environment.

Unregulated heating oil tank (UHOT) cases typically are lower risk cleanup projects and are not required to be overseen by an LSRP. As such, DEP reviews reports and

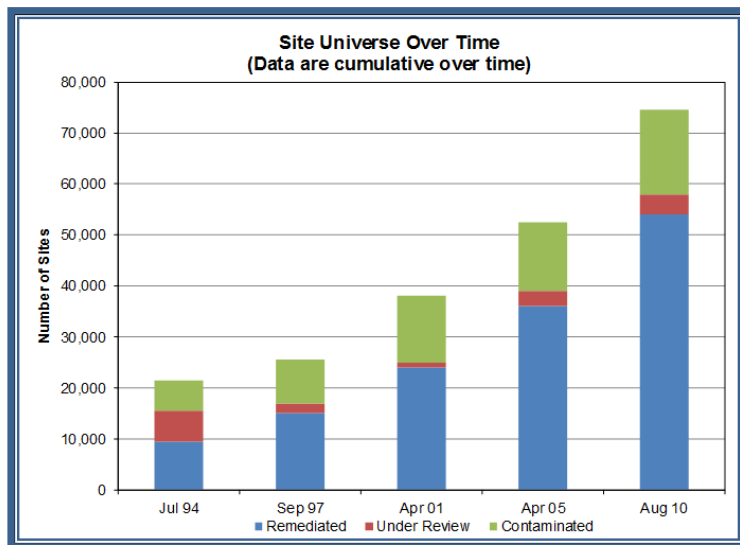
issues the final remediation document. These cleanups are often associated with a real estate transaction, and therefore when a final report is submitted, the DEP strives for a quick turnaround time, currently averaging just two to three days.

## Status and Trends

Since the implementation of the LSRP program, the systems by which cleanups are conducted and tracked have changed dramatically. This report will refer to 2009-2012 as the implementation period, where both programs (Department oversight and LSRP) were operating simultaneously and, importantly, the tracking of metrics changed. For example, prior to the enactment of SRRA, data are reported for "sites," referring to a property where one or several contamination issues exist. Upon implementation of SRRA, "cases," referring to multiple regulatory or contamination issues at one site, are tracked. An example of this distinction is a gas station: the gas station represents a single site; discharge(s) that occurred for each successive owner/operator represent an individual case.

### Active Cases

Because of the distinction between sites and cases, comparing the previous remediation paradigm with the LSRP program is difficult. The "Site Universe Over Time" graph below was included in this trend report, as well as previous reports, to provide the reader with an understanding of the status of cleanups before the LSRP

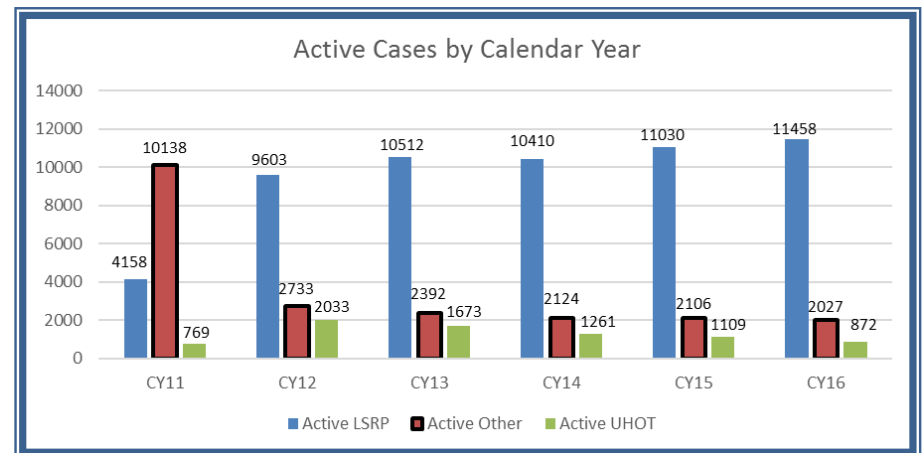


program was created. The "Site Universe Over Time" graph will no longer be updated.

In 1994, DEP identified approximately 12,000 sites in New Jersey, including both known and suspected contaminated sites and sites under review. Sites under review may be contaminated and require remediation or may not be contaminated. The number of active cases in New Jersey peaked at over 20,000 in 2008, and this number was often cited as DEP's "backlog." This increase can be attributed to several factors, including a growing industrial base that relies on the use of hazardous materials, increased awareness of the risk posed by certain chemicals, and new technologies that are able to detect these chemicals.

Subsequently, this number declined based on aggressive program review and process improvement in preparation for full implementation of SRRA.

DEP considers the active case count of 18,407 (March 2010) as the baseline from which future trends will be developed. Continued process improvements and initial impacts from the implementation of SRRA lowered the total number of active cases to 16,278 by August 2010.



Regarding LSRP cases, during the implementation period, cases participating in the LSRP program increased from the baseline of 319 cases in March of 2010 to 1,137 cases by the end of August 2010. Since all cases were required to fully transition to the LSRP program by 2012, there is an increase from 4,158 LSRP cases in 2011 to 9,603 LSRP cases in 2012.

The average total active case count since full implementation of the LSRP program (2012-2016) is approximately 14,200 cases. The total number of active cases during this time was the greatest in 2013 at 14,577 cases and least in 2014 at 13,795 cases. See the “Active Cases by Calendar Year” graph above. DEP expects the total number of active cases to stabilize around 14,000 in the next few years before starting to decline.

The number of active UHOT cases increased almost threefold from 2011 to 2012, due to changes in the way UHOTs are tracked by the program. However, generally, the number of active UHOT cases has been decreasing. This trend is expected, as the DEP reduces its backlog of UHOT cases. In the past 6 years, approximately 22,000 heating oil tank cases were completed - an average of almost 4,000 per year.

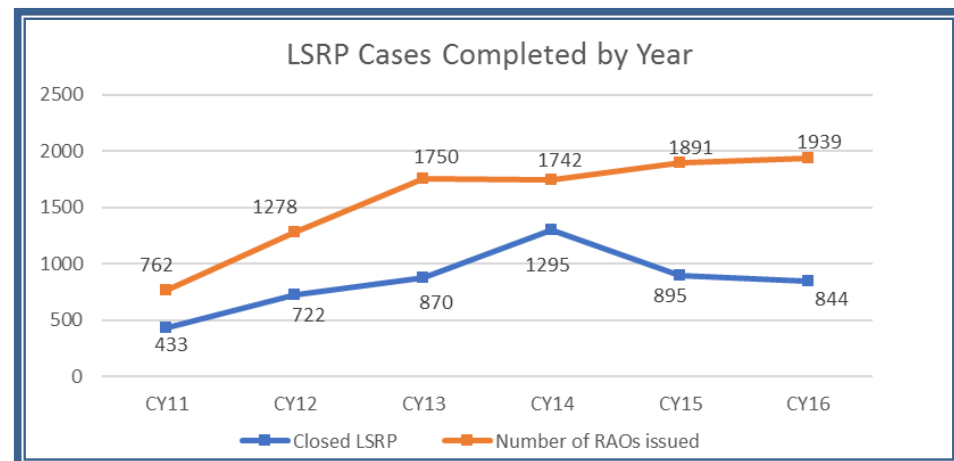
#### Cases Completed

The number of sites that were remediated from 1979 to 2010 is over 53,000. In 2011, the number of total cases completed was 4,360. Since full implementation of SRRA, the average number of cases completed is 4,637 per year. DEP expects that this number will be consistent for the next few years and eventually start to increase, as older cases approach the deadlines to complete remedial action.

The total number of cases completed peaked in 2014 at 5,036, which exceeded the number of new cases entering the program (4,928 new cases). This increase in completed cases is likely due to the deadline set forth in SRRA requiring responsible parties to complete the remedial investigation by May 7, 2014 for discharges that occurred before May 1999. Many of these cases had not only completed the remedial investigation, but had also completed the remedial action and were therefore able to close.

DEP expected the number of LSRP cases completed to generally increase each year. The number did increase from 433 in 2011 to a peak of 1,295 in 2014, then decreased to 844 in 2016. See the “LSRP Cases Completed by Year” graph. As discussed above, the peak in completed LSRP cases observed in 2014 is likely due to the statutory timeframe set forth in SRRA to complete the remedial investigation for cases addressing discharges discovered before May 1999.

Another trend being tracked is the number of Response Action Outcomes (RAOs) that have been issued by LSRPs. Generally, the number of RAOs issued annually has been increasing, with 1,939 RAOs issued in 2016. To date, LSRPs have issued over 10,000 RAOs since the inception of the program. It should be noted that this metric



is different from cases completed, as there can be more than one RAO associated with a case.

The mandatory timeframe to complete the remedial action for cases addressing discharges discovered before May 1999 where only soils are impacted is May 2019. It is expected that the number of cases completed and RAOs submitted will increase as the cleanups of these cases are completed.

#### Remedial Level

DEP is also tracking trends in cases by remedial level, specifically, simple cases versus complex cases. Simple cases are defined as those that are single-phase cleanups or only have soil contamination. Complex cases are those that are multi-phase and contamination in more than one media (including, but not limited to, soil, ground water, sediment, and indoor air due to vapor intrusion). Because remedial level was also tracked prior to the enactment of SRRA, DEP can draw a comparison between the two programs.

In the seven years prior to the enactment of SRRA (2001 to 2008), approximately 27 percent of cases completed were complex. This percentage increased to almost 30 percent in the seven years since the enactment of SRRA (2009 to 2016). Coupled with the fact that more cases are being closed under the LSRP program, for the same time frames, the number of complex cases completed in the new program has more than doubled.

## ***Outlook and Implications***

New Jersey has a long history of manufacturing industries, particularly petroleum, chemical and pharmaceutical, as well as agriculture. Through successful implementation of SRRA, historical contamination is being addressed more efficiently, protecting the public health and the environment, and sites are being returned to beneficial use and local ratables.

Today, there are more contaminated sites being actively remediated than ever before, and they are being cleaned up faster. Although the active cases count is increasing (because DEP is proactively identifying new cases), it is expected to show a decreasing trend in the near future. The increase in the number of cases completed indicates that contamination is being addressed and remediation activities are concluding. Similarly, the increasing number of RAOs issued by LSRPs indicates that the remediation of portions of sites or entire sites are moving forward and portions of a property are being readied for redevelopment.

DEP is continuously re-evaluating the program to ensure its continued success and protecting the public health and environment of the State of New Jersey.

## ***More Information***

<http://www.nj.gov/dep/srp/index.htm>

<http://www.epa.gov/swrust1/>

<http://www.epa.gov/superfund/index.htm>

