

New Jersey Site Remediation Benchmarking Study

**Prepared for
New Jersey Chamber of Commerce**



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SITE REMEDIATION PROGRAM BENCHMARKING STUDY

Executive Summary / Key Findings

Site remediation involves the removal of contaminants from the soils and groundwater and surface water of an area in order to protect public health and to allow future redevelopment of the land. Today there is an increasing demand for useable land in New Jersey as areas that were once considered undesirable are now attractive options for redevelopment. Given this demand and the history of industrial land use in the state, it is imperative that New Jersey's site remediation program utilize the best approaches to ensure that contaminated sites are cleaned up in a manner that is protective of public health and at the same time efficient and cost effective.

The New Jersey Chamber of Commerce commissioned this study to compare the performance and features of New Jersey's site remediation program to those in other states. The purpose is to better understand what is being done well and also to identify potential options for improving the site remediation program.

This study proposes that a key indicator of site remediation program performance is the ability to review and complete cases in a timely manner. In this regard, New Jersey performs well in its handling of homeowner cases but performs poorly in its handling of other types of cases. The objective assessment of program characteristics and features in the various states sheds some light on areas where New Jersey might improve performance but it also leaves some ambiguity: New Jersey shares several program features that are found in programs that have better performance indicators, so it is not the mere structure of the program but differences in how the program is implemented that seems to contribute to different levels of performance. We found, in an interview with NJ DEP, that the agency is taking a hard look at options for improving performance and is initiating some changes to improve performance.

The primary findings in this report are as follows:

1. New Jersey has not implemented a data driven management system that could address what appears to be the large concern of inconsistent application of standards and subjectivity in the treatment of cases. Such a system would also be helpful in managing caseloads in order to avoid the problems associated with the current situation in which new cases can "bump" cases already in review. The results by case type obtained through the informal survey highlight the potential for identifying priority staffing needs and begin to highlight how such information could be used to improve overall program performance. This is one area where New Jersey Department of Environmental Protection (NJ DEP) has indicated its intent to make change, and the potential for enhancing this change should be explored more fully. This should include consideration of establishing quantitative or other robust program goals and metrics.
2. New Jersey appears to have a large backload of open cases in part because cases relying on engineering and institutional controls (EIC) are considered "open" indefinitely. It may be useful to consider clarifying the status of open cases and the expectations for what might be required in the future based on case status. For those cases that are

open solely for monitoring purposes, there may be a way to reduce the perception of future liability. This would tie directly to concerns that were raised anecdotally that an applicant can face seemingly open ended requirements. Although it is appropriate for the state of New Jersey to impose new requirements as the science indicates, this needs to be balanced with the difficulties and stigma caused by the perception that projects have unlimited liability.

3. New Jersey's backlog of cases is increasing at a faster rate than its rate of closing cases. While we calculate an estimated 88 years to reduce backlog at current closure rates, this number of years to close backlog would actually seem to be growing each year. Since the major increase in backlog is from cases that are larger and more complicated than the homeowner cases that dominate the seemingly good closure statistics, this trend is of enormous concern.

4. There are two options that could help New Jersey to fully utilize the flexibility inherent in EIC measures while also ensuring adequate assurances for protection of public health; these include: (a) utilization of the Uniform Environmental Covenant Act (UECA) approach and/or (b) the use of state-based registration or permit tracking system.

5. Increasing available staff time and resources will be essential to addressing many of the outstanding concerns with New Jersey's program. One option for relieving this pressure may be to adopt a formal process to enable applicants to hire qualified 3rd party consultants to facilitate the review process. Such an approach could help to reduce case review time, assist with oversight of EICs, and limit the costs borne by the voluntary party.

6. The use of risk based assessments allows for flexibility in the clean up program and provides the voluntary party with options for timely remediation. While New Jersey reported that its program allows participants to choose a risk based method, anecdotal evidence from the survey suggests that risk based approaches to setting clean up standards are not perceived to be available or used. Although this study does not explore this issue in detail, anecdotal evidence suggests that New Jersey does not have staff who are adequately trained to consider the site specific risks in deciding cleanup standards, as a result, the prescriptive requirements and other constraints on the ability to utilize those flexible mechanisms within the New Jersey rules actually prevent their use.

In addition to these key findings, the report draws comparisons among the 40 States based on use of the data in the two source reports. The findings from that comparison are included in main report.

Table Of Contents

1.0 Purpose.....	4
2.0 Background	4
3.0 Method.....	4
4.0 Broad Overview	5
4.1 Completion Rate And Backlog.....	5
4.2 Fee Structures.....	10
4.3 Clean Up Standards	12
4.4 Liability.....	14
4.5 Long Term Stewardship	17
4.6 Financial Incentives	20
5.0 Detailed Review	22
5.1 Engineering And Institutional Controls In Site Remediation	22
5.1.1 New Jersey.....	24
5.1.2 Ohio.....	25
5.1.3 Discussion	26
5.2 Independent Consultants And Staffing.....	26
6.0 Conclusion.....	28

List of Tables

Table 1: Ranking Of States: Case Completion And Backlog.....	7
Table 2: Informal Survey Response - Case Completion Statistics.....	9
Table 3: Clean Up Program Fee Structure, By Rank.....	11
Table 4: State Approaches To Cleanup Program, By Rank	13
Table 5: State Approaches To Completion, By Rank	16
Table 6: State Approaches To Financial Liability, By Rank.....	17
Table 7: Long Term Stewardship, By Rank	19
Table 8: Financial Incentives, By Rank	22

1.0 Purpose

In 2006 the New Jersey Chamber of Commerce (NJCC) launched the Platform for Progress¹ initiative to develop consensus on approaches for addressing challenges in six key areas, Economic Development, Education, Environment, Government Reform, Health Care and Transportation.

This benchmarking study was commissioned as part of the Action Plan under the Environment Platform. Its purpose is to develop a better understanding of how New Jersey's site remediation program compares to those in other states and to explore potential options for improving the program.

2.0 Background

Site remediation involves the removal of contaminants from the soils and groundwater and surface water of an area in order to protect public health and to allow future redevelopment of the land. Today there is an increasing demand for useable land in New Jersey as areas that were once considered undesirable are now attractive options for redevelopment. Given this demand and the history of industrial land use in the state, it is imperative that New Jersey's site remediation program utilize the best approaches to ensure that contaminated sites are cleaned up in a manner that is protective of public health and at the same time efficient and cost effective.

3.0 Method

This study includes two parts. The first develops a broad comparison among a group of states based on the self-reported data collected in two national reports as described below. The purpose of this broad, and intentionally cursory, assessment is to develop a common point of reference to compare aspects of New Jersey's program. The second part of the report provides a more in-depth comparison of certain aspects of New Jersey's program based on further research. In addition, an informal survey was conducted as part of this effort in order to collect anecdotal information about program performance. Results from the survey are referenced in the report.

The broad comparison is derived from the information contained in two recent reports describing site remediation programs throughout the United States. The first of these reports is the "State Brownfields and Voluntary Response Programs: An Update from the States," which was released by the United States Environmental Protection Agency (EPA) in February 2005, and later updated in August 2006.² The second report was released by the Northeast Midwest Institute in May 2000, and is entitled "Brownfields, VCPs, and Housing: State-of-the-State Information and Data."³

¹ From the New Jersey Chamber of Commerce website located at: <http://www.platformforprogress.com/>

² Environmental Protection Agency, Brownfield Cleanup and Redevelopment Website available at: http://www.epa.gov/swerosps/bf/pubs/st_res_prog_report.htm (Last visited: May 17, 2007). For the purpose of this Benchmarking Study, this report will hereafter be referred to as "the EPA report."

³ Bartsch, Charles and Bridget Dorfman, Northeast Midwest Institute, "Brownfields, VCPs, and Housing: State-of-the-State Information and Data," available at: <http://www.nemw.org/NAHBresults.pdf> (Last visited May 17, 2007). For the purpose of this Benchmarking Study, this report will hereafter be referred to as "the NEMWI report," and any information from other versions of the report will be noted.

Both of the referenced reports describe aspects of state brownfield and voluntary cleanup programs including the financial, technical, and management elements; case statistics; public participation; and, statutory authority. This information is based on self-reported data from each of the states. Because the data is self-reported, there is a concern about data quality and consistency. The most obvious manifestation of this concern is that due to incomplete information, it was decided to base a comparison on 40 states rather than the full complement of 50 states plus territories included in the reports.⁴ The missing states are relatively unlike New Jersey in terms of demographics and primary social and economic drivers. This benchmarking report refers to the comparison group as the “40 states.” In preparing the initial ranking tables, several calculations were made using the data in these reports as explained in the body of the report.

In Section 4.1 – Completion Rate and Backlog, a list of the top ten states in terms of these performance indicators is developed. This list of the “top ten states” is referred to throughout the report. The report also uses the ranking convention of referring to the best performance as being ranked first (1st) and the worst performance as being ranked 40th. Unless specifically indicated otherwise, this convention is used throughout the report.

4.0 Broad Overview

This section compares the 40 States based on case completion rates and backlog in order to determine which states appear to have the most efficient programs. It then compares aspects of the 40 States’ programs including fee structure, clean up standards, liability provisions, long term stewardship requirements and use of financial incentives. The purpose of this broad review is to try to understand which programs seem to be most successful in completing cases and to determine if certain features of their program may be contributing to that success.

4.1 Completion Rate And Backlog

Finding 1: New Jersey ranks 38th for calculated time to reduce backlog, 3rd for reported case completions, and 20th in a combined assessment of closure and backlog reduction rates. These numbers show that other states appear to have better case management performance. Further investigation of these numbers shows that the absolute number of cases in the backlog is increasing annually and the seemingly good closure rate is dominated by homeowner cases, and so is not an accurate indicator of the closure rate in New Jersey.

An important indicator of program performance is the rate at which cases are completed and the size of the backlog of cases still to be completed. It was possible using the two

⁴ The reports used to generate the Broad Overview did not have complete information on all 50 states so a subset of 40 for which complete information was contained are the focus of this study. The missing states are Alabama, Idaho, Kentucky, Nebraska, Nevada, North Carolina, North Dakota, South Carolina, South Dakota and Wyoming. Given differences between these states and New Jersey with regard to the level of development, industrial history or population pressure, it was considered to be acceptable to omit these states.

source reports to calculate an objective closure (or completion) rate and a rate of reducing the reported backlog. It is important to note that these rates are calculated based on the available data in the two reports and are not widely reported by the states. Also, given concerns about data quality and consistency in the source reports, it is likely that the rates calculated in this report are not calculated consistently across the states. That said, these calculated rankings present a useful first step in the comparison. One theme that will be highlighted in this report is that the collection and analysis of site remediation performance data is mostly inadequate.

Table 1 provides the results of this analysis in which the 40 states are ranked for both completion and backlog rates and then ranked on a combined "score" of the component rankings.⁵ A score of "1" represents the best performance, (i.e., the lowest combined score) and "40" represents the worst performance (i.e., the highest combined score). The process for developing that calculation follows:

1. The "Calculated Case Completion Rate" is derived by dividing the number of completed cases by the number of years that the program has been in existence. The number of completed cases is included in the EPA report and the year that the each program started is included in the NEMWI report.
2. The "Completion Rate Rank" is derived by assigning the highest rank, "1," to the state with the highest completion rate and the lowest rank, "40," to the state with the lowest completion rate.
3. The "Expected Number of Years to Complete the Backlog" is derived by dividing the number of current cases by the calculated completion rate.
4. The "Backlog Rank" is derived by assigning the highest rank, "1," to the state with the lowest expected number of years until existing cases are completed and the lowest rank, "40," to the state with the longest.
5. The "Combined Score" is simply the total of the Completion Rate Rank and the Backlog Rank. Those scores that are highlighted are instances where the combined score was tied and the states are listed in alphabetical order.
6. The "Overall Rank" is derived by assigning the best rank, "1," to the state with the lowest combined score; the worst rank, "40," was assigned to the state with the highest combined score.
7. Caveat: The following analysis is based on the data in the referenced reports. Based on further investigation, it is known that there is a discrepancy between the reported current caseload for New Jersey in the source data and included in a recent presentation by DEP. This discrepancy is not corrected in Table 1 since there is no access independent information for the rest of the states. A discussion of this issue is included in the "Discussion of Results" Section.

⁵ Environmental Protection Agency, Brownfield Cleanup and Redevelopment Website available at: http://www.epa.gov/swerosps/bf/pubs/st_res_prog_report.htm (Last visited: May 17, 2007). P 145-148. It should be noted that this chart was compiled from information taken from the summary tables at the back of the report. There are instances where this information is not fully consistent with the data contained in the individual state summaries.

Table 1: Ranking Of States: Case Completion And Backlog

State	# of Completed Sites in VCP	# of Current sites in Progress	Calculated Completion Rate	Completion Rate Rank	Expected # Years to Complete Backlog	Backlog Rank	Combined Score	Overall Rank
Massachusetts	19513	~ 10,000	1626	1	6	6	7	1
California		300	125	6	2	2	8	2
Pennsylvania	1,711	650	156	4	4	4	8	3
Wisconsin	14,000	~ 7,252	1167	2	6	7	9	4
Michigan	1,000	216	83	7	3	3	10	5
Maine	260	40	20	15	2	1	16	6
Minnesota	1,500	589	83	8	7	8	16	7
Oklahoma	196	115	22	14	5	5	19	8
Rhode Island	700	550	64	11	9	12	23	9
Washington	1,207	2,200	134	5	16	20	25	10
Illinois	1,347	840	79	9	11	17	26	11
Missouri	210	166	18	17	9	15	32	12
Virginia	101	103	11	20	9	14	34	13
Arizona	79	79	9	22	9	13	35	14
Maryland	106	134	12	18	11	19	37	15
Indiana	552	957	42	12	23	26	38	16
Iowa	27	29	3	27	9	11	38	17
Texas	739	1,582	67	10	24	28	38	18
Alaska	20	21	3	30	7	9	39	19
New Jersey	3,402	23,000	262	3	88	38	41	20
Ohio	139	202	12	19	17	22	41	21
Delaware	91	85	8	24	11	18	42	22
Georgia	19	16	2	32	8	10	42	23
Colorado	226	425	19	16	23	27	43	24
New Mexico	21	31	3	28	10	16	44	25
Oregon	465	950	31	13	31	31	44	26
Montana	23	35	2	31	17	21	52	27
Tennessee	50	103	4	26	25	29	55	28
Kansas	72	311	8	23	39	33	56	29
New York	116	767	10	21	79	37	58	30
Utah	15	37	2	33	22	25	58	31
New Hampshire	11	24	1	36	22	23	59	32
Mississippi	34	206	5	25	42	35	60	33
West Virginia	32	113	3	29	39	32	61	34
Vermont	3	6	0	40	22	24	64	35
Hawaii	6	17	1	39	26	30	69	36
Arkansas	9	34	1	37	42	34	71	37
Connecticut	22	191	2	34	122	39	73	38
Louisiana	8	36	1	38	45	36	74	39
Florida	9	578	1	35	514	40	75	40

** Those scores that are highlighted in yellow are instances where the combined score was tied and the states are listed in alphabetical order.

Discussion:

According to this analysis, New Jersey performance is at about the 50th percentile of states reviewed. The calculated completion rate is very good and yet the state has almost the worst backlog reduction rank. These findings are difficult to reconcile, and upon further investigation, we find these numbers reported in the source reports to be a misleading.

For example, during the March 2007 Stakeholder meeting, Department of Environmental Protection (DEP)-Site Remediation presented information on the caseload of managers

in the program.⁶ Currently, there are 18,701 cases⁷ assigned to 359 managers.⁸ This equates to roughly 50 cases per manager.⁹ Assistant Commissioner Kropp acknowledged that if the Site Remediation Program were to require a 60 day turn around time, an estimated 900 new case managers would need to be hired. It was also noted that New Jersey expects to add roughly 1,500 new day care facility cases.

In addition, based on conversations with the NJ DEP, we learned that the reported New Jersey cases include homeowner cases in the count, this also appears to be the case for Massachusetts, but it is unknown if other states do the same. Homeowner cases are often easier to review and process than other cases, as a result they close at a faster rate. On average, New Jersey opens about 5,000 new cases a year, and 80% of these are homeowner cases which have a more rapid completion rate. Roughly 4,500 cases are issued No Further Action (NFAs) letters each year, resulting in annual additions to the current backlog of about 500 cases.¹⁰ The 20% of new cases that are not homeowner cases tend to be more complex and take (years) longer to review and complete. It seems that this may have skewed the completion rates upwards.

The informal survey conducted as part of this study suggests that certain types of non-homeowner projects take significantly longer to close and sheds an interesting light on completion performance. In the survey, eight respondents completed questionnaires regarding more than 1,600 cases combined. The responses, presented in Table 2, show the completion rates since the inception of the programs, by case type, and also the average amount of time that currently "closed" cases were open for review and the average amount of time the remaining "open" cases have been open for review.

As shown in Table 2, the Underground Storage Tank (UST) and Memorandum of Agreement (MOA) cases covered in the survey took about 3 years on average to close while it took nearly 8 to 9 years on average to close the Industrial Site Recovery Act (ISRA) and Administrative Consent Order (ACO) cases, respectively. Cases in all four categories that remain open have been so for considerably longer, ranging from 7 to almost 12 years – or nearly as long as the site remediation program has been in existence.

⁶ Meeting Minutes from "Site Remediation Program Reform Stakeholders Meeting" (March 6, 2007) available at: <http://www.state.nj.us/dep/srp/stakeholders/20070306.minutes.pdf> (Last visited: May 3, 2007) p:10

⁷ The chart notes that "[c]ases may be assigned to multiple Bureaus within SRWM that is reflected as a higher assigned case count than Total case count."

⁸ 193 cases were assigned to "No Bureau Named," but no information on the number of managers assigned to these cases was provided. Thus, for the purpose of this analysis, these 193 cases were not included.

⁹ It is important to note, as the meeting minutes did, that the length of time spent on a case can vary dramatically. For example, on homeowner cases, "most take about 3 to 4 hours and some other cases have been in the system 4 to 5 years. Every couple of weeks a case manager's priorities can change based on what comes in the door." Meeting Minutes from "Site Remediation Program Reform Stakeholders Meeting" (March 6, 2007) available at: <http://www.state.nj.us/dep/srp/stakeholders/20070306.minutes.pdf> (Last visited: May 3, 2007) p:4

¹⁰ According to officials at the NJ DEP, in FY 04, 4,500 NFAs were issued. In FY 05 that number increase to 6,000 and in FY 06 it was 5,400. Of those in FY 04, 4,000 were homeowner cases, in FY 05, 4,500 were homeowner cases and in FY 06, 3,600 were homeowner cases.

Table 2: Informal Survey Response - Case Completion Statistics

Case Type	UST	ACO	ISRA	MOA
Total cases covered in survey	1,313	30	96	227
% Cases closed	62%	18%	28%	34%
Average amount of time it took to close these cases	36 months (3 years)	108 months (9 years)	93 months (7.8 years)	38 months (3.2 years)
Average amount of time remaining open cases have been open	84 months (7 years)	142 months (11.8 years)	143 months (11.9 years)	112 months (9.3 years)

Key:

UST – Underground Storage Tank

ACO – Administrative Consent Order

ISRA – Industrial Site Recovery Act

MOA – Memorandum of Agreement, Voluntary Cleanup Program

There is also confusion about the backlog reduction rate. The data provided in the EPA report under “cases completed” actually cited MOAs that were opened in a particular year. In New Jersey, an MOA marks the beginning of the process, rather than the end of the process. From conversations with the NJ DEP, approximately 8,000 cases in New Jersey have been issued NFAs and there are currently 19,200 active cases. It is important to note that these are cases rather than sites, and some sites have multiple cases. Moreover, New Jersey relies heavily on engineering and institutional controls requiring long term monitoring; such cases are designated as “open” even though the primary activity is monitoring. Given these revised numbers, the New Jersey backlog reduction rate would improve; however, the absolute size of the backlog would still be growing. As a contrast, Massachusetts, ranked at the top of Table 1, is working through its backlog rather than adding to it. According to the EPA report, as of 2002, the number of clean ups completed each year in Massachusetts has surpassed the number of new notifications.¹¹

It should be evident from this information that there is difficulty in clearly assessing the completion performance numbers, both as they relate to the EPA report and as reported by the NJ DEP. The NJ DEP has a publicly available database on its website that is designed to provide current information on the status of cases in the system. However, repeated attempts to use the database failed – it is not user friendly. Even Assistant Commissioner Kropp noted, in a stakeholder meeting that “[t]he numbers were pulled off NJEMS for a report, so there will be a few data quality issues. We are working on cleaning it up. Site Remediation has not been using NJEMS consistently for a long time. As times goes on, we will get better data from it.”¹²

¹¹ Environmental Protection Agency, Brownfield Cleanup and Redevelopment Website available at: http://www.epa.gov/swerosps/bf/pubs/st_res_prog_report.htm (Last visited: May 17, 2007). p. 17.

¹² Site Remediation Program Reform, Stakeholders Meeting, March 6, 2007 available at: <http://www.state.nj.us/dep/srp/stakeholders/20070306minutes.pdf>

Yet, regardless of whether the numbers from the EPA report or the numbers from NJ DEP are used, both data sets indicate room to improve the rates for completing cases and reducing the backlog of open cases in New Jersey. The NJ DEP is cognizant of this need for improvement and has begun the process of implementing changes to make the process more streamlined and efficient. NJ DEP has been conducting a stakeholder outreach process since the beginning of the year to solicit feedback on what needs to be improved and how this can be accomplished. As a first course of action, NJ DEP has indicated that it is working to address homeowner cases through the "Clean Up Star Program" in order to free up site remediation program staff to increase the focus on the more complex cases being opened each year and to address the current backlog. Finally, the department is looking to expand this program to other areas including Underground Storage Tanks. It is not clear that these changes will be sufficient to significantly address backlog and closure rate issues.

4.2 Fee Structures

Finding 2: Approximately 8 of the 40 states did not include information on the structure of their fees; 75% of the remaining 32 states, including New Jersey, structure their Voluntary Cleanup Program (VCP) fees so that operational costs can be recovered. Roughly 25% of these 32 states cap their fees at some level. The proportion of states with uncapped and capped fee structures remained constant within the Top 10 States. The structure of the fee program does not seem to have a significant impact on the rate of case completion or backlog reduction.

The costs associated with cleanup activities, and often oversight, fall on the shoulders of the voluntary party. In most cases these costs are used to offset the cost associated with running the VCP program, including both staff and administrative costs. The majority of states have fees associated with their VCP. The major difference between the structures of various fee programs seems to be in whether the fees are capped at a certain level or if there is the possibility for the state agency to fully recover the operational costs of administering each case. 8 of the 40 states (or 20%) assessed did not fully report on their fee structures. Of these, half (about 4 states) indicated some fee and the other half did not include any information. Reported fees ranged from \$200 to a reported cap of \$7,500. The average reported minimum submittal fee for an uncapped fee program was \$1,645 per case and \$2,050 per case in programs that had capped fees.

Table 3 indicates the fee structure for the 40 states, as reported. "Max Initial Fee" indicates the submittal fee; "Hourly Rate for Oversight" indicates the amount charged per hour to cover the agency's oversight costs; "Max Oversight Charges" indicates a cap on the amount of oversight costs that can be charged. Finally, for "Cost Recovery" a state was given a "1" if it charges fees to recover costs, and a "2" if recovery costs were capped.

Table 3: Clean Up Program Fee Structure, By Rank

	Overall Rank	Max Initial Fee	Hourly Rate for Oversight	Max Oversight Charges	Cost Recovery
Massachusetts	1				
California	2				1
Pennsylvania	3	\$750			2
Wisconsin	4	\$250	\$75		1
Michigan	5	\$750			
Maine	6	\$500			1
Minnesota	7		\$150		1
Oklahoma	8				1
Rhode Island	9	\$1,000			2
Washington	10	\$500			1
Illinois	11				1
Missouri	12	\$200		\$5,000	2
Virginia	13	\$5,000			2
Arizona	14	\$2,000	\$110		1
Maryland	15	\$6,000			1
Indiana	16	\$1,000			1
Iowa	17	\$750		\$7,500	2
Texas	18	\$1,000			1
Alaska	19	\$0		\$0	
New Jersey	20				1
Ohio	21	\$5,000			2
Delaware	22				1
Georgia	23	\$3,000			1
Colorado	24	\$2,000	\$85		1
New Mexico	25	\$1,000	\$65		1
Oregon	26	\$2,500			
Montana	27				1
Tennessee	28	\$0			1
Kansas	29	\$200		\$5,000	2
New York	30				1
Utah	31	\$2,000			
New Hampshire	32	\$3,500			2
Mississippi	33	\$2,000	\$75		1
West Virginia	34				1
Vermont	35				
Hawaii	36	\$1,000	\$100		1
Arkansas	37				1
Connecticut	38				
Louisiana	39	\$500			1
Florida	40				

Discussion

In theory the ability to fully recover the costs of reviewing cases would enable a state to hire a large enough staff to complete reviews in a timely manner. This does not seem to

bear out in reality as it appears that completion and backlog reduction performance are not tied to the structure of a fee program.

One important concern in New Jersey is that the state employs an informal process for “bumping” cases in progress if new cases that are determined to be a higher priority open. Under this situation, a case worked begins to review the original case. They put aside that case when the new, higher priority case is opened. When the case worker finally returns to original case, they have to start over to get familiar with the details of the original case. This not only extends the time for review but also adds to administrative costs of review. The ability to charge unlimited fees for this review has not resulted in adequate staffing levels but does appear to have increased the administrative cost per case.

4.3 Clean Up Standards

Finding 3: In total, risk based assessments were available in 100% of the Top 10 States this compares to only 88% of the entire 40 states assessed. New Jersey reported that its program allows participants to choose a risk based method, however anecdotal evidence from the survey suggests that risk based approaches to setting clean up standards are not perceived to be available or used in New Jersey. We believe that this is due in part to staffing issues, it appears that NJ DEP lacks a sufficient number of personnel who are adequately trained to employ a risk based approach to screening projects and establishing clean up standards.

Decisions about the standards to which a site needs to be remediated are complicated, and often take into account the future use of the site and the frequency and degree of exposure that might occur. The standards issued by the state for site cleanup must be flexible enough to encourage cleanup, but sufficiently stringent enough to address the environmental hazard as well as public fears regarding the remediation of the site. Many states accomplish this by engaging in risk based assessments – some even employing a “risk based corrective action” (RBCA) process for site cleanup. Flexibility is maintained by providing choice or tiered standards. In some cases tiered standards allow for future land use (industrial, commercial, or residential) to be considered, and in others, they allow for a choice of clean up level (to background levels, pre-determined remediation standard or to site-specific standards). Table 4 provides information on the type of broad approach each state takes to its cleanup program based on what was reported in the source reports.

Table 4: State Approaches To Cleanup Program, By Rank

	Overall Rank	Choice	Tiered	Background	Risk Based	Site Specific	RBCA
Massachusetts	1		1		1	1	S
California	2		1		1	1	1
Pennsylvania	3		1	1	1	1	S
Wisconsin	4	1			1	1	NI
Michigan	5			1	1	1	NI
Maine	6		1		1	1	S
Minnesota	7		1		1		N
Oklahoma	8		1		1		NI
Rhode Island	9		1		1		NI
Washington	10		1		1		NI
Illinois	11		1	1	1		1
Missouri	12		1		1		1
Virginia	13	1	1	1	1		N
Arizona	14	1		1	1	1	NI
Maryland	15		1		1	1	S
Indiana	16		1		1	1	NI
Iowa	17		1	1	1	1	NI
Texas	18		1		1	1	NI
Alaska	19		1			1	S
New Jersey	20		1		1	1	NI
Ohio	21			1	1	1	NI
Delaware	22	N			1		N
Georgia	23	1			1	1	NI
Colorado	24	1			1		N
New Mexico	25	1		1	1	1	NI
Oregon	26	1			1	1	NI
Montana	27		1				S
Tennessee	28		1		1	1	1
Kansas	29		1		1		S
New York	30	1			1	1	1
Utah	31	1		1	1	1	NI
New Hampshire	32		1		1	1	NI
Mississippi	33	1					NI
West Virginia	34	1			1	1	N
Vermont	35				1	1	NI
Hawaii	36		1				1
Arkansas	37	1					NI
Connecticut	38	1		1	1	1	S
Louisiana	39	1			1		NI
Florida	40		1	1	1	1	S

Key: 1 = Yes, N= No, NI= No Information, S= Similar

Discussion:

It would appear that New Jersey employs a risk based approach to setting clean up standards but anecdotal evidence questions whether the agency is adequately resourced to implement this approach. One of the questions asked in the survey sought to

determine if people were aware of New Jersey using risk based standards and also whether they would use them if available. Respondents representing just 26.8% of the cases that were eligible to use such methods believe that New Jersey offers them whereas respondents representing 96.8% of the cases covered in the survey would like to use them. Additionally, some respondents noted that while risk assessments are incorporated into the Technical Regulations, they are not used in actual case reviews.

In addition, respondents were asked to indicate why they believed certain of the cases remained open for so long. The remarks included the following statements:

- "Although the DEP regulations allow for site specific clean up levels based on site conditions and risk, the Case Managers are prone to require cleanup to the most stringent standards."
- "Very prescriptive process, no ability to streamline to get to a reasonable end-point or closure position. For example, the lack of risk-based decision making. [The classification of waters in heavy industrial areas as drinking water] requires numerical (not risk-based) remedial solutions that are not cost-effective and do not provide a true risk reduction for the public. Further, the state does not have an integrated risk-based program, it does not allow and will not accept site specific risk assessments, even though the preamble to ISRA envisioned such provisions."
- "Subjective remediation criteria applied by NJDEP"

These comments suggest that while the New Jersey site remediation regulations may technically allow flexibility in determining the site clean up standards, the agency is not equipped to implement the rules. Instead, New Jersey employs the first tier of a risk based approach, generic standards tied towards standard land use categories, but has not successfully used the tier 2 and 3 measures that would lead to

4.4 Liability

Finding 4: 80% of the Top 10 States rely on a combination of using a Covenant Not to Sue (CNTS) and/or a Memorandum of Agreement (MOA) with EPA as mechanisms to provide assurances of the finality of completion to participants. This rate is slightly higher than the combined rate of 70% for the whole set of 40 states.

Finding 5: The top ten states were more than twice as likely to utilize programs to limit the financial liability, or define the assignment of the financial liability for clean up costs, to certain parties. One result is that lenders get a clear determination that they would not be liable for clean up costs and thus they perceive the investment as less risky. Although New Jersey has lender liability provisions "on the books" they were not reported in the source reports and there is evidence that they are not widely used because of investor perceptions of residual risk.

Once clean up activities are finished, participants seek formal notice of completion. Table 5 indicates the methods used by states to provide participants with assurance that cases are closed. The methods are indicated in order of increasing certainty. The first three columns relate to the level of assurance provided by the state including Letters of No Further Action (NFA) and the related Certificate of Closure (COC). If the state has statutory authority to issue an NFA, there is greater assurance on completion than if the state does not have such authority under statute. For additional assurance, some states

employ CNTS as an indication that they will not pursue further legal action. New Jersey uses both NFA and CNTS.

The last column indicates whether a state has signed an MOA with EPA. Roughly 60% of the Top 10 States and more than half of the whole set of 40 states have signed an MOA. The MOA eliminates the “dual master” problem by giving the state VCP credibility and autonomy. EPA has stated, in agency guidance, that it will not investigate or “second guess” sites that have successfully completed the state’s program unless there is a compelling reason to do so – like previously unknown contamination that presents an imminent threat to health and the environment. What an MOA can mean, in practice, is that brownfield redevelopers are more willing to undertake a site cleanup without fear of federal liability and EPA enforcement action.¹³ New Jersey has not signed an MOA with EPA, suggesting further potential of EPA oversight of clean up projects than in states with an MOA.

Table 6 indicates the approach to assigning financial liability for clean up activities. The first column indicates whether a state excuses lenders from liability. In theory, this should make it easier for participants to obtain financing for clean up activities. 40% of the Top 10 States provide this option, whereas only 20% of the 40 states provide this option. New Jersey is not reported as providing this protection, but it appears that the “Brownfield Act” of 1998 built on existing efforts to limit the financial liability for investors and lenders. The next three columns describe the extent to which financial liability is assigned strictly and/or jointly to owners and also the extent to which liability is retroactive and regardless of who owned the site or whether the contaminating action was legal at the time. Between 50-60% of the Top 10 States assign these liabilities, whereas only 23-30% of the full 40 assign them.

We speculate that these provisions work in tandem to encourage clean up activities by making access to financing easier and creating incentives related to transfer of ownership. However, this does not necessarily seem to be the case. A 2004 article in the *New Jersey Lawyer Magazine* cites the general concern that: “Many sites currently on the market have owners who are unwilling or unable to sell because of concerns about environmental risk and other liability exposures.”¹⁴ The authors suggest that additional protections may need to be developed to further encourage property owners with contaminated sites to move towards the stages of completing projects and re-using the land for commercial purposes. This is an issue that warrants further consideration in New Jersey.

¹³ Bartsch, Charles and Bridget Dorfman, Northeast Midwest Institute, “Brownfields, VCPs, and Housing: State-of-the-State Information and Data,” available at: <http://www.nemw.org/NAHBresults.pdf> (Last visited May 17, 2007) p2-3.

¹⁴ Toft, Dennis and Todd Terhune, Wolff and Samson, “NJDEP Approves the Use of Risk Transfer Tools to Facilitate Brownfield Transactions,” available at: http://wolffsamson.client.tagonline.com/news/articles/publish/article_48.shtml (last visited August 28, 2007)

Table 5: State Approaches To Completion, By Rank

State	Overall Rank	NFA	COC	CNTS	MOA
Massachusetts	1			1	N
California	2		1		N
Pennsylvania	3				1
Wisconsin	4		1		1
Michigan	5			1	1
Maine	6		1		N
Minnesota	7	1	1		1
Oklahoma	8		1		1
Rhode Island	9		1	1	1
Washington	10			1	N
Illinois	11	1			1
Missouri	12		1		1
Virginia	13				1
Arizona	14			1	N
Maryland	15	1	1		1
Indiana	16		1	1	1
Iowa	17				1
Texas	18		1		1
Alaska	19	1			N
New Jersey	20	1		1	N
Ohio	21	1		1	1
Delaware	22	1	1	1	1
Georgia	23				N
Colorado	24				1
New Mexico	25		1	1	1
Oregon	26				N
Montana	27	1			N
Tennessee	28	1			N
Kansas	29	1			1
New York	30		1	1	N
Utah	31		1		N
New Hampshire	32	1	1	1	N
Mississippi	33	1			N
West Virginia	34		1		N
Vermont	35		1		N
Hawaii	36				N
Arkansas	37				1
Connecticut	38			1	N
Louisiana	39		1		1
Florida	40	1			1

Key: 1 = Yes, N= No

Table 6: State Approaches To Financial Liability, By Rank

State	Overall Rank	Lenders Exemption	Strict	Joint & Several	Retroactive
Massachusetts	1	1	1	1	1
California	2	1			
Pennsylvania	3		1	1	1
Wisconsin	4	1			
Michigan	5			1	1
Maine	6		1	1	
Minnesota	7		1	1	1
Oklahoma	8				
Rhode Island	9		1	1	1
Washington	10	1			
Illinois	11				
Missouri	12				
Virginia	13				
Arizona	14				
Maryland	15		1	1	1
Indiana	16				
Iowa	17		1	1	1
Texas	18				
Alaska	19				
New Jersey	20				
Ohio	21				
Delaware	22		1	1	
Georgia	23				
Colorado	24				
New Mexico	25	1			
Oregon	26				
Montana	27				
Tennessee	28	1			
Kansas	29				
New York	30				
Utah	31				
New Hampshire	32		1	1	
Mississippi	33				
West Virginia	34	1			
Vermont	35		1	1	
Hawaii	36				
Arkansas	37				
Connecticut	38	1	1	1	1
Louisiana	39				1
Florida	40				

Key: 1 = Yes

4.5 Long Term Stewardship

Finding 6: Anecdotally the reopening of cases is cited as a problem with New Jersey's program. Empirically, just the opposite seems to be the case, nationwide, only a small

number of cases are reopened.¹⁵ Perhaps the threat of reopening seems is as much a concern as the actual instance of it. Virtually all states implement a long-term stewardship program that involves the more administrative task of oversight, while about 40% also employ the more aggressive task of monitoring. As cases are monitored over the long term, the potential for needing to reopen a case remains active. The approach to long term stewardship appears similar across the 40 states.

In 2003, the EPA established a task force on long-term stewardship. This task force reported out its findings in 2005, and among its work was a definition of long-term stewardship. The task force stated that long-term stewardship
... "applies to sites where long-term management of contaminated environmental media is necessary to protect human health and the environment. Long-term stewardship generally includes the establishment and maintenance of physical and legal controls, implementation entities, authorities, accountability mechanisms, information and data management systems, and resources that are necessary to ensure that these sites remain protective of human health and the environment."¹⁶

In order to ensure that sites have remained protective of human health and the environment, states have implemented programs that track, monitor and/or provide oversight for the remediated sites. In some cases, states have created tracking and monitoring databases that can be viewed online by interested parties.

One of the outcomes of long term monitoring of sites is the potential for reopening a case. Cases can be reopened when the new owner requests assurances that were granted to the previous owner, when there has been fraud in the attainment of the site cleanup, when new areas of contamination have been identified, if there is a remedy failure, if there is a change in exposure that increases risk, or if new toxicology information becomes available. There are other reasons for reopening cases as well, with each state having its own rules and guidance for how and why this is to be accomplished. When cases are reopened, the state may require additional work to be performed as the site. As a result, there is evidence that lenders are hesitant to provide loans to these sites for fear that a reopening of the site might lead to default or loss of collateral value. It is important for states to balance the risk for both the party engaging in the clean up and the public by creating a tracking, monitoring, and oversight program that is as protective as necessary, but flexible enough to not create additionally undue risk for those conducting the cleanup.

Table 7 is based on the data provided by the EPA report and the NEMWI study. It provides an overview on state activity regarding tracking, oversight, monitoring and reopeners. From this table, it is clear that reopening a site is not done very often in the set of 40 states, or in the Top 10 States. Of these, 8 conduct regular oversight, one

¹⁵ Simons, Robert, Quantifying Long-term Environmental Regulatory Risk for Brownfields: Are Reopeners Really an Issue? *Journal of Environmental Planning and Management*, 46(2), (2003).

¹⁶ Environmental Protection Agency, "What is Long Term Stewardship?" available at http://www.epa.gov/landrevitalization/itsf_report/whatis_longterm_stewardship.htm (Last visited May 21, 2007)

does not conduct any oversight and five of those, plus New Jersey, monitor the sites.

Table 7: Long Term Stewardship, By Rank

	Overall Rank	T	O	M	R	# of R
Massachusetts	1				1	n/a
California	2		1	1	1	n/a
Pennsylvania	3	1	1	1	1	0
Wisconsin	4	1	1	1		n/a
Michigan	5		1			n/a
Maine	6	1				0
Minnesota	7		1	1		n/a
Oklahoma	8	UD	1	1	1	0
Rhode Island	9				1	very few
Washington	10		1		1	rare
Illinois	11		1		1	n/a
Missouri	12		1			0
Virginia	13		1		1	0
Arizona	14	1	1	1		n/a
Maryland	15		1		1	0
Indiana	16	UD	1			0
Iowa	17					n/a
Texas	18		1	1		0
Alaska	19		1	1		n/a
New Jersey	20			1		n/a
Ohio	21		1		1	1
Delaware	22	1	1			0
Georgia	23	1	1	1	1	n/a
Colorado	24	1	1	1	1	2%
New Mexico	25		1	1		0
Oregon	26		1		1	1 or 2
Montana	27		1			0
Tennessee	28	1	1	1		0
Kansas	29		1			n/a
New York	30			1	1	1
Utah	31		1			0
New Hampshire	32			1		0
Mississippi	33		1		1	1
West Virginia	34		1			n/a
Vermont	35					n/a
Hawaii	36					n/a
Arkansas	37	1	1			n/a
Connecticut	38				1	10
Louisiana	39	1				0
Florida	40	1	1	1		0

Key: T: Tracking, O: Oversight, M: Monitoring, R: Reopeners, UD: Database under development, 1: Yes

Discussion

The Environmental Law Institute (ELI) released a preliminary report in 2001 entitled "Quantifying Long Term Environmental Regulatory Risk for Brownfields: Are Reopeners Really an Issue?" The report found that in more than 8,400 cleanups in 42 states, there were only 11 instances where a site was reopened.¹⁷ The study also noted that the most common reasons for re-openers were "fraud, failure to file the proper deed restrictions at the county recorder, a major change in remediation technology (e.g. standards for health risk analysis are changed or asphalt caps become obsolete and thus sites require extensive soil removal), a change in land use and/or the discovery of new contamination."¹⁸ In New Jersey, the ELI report found that while the state issued a large number of the total closure letters, it "had a below average reopener rate, even with its stringent 'cap cop' engineering control management and enforcement program [sic]."¹⁹ Interestingly, the report also found that outside of its voluntary program, New Jersey had a reopener rate of 3%-5%.²⁰ Finally, the study notes that

... "the reopener rates may be expected to change with more vigorous enforcement and over the passage of time, due to increased development pressure, and weather eroding caps or other structures protecting the contamination. This means that the incidences of failure to maintain an engineering control (e.g. a cap) may increase. Also, the number of changes to a land use that is or may be incompatible with the remedy can be expected to increase over time."²¹

In New Jersey, the biennial certification process is beginning to take shape and there is anecdotal concern that this process will lead to further delay in completing cases. Due to lack of sufficient levels of staff to oversee the monitoring associated with biennial certification, the NJ DEP is just ramping up its efforts to implement this program.²² Recently, the NJ DEP sent letters to approximately 2,000 responsible parties that are out of compliance with the biennial certification which requires that reports be submitted on the status of the site. NJ DEP is hoping to jumpstart the program by offering amnesty for these responsible parties to come into compliance. The responsible parties will have until September 18, 2007, at which time if they remain out of compliance an \$8,000 a day fine will be levied. NJ DEP did not believe that enforcing the biennial certification program would cause an increase in the number of cases reopened in the state, but that perception is not held by the regulated community.

4.6 Financial Incentives

Finding 7: The Top 10 States provided greater access to financial incentives and assistance for clean up activities than those states in the whole set of 40, especially in the areas of tax abatement and credits . New Jersey provided access to all of the

¹⁷ The study did not include data from California, Massachusetts and Wisconsin.

¹⁸ Simons, Robert, Quantifying Long-term Environmental Regulatory Risk for Brownfields: Are Reopeners Really an Issue? *Journal of Environmental Planning and Management*, 46(2), (2003): 258.

¹⁹ *Ibid*, 266.

²⁰ *Ibid*.

²¹ *Ibid*, 267

²² Based on interview with NJDEP.

financial mechanisms included in the survey except for clean-up bonds, yet the survey suggests a lack of familiarity with these programs suggesting that they could be implemented more effectively.

Since the burden of paying for the cleanup and oversight often falls to the voluntary party, many states offer various financial incentives, including grants, bonds, loans and tax abatements or credits. Grants or loan subsidies are used to help offset the cost of site investigation and cleanup, while tax credits and abatements help to provide the necessary motivation for the voluntary party to being the cleanup process.

Table 8 is based on the data provided by the EPA report. The table provides information on the various financial incentives provided by the state, including whether or not the state provides the party responsible for the clean up with grants, bonds, loans, tax abatement or tax credits.

Additionally, states have also begun to look at ways to assist with the financial burden of environmental insurance, which provides financial protection against the unanticipated risks and costs associated with site remediation. These incentives are currently in place in only two states, with a couple of additional states working on development of similar programs. In Massachusetts, the state will subsidize up to 50% of the cost of the insurance, and in New York the state provides a tax credit up to \$30,000 or 50% of the insurance premium which ever is less. Like the incentives mentioned above, providing a means for easing the cost of environmental insurance helps to encourage more voluntary parties to participate in the clean up programs, by reducing some of that party's risk. Information on states that provide incentives for environmental insurance are also contained in Table 8.

Table 8: Financial Incentives, By Rank

	Overall Rank	Grants	Bonds	Loans	Tax Abatement	Tax Credit	Env. Ins.
Massachusetts	1		1	1	1	1	1
California	2	1		1			UD
Pennsylvania	3	1		1		1	P
Wisconsin	4	1	1	1		1	UD
Michigan	5	1		1		1	
Maine	6	1					
Minnesota	7	1		1			
Oklahoma	8			1			
Rhode Island	9			1			1
Washington	10	1		1	1	1	
Illinois	11	1		1			1
Missouri	12	1		1	1		1
Virginia	13						1
Arizona	14	1		1			1
Maryland	15	1		1			1
Indiana	16	1		1	1		1
Iowa	17			1			
Texas	18			1	1		1
Alaska	19						
New Jersey	20	1		1	1	1	
Ohio	21	1		1	1		1
Delaware	22	1		1			1
Georgia	23				1		
Colorado	24	1		1			1
New Mexico	25	1		1			
Oregon	26	1		1			
Montana	27	1		1			
Tennessee	28	1		1			1
Kansas	29			1			
New York	30		1	1			1
Utah	31	1					
New Hampshire	32			1	1		
Mississippi	33	1					
West Virginia	34			1			
Vermont	35	1		1			1
Hawaii	36	1		1			
Arkansas	37			1			
Connecticut	38			1	1		1
Louisiana	39			1			
Florida	40			1			1

Key: UD: Under development, P: Pending, 1: Yes

5.0 Detailed Review

5.1 Engineering And Institutional Controls In Site Remediation

Engineering and institutional controls (EIC) impose physical or legal limits to prevent human exposure to pollutants at contaminated sites. They are used to allow sites for which it would be cost prohibitive to restore to ambient conditions, to be partially

remediated and used for limited purposes. For this reason, most states allow, and even encourage, the use of EIC as part of a voluntary clean up program. In fact, the majority of sites that were closed under VCPs have used some type of EIC.²³ By providing cost-savings while also protecting the public health, EIC encourage at least partial remediation and allows for limited development in areas that might otherwise never get remediated or used.

There are different approaches to limiting exposure to contaminants through EIC: engineering controls use physical measures and institutional controls use administrative or legal procedures. They are often used in combination with each other. Both approaches essentially use exposure limits in lieu of returning a site to ambient conditions. Because of this the use of EIC raises a new set of issues about projects including the need for additional monitoring, determining when and if to re-open sites, and ensuring that future owners of the property have adequate information about potential use.

An example of engineering controls includes capping contamination and then preventing public access to these capped areas. Engineering controls achieve their goal of "managing environmental and health risks by reducing contamination levels or limiting exposure pathways."²⁴

Institutional controls are legal or administrative measures that are often used in conjunction with, rather than instead of, engineering controls. Institutional controls cover a wide spectrum of measures, but share a common feature in that they are "intended to control exposure to residual contamination at sites which have undergone environmental remediation."²⁵ To accomplish this, institutional controls are designed to ensure that post-remediation use of the property is compatible with the level of cleanup by answering the question: "how clean is acceptable?" The answer to this question is based on a risk assessment that uses assumptions about the degree, frequency and type of future exposure that will occur at the individual site. It is important to note that institutional controls may also be used during an ongoing clean up for "a remedy that will eventually achieve unrestricted site use cleanup levels but will take a long time, for example, for sites undergoing long term groundwater remediation and sites where a monitored natural attenuation remedy is approved."²⁶

What follows is a more in depth review of the use of EIC in New Jersey and Ohio. New Jersey and Ohio were picked as a good comparison of the relationship between stewardship and reopening cases.

²³ Environmental Council of the States, "Recycling America's Brownfields Act: III. Tools to help Free the Mothballed Brownfields Sites," available at:

http://www.ecos.org/files/2764_file_mothballed_sites_sectin_complete.doc (Last visited May 15, 2007).

²⁴ Department of Environmental Quality, Wyoming, "Fact Sheet #23: Institutional Controls, Engineering Controls and Use Control Areas," available at

<http://deg.state.wy.us/volremedi/downloads/Fact%20Sheet%2023%20Jan05/f.s.%2023%2001-06-05.pdf> (Last visited August 1, 2007_

²⁵ The Role of Institutional Controls in Brownfield Redevelopment - Gibbons P.C.

http://www.gibbonslaw.com/news_publications/articles.php?action=display_publication&publication_id=60 (Last visited August 1, 2007): p2

²⁶ Department of Environmental Quality, Wyoming, "Fact Sheet #23."

5.1.1 New Jersey

New Jersey law contains statutory authority for the use of institutional controls.²⁷ Additionally, public law in NJ states that "it is the policy of this State to protect the public health, safety, and the environment, to promote efficient and timely cleanups, and to eliminate any unnecessary financial burden of remediating contaminated sites."²⁸ The statutory authority for institutional controls states that when engineering or institutional controls are

"used in lieu of remediating a site to meet an established remediation standard for soil, groundwater, or surface water, the department shall, as a condition of the use of that standard or control measure . . . require the establishment of any engineering or institutional controls the department determines are reasonably necessary to prevent exposure to the contaminants, require maintenance, as necessary, of those controls, and require the restriction of the use of the property in a manner that prevents exposure; and . . . require, with the consent of the owner of the real property, the recording with the office of the county recording officer, in the county in which the property is located, a notice to inform prospective holders of an interest in the property that contamination exists on the property at a level that may statutorily restrict certain uses of or access to all or part of that property..."²⁹

New Jersey tracks three types of institutional controls including: Classification Exception Areas (CEAs), Deed Notice Areas (DNAs) and Sanitary Waste Landfills (SWL). SWL, which are typically waste disposal facilities, are the least active, with only 30 active sites, despite approximately 1,000 mapped sites. A CEA is a geographic area that exceeds acceptable levels of groundwater contamination. This classification is site specific, and currently NJ has mapped approximately 2,000 sites. New Jersey has also mapped nearly 700 DNAs. In New Jersey, a deed notice is issued when a soil remediation standard for a specific contaminant is exceeded at a site. There is some concern in New Jersey, and elsewhere, that sites with deed notice restrictions are not being converted correctly as ownership of property changes and that the restrictions were not being adequately followed. As a result, NJ DEP instituted a policy of "biennial certification to ensure the effectiveness of the deed restriction control."³⁰ New Jersey could augment this protection by instituting the Uniform Environmental Covenant Act approach (described in Section 5.1.2) or a program to register and track deed restrictions in order to ensure proper consideration of potential future uses of sites that have been remediated.

²⁷ N.J.S.A 13:1K-7

²⁸ Industrial Site Recovery Act (ISRA) available at <http://www.state.nj.us/dep/srp/isra/s1070.htm> (Last visited August 1, 2007)

²⁹ N.J.S.A. 58:10B-13

³⁰ *Ibid.*

5.1.2 Ohio

In late 2004, Ohio was the first state to pass the Uniform Environmental Covenant Act (UECA). Since that time 13 states have followed suit and an additional 12 states have introduced legislation this year.³¹ The UECA provides a clear framework for establishing and enforcing land use restrictions by allowing the Ohio Environmental Protection Agency (OhioEPA) to enter into environmental covenants. The covenants are then recorded in the deed and are considered binding on future property owners and occupants, unless a release from the covenant has been granted. Prior to the enactment of the UECA it was unclear whether previous implementations of land use controls would have survived legal challenges. According to testimony presented by Ohio EPA prior to the passage of the legislation, the UECA provides “better legal tools to ensure that future generations understand the reasons for specific restrictions on certain land uses and the need for certain long-term monitoring and maintenance obligations.”³²

In May 2005, OhioEPA release a guidance containing “language for development of proposed environmental covenants in coordination with the *Environmental Covenant Template* - an Ohio EPA template for use with all agency environmental response projects.”³³ The guidance applies in instances where there has been a request of either a no further action (NFA) letter or a covenant not to sue (CNTS).

According to the guidance, an environmental covenant for properties relying on activity and use limitations must contain the following items:

- (1) A statement that the instrument is an environmental covenant executed pursuant to sections 5301.80 to 5301.92 of the Revised Code;
- (2) A legally sufficient description of the real property that is subject to the environmental covenant;
- (3) A description of the activity and use limitations on the real property;
- (4) Requirements for notice following transfer of a specified interest in, or concerning proposed changes in the use of, applications for building permits for, or proposals for any site work affecting contamination on, the property that is subject to the environmental covenant;
- (5) The name or identity of every holder;
- (6) Rights of access to the property granted in connection with implementation or enforcement of the environmental covenant;
- (7) The signatures of the applicable agency, every holder, and, unless waived by the agency, every owner of the fee simple of the real property that is subject to

³¹ UECA has been adopted in Delaware, Hawaii, Idaho, Iowa, Kentucky, Maine, Maryland, Nebraska, Nevada, Ohio, Oklahoma, South Dakota, Utah, and West Virginia. Additionally, legislation has been introduced in the following states: Alabama, Arizona, Connecticut, Indiana, Michigan, Minnesota, Mississippi, Missouri, New Mexico, Pennsylvania, Rhode Island, Vermont, and Virginia.

³² Ohio EPA, “Testimony in Support of the Uniform Environmental Covenants Act Ohio Environmental Protection Agency” November 17, 2004 <http://icma.org/upload/library/2005-08/%7BD33E91CD-9252-4FOC-BCF2-4B2238FF4CF1%7D.pdf> (Last visited: May 17,2007) p 2

³³ VAP Environmental Covenants Guidance, “May 2005 Guidance: Developing Proposed Environmental Covenants with “Activity and Use Limitations” for Properties under Ohio’s Voluntary Action Program” available at: http://www.epa.gov/superfund/action/ic/pdfs/navarre_vap.pdf (Last visited: May 17,2007)

the environmental covenant;

(8) An identification of the name and location of any administrative record for the environmental response project pursuant to which the environmental covenant is created.³⁴

The Guidance notes that the appropriate type of use limitation should be developed in concert with the property assessment as required by Ohio Administrative Code.³⁵ Activity and use limitations should be considered on a site specific basis in order to establish if the limitations are appropriate. Furthermore, the Guidance states that limitations should be evaluated on “the type of complete exposure pathways, affected media, receptors and the standards applicable to the property.”³⁶

Each year, OhioEPA conducts audits on a quarter of its voluntary clean up sites, and all sites that use institutional controls are audited at least once every five years. Even with this aggressive monitoring and oversight program, only one property has been revisited as a result of a failed engineering control.

5.1.3 Discussion

The purpose of using EIC is to allow some flexibility in the clean up requirements based on risk assessment and intended land use. That flexibility appears to be undermined in New Jersey, by blanket provisions attached to DNAs restricting certain types of land use that might be otherwise be acceptable. It would be useful to further explore this option for New Jersey.

Monitoring and enforcement is crucial to having the public feel comfortable with the use of EIC. Therefore it is imperative that sufficient staff, or outside consultants, be retained to monitor ECs and ICs and enforce ICs when necessary. Along the same token, effective programs will define or adopt a regular schedule for reviewing ICs.

5.2 Independent Consultants And Staffing

It appears that staffing issues within the NJ DEP has led to overworked case managers and slow review and decision process for clean ups. There are more cases in the system than can be effectively processed and decided on, resulting in a growing backlog of unresolved cases. That backlog is growing steadily and keeping projects on-track is becoming an increasing challenge leading to frustration for all parties in the process, as the environmental issues complicate and delay the planning, financing, and completion of these projects.

³⁴ Ohio Revised Code, TITLE [53] LIII REAL PROPERTY, CHAPTER 5301: CONVEYANCES; ENCUMBRANCES, 5301.82 Contents of environmental covenant

³⁵ Ohio Administrative Code (OAC) 3745-300-07(D)(5) and 3745-300-15

³⁶ VAP Environmental Covenants Guidance, “January 2005 Guidance for Drafting Proposed Environmental Covenants to Establish “Activity and Use Limitations” for Properties under Ohio’s Voluntary Action Program” available at: <http://icma.org/upload/library/2005-05/%7BDD33A385-1DE9-4963-8C46-E5D1F9FFB940%7D.pdf> (Last visited August 1, 2007): 2

In fact, in the informal survey, a couple of respondents cited case manager turnover and case manager overload as primary reasons for cases being opened for long periods of time. It is common for a new case to bump the ongoing review of an existing case if the new case has a higher priority. Once the second case has been completed, the case worker has to virtually start over with the review of the original case. This adds additional time and cost to the case review. Since there are multiple levels of review, a case could be bumped at each of these levels and the cost to the responsible party can increase exponentially.

One of the ways that New Jersey is looking to dramatically change its program is by including the use of licensed professionals or outside consultants.³⁷ The inclusion of these independent consultants could help the NJ DEP chip away at its backlog. The use of consultants in some states has helped to move the process along quicker because the consultants are better educated on the process and understand the issues more than the voluntary party.

In February 2001, the Association of State and Territorial Waste Management Officials (ASTSWMO) published a report titled "State Privatized Cleanup Program Survey Results, February, 2001" which showed that six states have implemented privatized cleanup program and that a handful of other have considered the approach. The six states with these programs are: Arizona, California, Connecticut, Massachusetts, North Carolina, and Ohio. The Massachusetts program is the best known of this group.

Changes in Massachusetts law in 1993 significantly altered the manner in which site remediation was addressed. One change involved the use of risk based determinations of corrective action. In addition, the Massachusetts Contingency Plan requires the use of Licensed Site Professionals (LSPs), licensed and policed by a state board, to evaluate and oversee the remediation of contaminated sites. In a report analyzing the use of third party professionals, this program in Massachusetts is credited with yielding significant and immediate results.

Within the first two years of the new program, there were more than 3,200 permanent site cleanups – including 700 at sites that had languished under the old rules with no clear way out of the cleanup process. According to a program review conducted in 2001, between 1983 and June 30, 2001, nearly 26,000 contaminated sites were reported to, or identified by, DEP. Most of these sites involved releases of oil to commercial or industrial properties, affecting soil and /or groundwater. Since October 1993, approximately 17,000 of these 24,000 sites (70%) have been closed, meaning that they have been permanently cleaned up, that no cleanup is necessary, or that temporary solutions have been reached that eliminate any substantial hazard to human health or the environment. An average of 2,300 sites per year have been closed, with sites requiring an average of 22 months to achieve closure. The remaining 30% of sites have not yet reached a permanent or temporary solution. However, 85% of

³⁷ Based on conference call with NJ DEP

all sites have had at least some cleanup activity reported. Many more have begun the site investigation necessary to prepare for cleanup.³⁸

The exceptional results in Massachusetts are likely due from the combination of risk based determinations and the use of LSPs. That said, the LSP program is cited as a major factor in streamlining the review process. Such a program should be considered for New Jersey. Massachusetts initiated its program after a two-year stakeholder process and required statutory authority.

6.0 Conclusion

This study proposes that a key indicator of site remediation program performance is the ability to review and complete cases in a timely manner. In this regard, New Jersey performs well in its handling of homeowner cases but does not perform well in its handling of other types of cases – indeed, there are numerous instances where case remain open for long periods of time. The objective assessment of program characteristics and features in the various states contained in Section 4 sheds some light on areas where New Jersey might improve performance but it also leaves some ambiguity: New Jersey shares several program features that are found in programs with better performance, so it is not the mere structure of the program but also how the program is implemented that seems to contribute to different levels of performance. We found, in an interview with NJ DEP, that the agency is taking a hard look at options for improving performance and is initiating some changes to improve performance.

The primary findings in this report are as follows:

1. New Jersey has not implemented a data driven management system that could address what appears to be the large concern of inconsistent application of standards and subjectivity in the treatment of cases. Such a system would also be helpful in managing caseloads in order to avoid the problems associated with the current situation in which new cases can “bump” cases already in review. The results by case type obtained through the informal survey highlight the potential for identifying priority staffing needs and begin to highlight how such information could be used to improve overall program performance. This is one area where New Jersey Department of Environmental Protection (NJ DEP) has indicated its intent to make change, and the potential for enhancing this change should be explored more fully. This should include consideration of establishing quantitative or other robust program goals and metrics.
2. New Jersey appears to have a large backload of open cases in part because cases relying on engineering and institutional controls (EIC) are considered “open” indefinitely. It may be useful to consider clarifying the status of open cases and the expectations for what might be required in the future based on case status. For those cases that are open solely for monitoring purposes, there may be a way to reduce the perception of future liability. This would tie directly to concerns that were raised anecdotally that an

³⁸ “An Initial Evaluation of a Licensed, Third-Party Approach to Site Remediation in Rhode Island” December 2002, available at: <http://www.dem.ri.gov/programs/benviron/waste/pdf/sr3party.pdf> (Last visited August 1, 2007)

applicant can face seemingly open ended requirements. Although it is appropriate for the state of New Jersey to impose new requirements as the science indicates, this needs to be balanced with the difficulties and stigma caused by the perception that projects have unlimited liability.

3. New Jersey's backlog of cases is increasing at a faster rate than its rate of closing cases. While we calculate an estimated 88 years to reduce backlog at current closure rates, this number of years to close backlog would actually seem to be growing each year. Since the major increase in backlog is from cases that are larger and more complicated than the homeowner cases that dominate the seemingly good closure statistics, this trend is of enormous concern.
4. There are two options that could help New Jersey to fully utilize the flexibility inherent in EIC measures while also ensuring adequate assurances for protection of public health; these include: (a) utilization of the Uniform Environmental Covenant Act (UECA) approach and/or (b) the use of state-based registration or permit tracking system.
5. Increasing available staff time and resources will be essential to addressing many of the outstanding concerns with New Jersey's program. One option for relieving this pressure may be to adopt a formal process to enable applicants to hire qualified 3rd party consultants to facilitate the review process. Such an approach could help to reduce case review time, assist with oversight of EICs, and limit the costs borne by the voluntary party.
6. The use of risk based assessments allows for flexibility in the clean up program and provides the voluntary party with options for timely remediation. While New Jersey reported that its program allows participants to choose a risk based method, anecdotal evidence from the survey suggests that risk based approaches to setting clean up standards are not perceived to be available or used. Although this study does not explore this issue in detail, anecdotal evidence suggests that New Jersey does not have staff who are adequately trained to consider the site specific risks in deciding cleanup standards, as a result, the prescriptive requirements and other constraints on the ability to utilize those flexible mechanisms within the New Jersey rules actually prevent their use.

In addition to these key findings, the report draws comparisons among the 40 States based on use of the data in the two source reports. The findings from that comparison are restated here and are also included in each subsection of Section 4, some of these findings repeat main conclusions summarized above.

Finding 1: New Jersey ranks 38th for calculated time to reduce backlog, 3rd for reported case completions, and 20th in a combined assessment of closure and backlog reduction rates. These numbers show that other states appear to have better case management performance. Further investigation of these numbers shows that the absolute number of cases in the backlog is increasing annually and the seemingly good closure rate is dominated by homeowner cases, and so is not an accurate indicator of the closure rate in New Jersey.

Finding 2: Approximately 8 of the 40 states did not include information on the structure of their fees; 75% of the remaining 32 states, including New Jersey, structure their Voluntary Cleanup Program (VCP) fees so that operational costs can be recovered. Roughly 25% of these 32 states cap their fees at some level. The proportion of states with uncapped and capped fee structures remained constant within the Top 10 States. The structure of the fee program does not seem to have a significant impact on the rate of case completion or backlog reduction.

Finding 3: In total, risk based assessments were available in 100% of the Top 10 States this compares to only 88% of the entire 40 states assessed. New Jersey reported that its program allows participants to choose a risk based method, however anecdotal evidence from the survey suggests that risk based approaches to setting clean up standards are not perceived to be available or used in New Jersey. We believe that this is due in part to staffing issues, it appears that NJ DEP lacks personnel who are adequately trained to employ a risk based approach to screening projects and establishing clean up standards.

Finding 4: 80% of the Top 10 States rely on a combination of using a Covenant Not to Sue (CNTS) and/or a Memorandum of Agreement (MOA) with EPA as mechanisms to provide assurances of the finality of completion to participants. This rate is slightly higher than the combined rate of 70% for the whole set of 40 states. New Jersey does not have an MOA with EPA and so cannot make use of this mechanism.

Finding 5: The top ten states were more than twice as likely to utilize programs to limit the financial liability, or define the assignment of the financial liability for clean up costs, to certain parties. One result is that lenders get a clear determination that they would not be liable for clean up costs and thus they perceive the investment as less risky. Although New Jersey has lender liability provisions "on the books" they were not reported in the source reports and there is evidence that they are not widely used because of investor perceptions of residual risk.

Finding 6: Anecdotally, the reopening of cases is cited as a problem with New Jersey's program. Empirically, just the opposite seems to be the case, nationwide, only a small number of cases are reopened.³⁹ Perhaps the threat of reopening seems is as much a concern as the actual instance of it. Virtually all states implement a long-term stewardship program that involves the more administrative task of oversight, while about 40% also employ the more aggressive task of monitoring. As cases are monitored over the long term, the potential for needing to reopen a case remains active. The approach to long term stewardship appears similar across the 40 states.

Finding 7: The Top 10 States provided greater access to financial incentives and assistance for clean up activities than those states in the whole set of 40,

³⁹ Simons, Robert, Quantifying Long-term Environmental Regulatory Risk for Brownfields: Are Reopeners Really an Issue? *Journal of Environmental Planning and Management*, 46(2), (2003).

especially in the areas of tax abatement and credits . New Jersey provided access to all of the financial mechanisms included in the survey except for clean-up bonds, yet the survey suggests a lack of familiarity with these programs suggesting that they could be implemented more effectively.