

NEW JERSEY'S REFORM OF CONTAMINATED SITE REMEDIATION

*Mark K. Dowd**

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* Associate with the law firm of Lord Day & Lord, Barrett Smith, New York City. Mr. Dowd was previously associated with Maraziti, Falcon & Gregory, Morristown, New Jersey. J.D., Seton Hall University School of Law; B.A., Rutgers College, Rutgers University.

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I. Introduction

Since the 1970s, New Jersey's judicial, legislative and executive branches have been forced to deal with complex environmental issues.¹ The combination of being one of the most contaminated states in the country,² and the recent economic troubles that have been plaguing the Northeast, have resulted in the perception that the business community, particularly the industrial base, has been excessively burdened by environmental laws and regulations. Consequently, the New Jersey Department of Environmental Protection and Energy (NJDEPE) has been criticized, both fairly and

¹ For example, the Water Pollution Control Act, N.J. STAT. ANN. §§ 58:10A-1 to -60 (West 1992) [hereinafter WPCA], was signed into law in 1977, while the Spill Compensation and Control Act, N.J. STAT. ANN. §§ 58:10-23.11 to -23.11z (West 1992) [hereinafter Spill Act], which served as the model for the federal Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9615 (1993) [hereinafter CERCLA or Superfund], was signed into law in 1976.

² New Jersey has 108 of the 1207 sites on the National Priority List [hereinafter NPL], which the United States Environmental Protection Agency [hereinafter EPA] uses to rank the most hazardous sites in the country. 42 U.S.C. § 9605(8)(B) (1989); 40 C.F.R. § 300.425 (1992). There are only five other states that have more than 50 sites on the NPL: New York, Pennsylvania, Florida, Michigan and California. U.S. GEN. ACCOUNTING OFFICE, SUPERFUND: PROBLEMS WITH THE COMPLETENESS AND CONSISTENCY OF SITE CLEANUP PLANS 12 (May 1992) [hereinafter USGAO SUPERFUND]. The EPA estimates that the number of sites on the NPL will grow from 1200 to approximately 2100 by the year 2000. *Id.* at 10. Furthermore, the New Jersey Department of Environmental Protection and Energy [hereinafter NJDEPE] estimates that there are at least 25,000 known and suspected contaminated sites in New Jersey that are not on the NPL. NEW JERSEY DEP'T OF ENVTL. PROTECTION AND ENERGY, SITE REMEDIATION REPORT 13 (1992) [hereinafter SITE REMEDIATION REPORT]. It is estimated that it will cost between \$100-300 billion to clean up just the sites on the NPL, however, there is only \$15.2 billion available in the Superfund, the trust fund established under CERCLA. USGAO SUPERFUND, *supra*, at 10. Additionally, it will cost between \$10-60 billion to implement the Resource Conservation and Recovery Act [hereinafter RCRA] Correction Action Program. John C. Chambers, Jr., *Overview of RCRA Corrective Action Requirements*, 20 CHEM. WASTE LITIG. REP. 723 (1990). The NJDEPE has not estimated the cost of cleaning up the other 25,000 contaminated sites in New Jersey, but projects that the public funds available in the Spill Fund, the trust fund established under the Spill Act, will be depleted by the end of 1995. USGAO SUPERFUND, *supra*, at ii.

unfairly, regarding the inefficient, fractured and ineffective site remediation program.³ The site remediation program is designed to oversee the publicly and privately funded cleanup of contaminated sites.⁴

A number of factors in the 1980s and early 1990s have led to the need for reform in the cleanup of contaminated sites. One of the main reasons for the fractured regulatory approach to the remediation of contaminated sites was the exponential growth in legal requirements and technical tools.⁵ The NJDEPE has been driven by environmental concerns and regulatory issues relating to specific media (e.g., surface water, ground water, air and soil), rather than being organized by functional responsibilities such as site remediation, enforcement and permitting.⁶ Additionally, the regulatory personnel brought their program's provincial bias to the regulated site. Due to these factors, it was simply unrealistic to expect individual regulators, responsible for their own complex program, to coordinate with other complicated regulatory programs as long as each program retained a different set of priorities, requirements and cleanup criteria.

An attempt was made to bring a uniform and consistent approach to site remediation in New Jersey by reforming the regulatory and statutory requirements. The shift from writing new cleanup laws to reforming the cleanup process occurred in reaction to strong criticism leveled at both federal and state environ-

³ It is interesting to note that the site remediation program no longer utilizes the term "cleanup." The term "cleanup" has been substituted by broader terms such as "remedial action," "remediate" and "remediation." Generally, "cleanup" connoted a pristine result, while "remedial action" invoked lower public expectations. More importantly, the terms "remediation" or "remediate" have broader application than the term "cleanup" because they include all of the necessary actions to investigate and purify a contaminated site. Compare Environmental Cleanup Recovery Act, N.J. STAT. ANN. §§ 13:1K-6 to -18 (West 1991) [hereinafter ECRA] with Industrial Site Recovery Act, ch. 139, 1993 N.J. Sess. Law Serv. 359 (West) (amending N.J. STAT. ANN. §§ 13:1K-6 to -18, 58:10B-1 to -20, 58:10-23.11(g) (West 1991)) [hereinafter ISRA] (indicating the change in terminology).

⁴ See 25 N.J. Reg. 2281(b) (1993); 25 N.J. Reg. 2002(a) (1993); SITE REMEDIATION REPORT, *supra* note 2, at 1-4.

⁵ U.S. ENVTL. PROTECTION AGENCY, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, TECHNOLOGY INNOVATION OFFICE, TWO YEARS LATER: WHAT HAS BEEN DONE TO REDUCE IMPEDIMENTS TO THE USE OF INNOVATIVE TECHNOLOGY 66 (Jan. 1993) [hereinafter EPA TWO YEARS LATER].

⁶ SITE REMEDIATION REPORT, *supra* note 2, at i.

mental programs.⁷ With the re-authorization of both the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund),⁸ and the Resource Conservation and Recovery Act (RCRA)⁹ on the horizon, the national debate has focused attention on some of the inefficiencies in the United States Environmental Protection Agency's (EPA) site remediation program. Similarly, New Jersey has focused on these issues and has attempted to set forth a single coordinated structure that allows for more consistent, efficient and effective cleanup of contaminated sites. Consequently, both the NJDEPE¹⁰ and the New Jersey Legislature have initiated substantive and procedural reforms to the site remediation programs.¹¹

A. Overview of Federal and State Regulatory Programs in New Jersey

The remediation of contaminated sites in New Jersey is currently being regulated by two major federal programs, Superfund¹² and RCRA.¹³ Under Superfund, the EPA oversees the 108 sites in New Jersey that are listed on the National Priorities List (NPL).¹⁴ The EPA and the NJDEPE, through delegation agreements between the two agencies, share responsibility for regulating the remediation of sites that appear on the NPL.¹⁵ Under the RCRA

⁷ Most of the criticism was aimed at environmental regulations that put an undue burden on the economy without achieving the legislative goals of protecting human health and natural resources set forth in the enabling statutes. *See, e.g.*, N.J. STAT. ANN. § 13:10-2 (West 1991); N.J. STAT. ANN. § 58:10-23.11(9) (West 1992); N.J. STAT. ANN. § 13:1K-7 (West 1991); N.J. STAT. ANN. § 58:10A-2 (West 1992) (enabling statutes for New Jersey's environmental protection laws).

⁸ 42 U.S.C. §§ 9601-9615 (1993).

⁹ 42 U.S.C. §§ 6901-6907 (1989).

¹⁰ *See* N.J. ADMIN. CODE tit. 7, §§ 26C-1.1 to -5.6 (1993); N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -7.1 (1993).

¹¹ ISRA amended ECRA and changed the statute's name to ISRA. Officially, ISRA refers to N.J. STAT. ANN. §§ 13:1K-6 to -18 (West 1991), but it also includes amendments to other environmental laws. Industrial Site Recovery Act, ch. 139, 1993 N.J. Sess. Law Serv. 359 (West) (amending N.J. STAT. ANN. §§ 13:1K-6 to -18, 58:10B-1 to -20, 58:10-23.11(g) (West 1991)). These amendments to other statutes are also referred to as ISRA, even though they have nothing to do with ECRA. This article will refer to the amendments to N.J. STAT. ANN. §§ 13:1K-6 to -18 (West 1991) as ISRA/ECRA, while all other amendments will be referred to as ISRA.

¹² 42 U.S.C. §§ 9601-9615 (1993).

¹³ 42 U.S.C. §§ 6901-6907 (1989).

¹⁴ 42 U.S.C. § 9605(e) (1989); 40 C.F.R. § 300.425 (1992).

¹⁵ 24 N.J. Reg. 1282 (1992).

program, the EPA manages the generation, transportation, treatment, storage and disposal of hazardous substances.¹⁶ When a hazardous substance is released into the environment from a RCRA regulated facility, the EPA institutes corrective action.¹⁷

States with final authorization under RCRA are required to maintain a hazardous waste program that is equivalent to, consistent with, and no less stringent than, the federal hazardous waste program.¹⁸ New Jersey received final authorization for its base RCRA program on February 12, 1985, and October 9, 1988.¹⁹ New Jersey will receive final authorization to implement the Hazardous and Solid Waste Amendment of 1984 (HSWA) on January 10, 1994.²⁰ As a result of this authorization, the NJDEPE will be able to enforce RCRA corrective action requirements. The EPA has also delegated RCRA authority to the NJDEPE to regulate underground storage tanks (USTs) pursuant to New Jersey's Underground Storage of Hazardous Substances Act (UST Act).²¹

New Jersey's statutory and regulatory requirements for contaminated sites focus on establishing goals for protecting the quality of human health and natural resources by developing regulatory programs that limit and control the discharge of contaminants into the environment. Additional goals include overseeing how and when cleanups are conducted and identifying responsible parties.²² In the past, these statutory and regulatory requirements have been carried out through programs established to address specific media.²³ For example, the statutes dealing with contaminated sites include the Spill Compensation and Control Act (Spill Act),²⁴ the Industrial Site Recovery Act,²⁵ formerly known

¹⁶ 42 U.S.C. § 6903 (1983).

¹⁷ 42 U.S.C. § 9604(g), (h) (1989). There are over 600 facilities in New Jersey that are subject to these RCRA corrective action requirements. 24 N.J. Reg. 1696 (1992).

¹⁸ 42 U.S.C. § 6929(b) (1983).

¹⁹ 58 Fed. Reg. 59,370 (Nov. 9, 1993).

²⁰ *Id.*

²¹ N.J. STAT. ANN. § 58:10A-21 (West 1992). The UST Act regulations require the cleanup of discharges from USTs. N.J. ADMIN. CODE tit. 7, §§ 14B-1 to -1.3 (1990). The NJDEPE estimates that there are approximately 80,000 USTs in New Jersey that are subject to these requirements. 24 N.J. Reg. 1282 (1992).

²² See N.J. STAT. ANN. § 13:1D-9 (West 1991); N.J. STAT. ANN. § 58:10-23.11f(9) (i) (West 1992); N.J. STAT. ANN. § 58:10A-2 (West 1992).

²³ N.J. STAT. ANN. §§ 13:1E-1 to -207 (West 1991).

²⁴ N.J. STAT. ANN. §§ 58:10-23.11 to -23.11z (West 1992).

²⁵ Industrial Site Recovery Act, ch. 139, 1993 N.J. Sess. Law Serv. 359 (West)

as the Environmental Cleanup and Responsibility Act (ISRA/ECRA),²⁶ the Solid Waste Management Act (SWMA),²⁷ the Water Pollution and Control Act (WPCA)²⁸ and the UST Act.²⁹ These statutes have each spawned a set of complex regulatory programs dealing with the four basic media: air, ground water, surface water and soil.³⁰

The Spill Act regulates the cleanup of contaminated sites by requiring persons in any way responsible for the discharge of hazardous substances to cleanup and remove the hazardous discharge.³¹ The NJDEPE has broad statutory power under the Spill Act either to direct a person who is in any way responsible for a discharge to perform the remediation,³² or the NJDEPE could remediate the site itself and sue for reimbursement under a statuto-

(amending N.J. STAT. ANN. §§ 13:1K-6 to -18, 58:10B-1 to -20, 58:10-23.11(g) (West 1991)).

²⁶ N.J. STAT. ANN. §§ 13:1K-6 to -35 (West 1991).

²⁷ N.J. STAT. ANN. §§ 13:1E-1 to -207 (West 1991).

²⁸ N.J. STAT. ANN. §§ 58:10A-1 to -60 (West 1992).

²⁹ N.J. STAT. ANN. §§ 58:10A-21 to -51 (West 1992).

³⁰ N.J. ADMIN. CODE tit. 7, §§ 9-6.1 to -6.11 (1993) (program dealing with the discharge to and categorization of ground water based upon potential use as a drinking water source); 25 N.J. REG. 464 (1993); N.J. ADMIN. CODE tit. 7, §§ 14-2.1 to -2.15 (1984) (program prohibiting unpermitted discharges to surface and ground water); N.J. ADMIN. CODE tit. 7, §§ 10-1.1 to -1.5 (1991) (program regulating the distribution of drinking water); N.J. ADMIN. CODE tit. 7, §§ 9-1.1 to -1.107 (1983) (program requiring all permitted discharges to surface and ground water to be consistent with NJDEPE approved planning documents); N.J. ADMIN. CODE tit. 7, §§ 14B-1.1 to -1.6 (1990) (program regulating the use of underground storage tanks); N.J. ADMIN. CODE tit. 7, §§ 14A-1.1 to -1.9 (1993) (program dealing with permitted discharges to the surface and ground waters); N.J. ADMIN. CODE tit. 7, §§ 26-1.1 to -1.13 (1990) (program regulating solid and hazardous waste); N.J. ADMIN. CODE tit. 7, §§ 26-12.1 to -12.2 (1992) (program addressing new landfills); N.J. ADMIN. CODE tit. 7, § 26-2A.9 (1990) (program addressing old landfills); N.J. ADMIN. CODE tit. 7, §§ 9A-1.1 to -1.8 (1993) (program governing the discharge of subsurface waste water); N.J. ADMIN. CODE tit. 7, §§ 26B-1.1 to -3.2 (1993) (program regulating the transfer and closure of industrial establishments); N.J. ADMIN. CODE tit. 7, §§ 27-16.1 to -16.12 (1992) (program monitoring discharges to the air); N.J. ADMIN. CODE tit. 7, §§ 26-6.1 to -6.8 (1993) (program regulating the disposal of contaminated soils).

³¹ N.J. STAT. ANN. § 58:10-23.11(f),(g) (West 1992). Under the Spill Act, liability is affixed based upon a broad analysis of a person's relationship to the discharge. *Id.* Parties "in any way responsible" would be those committing a "discharge" or "an intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous substances into the waters or onto the lands of the state. . . ." N.J. STAT. ANN. § 58:10-23.11b(h) (West 1992).

³² N.J. STAT. ANN. § 58:10-23.11(f)(10) (West 1992).

rily imposed strict, joint and several liability scheme against the responsible person.³³ Reform of the site remediation program is particularly important under the Spill Act because of the limited ability of the responsible party to challenge the NJDEPE's finding of liability or method of cleanup until the cleanup is completed.³⁴

The SWMA regulates the manner in which solid and hazardous waste is generated, transported, treated, disposed and stored.³⁵ The NJDEPE prevents the unauthorized discharge of contaminants through the use of a manifesting, monitoring, labeling and reporting system.³⁶

The WPCA prohibits any person from discharging pollutants into surface or ground waters without first obtaining a New Jersey Pollutant Discharge Elimination System (NJPDES) permit.³⁷ The permit program limits the discharge of contaminants to a level that maintains the quality of surface and ground waters.³⁸ Thus, the NJPDES program has a significant impact on the remediation of contaminated sites because the remedial action selected may require the discharge of pollutants from the on-site remediation system to the surface water, storm sewer, ground water or sanitary sewer.³⁹ A discharge to the surface water, storm sewer or ground water may require the responsible party to obtain a NJPDES permit.⁴⁰ In 1992, the NJDEPE estimated that there were over 600 landfills in New Jersey that may have been discharging into the

³³ N.J. STAT. ANN. § 58:10-23.11(g)(c) (West 1992). Presently, the NJDEPE is reviewing the liability scheme in the Spill Act to determine whether there is an alternate means of enforcing the statute. See *New Jersey Dep't of Env'tl. Protection v. Ventron Corp.*, 468 A.2d 150 (N.J. 1983).

³⁴ See *Woodland Private Study Group v. New Jersey*, 616 F. Supp. 794 (D.N.J. 1985), *aff'd*, 846 F.2d 921 (3d Cir. 1988); *In Re Kimber Petroleum*, 539 A.2d 1181 (N.J. 1988); *New Jersey Dep't of Env'tl. Protection v. Mobil Oil Corp.*, 587 A.2d 657 (N.J. Super. Ct. App. Div. 1991).

³⁵ N.J. STAT. ANN. §§ 13:1E-1 to -48.1 (West 1991). The act further seeks to develop "objectives, criteria and procedures to assure the orderly preparation and evaluation of solid waste management plans developed by every solid waste management district, and to approve, modify, or reject [these plans]. . . ." *Id.*

³⁶ N.J. ADMIN. CODE tit. 7, §§ 26-7.1 to -7.3 (1993); N.J. ADMIN. CODE tit. 7, §§ 26-9.1 to -9.4 (1990).

³⁷ N.J. STAT. ANN. §§ 58:10A-1 to -10 (West 1992).

³⁸ N.J. ADMIN. CODE tit. 7, §§ 14A-1 to -1.9 (1993).

³⁹ *Id.*

⁴⁰ A discharge to a storm sewer or sanitary sewer may require an industrial pre-treatment permit from a local Publicly Owned Treatment Works [hereinafter POTW]. A discharge to the sanitary sewer may require an industrial pre-treatment permit. See N.J. ADMIN. CODE tit. 7, §§ 14A-1 to -1.9 (1993).

ground water or surface water.⁴¹

In 1983, the New Jersey Environmental Cleanup and Responsibility Act (ECRA)⁴² sought to have industrial establishments⁴³ cleanup any contamination present at the site before the establishment was permitted to close or transfer its operations.⁴⁴ The intention of ECRA was to regulate the transfer and closure of industries located on contaminated property by triggering the cleanup process when funding became available from the transfer or closure.⁴⁵ ECRA sought to achieve this objective by requiring approval of a cleanup plan before the transfer or upon the closing of an industrial establishment.⁴⁶

ECRA, however, was a complicated program that stagnated the transfer of contaminated property and dramatically affected the development of a healthy industrial base necessary for a continued economic recovery. One unintended effect was the abandonment of industrial centers in urban areas, causing the loss of jobs and the movement of industrial establishments into areas where industry had not previously existed.⁴⁷ Thus, ECRA became synonymous

⁴¹ 24 N.J. Reg. 1282 (1992). Many of these landfills do not have the necessary leachate control mechanisms and are located in environmentally sensitive areas because they predated the mandatory requirements for the proper design and closure of landfills. See Sanitary Landfill Closure and Contingency Fund Act, N.J. STAT. ANN. §§ 13:1E-49 to -91 (West 1991); N.J. ADMIN. CODE tit. 7, § 26-2A.9 (1992).

⁴² N.J. STAT. ANN. §§ 13:1K-6 to -18 (West 1991).

⁴³ An industrial establishment is defined in ISRA/ECRA as any place of business engaged in operations involving the generation, manufacture, refining, transportation, treatment, storage, handling or disposal of hazardous substances or hazardous wastes on-site, above or below ground. The definition also requires an establishment to have a primary Standard Industrial Classification number within 22-39 inclusive, 46-49 inclusive, 51 or 76, as designated in the Standard Industrial Classifications Manual prepared by the Office of Management and Budget in the Executive Office of the President of the United States. N.J. STAT. ANN. § 13:1K-8 (West 1991). See also N.J. ADMIN. CODE tit. 7, §§ 26B-1.1 to -1.13 (1993).

⁴⁴ The NJDEPE has estimated that there are approximately 17,000 industrial establishments in New Jersey that must obtain ISRA/ECRA clearance before being able to close or transfer their operations. 24 N.J. Reg. 1282 (1992).

⁴⁵ N.J. STAT. ANN. § 13:1K-7 (West 1991).

⁴⁶ *Id.*

⁴⁷ *Testimony of Regional Plan Association/NJ on Senate Bill 1070, Industrial Site Recovery Act to Senate Environment Committee*, 205th N.J. Legis., 2d Sess. 48 (1993) (statement of Joseph J. Maraziti, Jr., Esq.). The present industrial base located in urban areas provided the jobs necessary to sustain urban growth. Unfortunately, these industrial centers were also contaminated making it economically unfeasible for new industries to locate there due to the large capital investment necessary to cleanup the property. Rather, the new industries took the money they would have spent on cleaning up the

with everything that was wrong with the NJDEPE's Site Remediation Program, regardless of whether it was related to ECRA.

In 1993, the New Jersey Legislature sought to correct the problem by changing ECRA's name to ISRA and substantially changing the process that must be followed prior to getting approval from the NJDEPE to transfer or close the industrial operations. It is important to note that although the title and process have changed as a result of ISRA/ECRA, the basic purpose of the law has remained—to remediate contaminated industrial sites prior to transfer or closure.

B. *New Jersey's Regulatory Reform Initiative*

The NJDEPE is statutorily required to promulgate rules and regulations to protect human health and the environment from exposure to the hazardous substances and wastes found at contaminated sites in New Jersey.⁴⁸ The myriad of complex procedural and substantive requirements for remediating contaminated sites, indicative of both the federal and state regulatory programs, are a direct result of society's competing need for a clean environment and a healthy economy. While both sides of the societal equation have a strong influence on public policy, the difficulties of balancing environmental needs with economic needs are often compounded by the significant reliance on technology, as well as the unique characteristics of each site.

This dilemma arises from the dramatic technological advances in the detection, investigation and cleanup of hazardous substances. Such advances have fostered a diverse approach to evaluating the nature and extent of the hazard created by the contaminants present at the site.⁴⁹ In addition, technological advances have diversified the process of assessing the risks posed by that hazard, developing plans to remedy the hazard, selecting and

urban establishment and instead built a new building on clean land in the suburbs.
Id.

⁴⁸ N.J. STAT. ANN. § 58:10-23.11(t) (West 1992). See *GATX Terminals Corp. v. New Jersey Dep't of Env'tl. Protection*, 414 A.2d 980 (N.J. 1981).

⁴⁹ For example, the NJDEPE's Field Sampling Procedures manual provides technical guidance on the proper methods of environmental sampling and compliance monitoring activities. The manual details the sampling techniques and equipment to be used in the Site Remediation Program and Water Data Acquisition. See SCOTT A. WEINER, COMMISSIONER, NEW JERSEY DEP'T ENVTL. PROTECTION & ENERGY, FIELD SAMPLING PROCEDURES MANUAL (1992).

implementing the plans that best protect human health and the environment, and deciding when the site has been adequately remediated. The situation is further complicated by contamination of different types of environmental media. The creation of a complex and unpredictable process for complying with environmental laws and regulations is a direct result of the disparate circumstances presented by the thousands of contaminated sites.⁵⁰

Nevertheless, New Jersey has attempted to implement a streamlined process by applying one method to all of the regulatory programs which deal with the cleanup of hazardous substances, instead of the previously fractured approach to site remediation.⁵¹ In 1991, the NJDEPE consolidated into one program the management, regulations, guidance and data systems dealing with contaminated sites.⁵² All personnel who had overseen the remediation of contaminated sites were brought under the control of the Assistant Commissioner for Site Remediation.⁵³ The consolidated system allows for one case manager to be assigned to each site, rather than several different case managers representing various bureaus.⁵⁴

The specific reforms that have been instituted for remediating sites in New Jersey include: (1) the adoption of uniform technical requirements for site remediation;⁵⁵ (2) the adoption of procedures for the NJDEPE's oversight of the remediation of contaminated sites, also referred to as the voluntary cleanup program;⁵⁶ and (3) the enactment of ISRA on June 16, 1993, that made major revisions to ECRA and to other environmental statutes.⁵⁷

⁵⁰ The NJDEPE is not solely to blame for the growth in environmental regulations. The Legislature often reacts to public outcry by adopting a new law and requiring the over-burdened NJDEPE to enforce the new law's requirements without allocating the resources to accomplish the statutory goals. For example, the Comprehensive Regulated Medical Waste Management Act, N.J. STAT. ANN. §§ 13:1E-48.1 to -48.28 (West 1991), was enacted in reaction to medical waste washing up on the New Jersey shore.

⁵¹ 25 N.J. Reg. 2004 (1993).

⁵² N.J. STAT. ANN. § 13:10-1 (West 1991).

⁵³ *Id.* See SITE REMEDIATION REPORT, *supra* note 2, at i; 24 N.J. Reg. 375 (1992).

⁵⁴ For example, under the previous system, it was not unusual to have an ECRA case manager, a Bureau of Underground Storage Tank case manager and an NJPDES case manager overseeing the cleanup of the same site. N.J. ADMIN. CODE tit. 7, §§ 26B-1 to -14.1 (1993); N.J. ADMIN. CODE tit. 7, §§ 14B-1.1 to -1.6 (1993); N.J. ADMIN. CODE tit. 7, §§ 14-1.1 to -8.16 (1993).

⁵⁵ 25 N.J. Reg. 2281 (1993).

⁵⁶ 25 N.J. Reg. 2005 (1993).

⁵⁷ See Industrial Site Recovery Act, ch. 139, 1993 N.J. Sess. Law Serv. 359 (West)

II. NJDEPE'S Solution to the Complexities of Site Remediation

A. Contaminated Sites

The Legislature created the Hazardous Waste Advisory Council⁵⁸ to meet the need for a systematic and consistent approach to the detoxification of contaminated sites⁵⁹ and required that their findings be contained in the New Jersey Hazardous Substance Contingency Response Master Plan (HSCR Plan).⁶⁰ Under the HSCR Plan, the NJDEPE has been developing a central inventory of all known or suspected contaminated sites in New Jersey, referred to as the Comprehensive Site List (CSL).⁶¹

The CSL is an evaluation or scoring of each contaminated site in New Jersey based upon the level of risk the site poses to human health and the environment,⁶² but the scoring is not used by the NJDEPE to determine if the site is to be put on the CSL.⁶³ Ranking sites for remediation will be accomplished through the Site Remediation Program's remedial priority scoring system, which is designed to ensure that the worst sites will be remediated first.⁶⁴ The NJDEPE has stated its intention to list all actual and suspected

(amending N.J. STAT. ANN. §§ 13:1K-6 to -18, 58:10B-1 to -20, 58:10-23.11(g) (West 1991)). There have also been specific reforms instituted or proposed for applying specific cleanup standards to all sites, including: (A) ISRA's amendments to a number of environmental statutes incorporating minimum and differential remediation standards and other reforms to the cleanup levels at contaminated sites, 24 N.J. Reg. 374 (1992); (B) the proposed, but not adopted, uniform cleanup standards for soil and ground water at contaminated sites, 24 N.J. Reg. 374 (1992); (C) the adoption of ground water quality standards, 25 N.J. Reg. 464 (1993); and (D) the proposed amendments to the surface water quality standards, 25 N.J. Reg. 405 (1993).

⁵⁸ N.J. STAT. ANN. § 13:1E-54 (West 1991). This 17 member committee is required to assist the NJDEPE in developing procedures for the analysis and evaluation of the fiscal management of the state's Hazardous Waste Site Cleanup Program. N.J. STAT. ANN. § 13:1E-55 (West 1991).

⁵⁹ N.J. STAT. ANN. § 58:10-23.20 (West 1992).

⁶⁰ N.J. STAT. ANN. § 58:10-23.24 (West 1992).

⁶¹ SITE REMEDIATION REPORT, *supra* note 2, at 11-12.

⁶² 25 N.J. Reg. 2281 (1993).

⁶³ *Id.* Sites on the CSL will be grouped into three categories: sites that need to be evaluated; sites that have been determined to be contaminated; and sites that require no further action. The CSL will also indicate the priority of sites at two different steps of the remediation process: (1) the pre-remedial or site assessment phase—based upon factors such as population density, quantity of hazardous materials handled, historical site activities, and ground water classification; and (2) the remedial phase—based upon the potential human health and environmental risk. *Id.*

⁶⁴ SITE REMEDIATION REPORT, *supra* note 2, at 11-12.

sites, regardless of the extent of the contamination at the site,⁶⁵ as opposed to the use of the NPL under CERCLA, where the ranking system lists only the highest priority sites.⁶⁶

One purpose of the CSL will be to select sites that warrant the use of public funds for cleanup.⁶⁷ Another purpose of the CSL will be to determine whether a site is a "priority site" or a "non-priority site." Last, the CSL will be used to determine the NJDEPE's enforcement priorities.⁶⁸ The NJDEPE has not divulged the contents of the master list, its system for scoring each site as to its risk to health and the environment, or the exact manner in which the CSL will be used by the NJDEPE. At the beginning of each fiscal year, the NJDEPE will publish the sites it has scheduled for public funding.⁶⁹ This partial list will serve to notify potentially responsible parties that the NJDEPE will be issuing Spill Act Directives exposing them to treble cleanup costs.⁷⁰

The determination of whether a site is a "priority site" will be relevant to the application of the Technical Requirements for Site Remediation (Technical Regulations)⁷¹ and the Procedures for NJDEPE Oversight at Contaminated Sites (Oversight Regulations).⁷² At a priority site, the responsible party must perform each remedial phase with NJDEPE oversight and will not be able to take advantage of the incentives in the voluntary cleanup program.⁷³

⁶⁵ *Id.*

⁶⁶ 42 U.S.C. § 9605(e) (1993).

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ 25 N.J. Reg. 2002 (1993). The list for public funding will most likely be the only portion of the master list released to the public. *Id.*

⁷⁰ *Id.* Previously, the NJDEPE withheld the CSL due to enforcement considerations. 24 N.J. Reg. 1697 (1992). Now the NJDEPE acknowledges that it must make available all information related to the master list as required by law. 25 N.J. Reg. 2002 (1993). The NJDEPE will also be proposing rules on the criteria used for scoring and ranking a site on the CSL. *Id.*

⁷¹ N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -1.11 (1993) (providing general information and the minimum technical requirements for investigating and remediating site contamination).

⁷² N.J. ADMIN. CODE tit. 7, §§ 26C-1.1 to -5.6 (1993).

⁷³ N.J. ADMIN. CODE tit. 7, § 26C-3.1(b) (1993) (allowing for voluntary site cleanup unless it is a priority site or is subject to ECRA). Some of the advantages of a voluntary cleanup are that the person conducting the cleanup does not have to submit reports to the NJDEPE for each phase of the remediation. However, the person conducting the cleanup must establish a remediation funding source and has the option to complete the remediation of the site in one step. N.J. ADMIN. CODE tit. 7, § 26-3 (1993) (Appendix A); N.J. ADMIN. CODE tit. 7, § 26-5 (1993) (Appendix C).

Another disadvantage of having the site ranked as a priority site is that the NJDEPE will provide oversight through an Administrative Consent Order (ACO),⁷⁴ rather than a Memorandum of Agreement (MOA).⁷⁵ An ACO has stipulated penalties and is binding upon the responsible party,⁷⁶ while an MOA has neither provision.⁷⁷ Therefore, the characterization of a site as a "priority" site will have a significant impact on the implementation of the Technical Regulations and Oversight Regulations.

B. *Technical Requirements for Site Remediation*

The Technical Regulations⁷⁸ are one of two sets of regulations adopted by the NJDEPE to establish detailed technical and procedural requirements for the investigation and cleanup of contaminated sites.⁷⁹ Generally, the Technical Regulations prescribe the various phases for investigative and remedial activities.⁸⁰ Remedial phases connote distinct components of the remediation process, such as the preliminary assessment site investigation (PASI), the remedial investigation (RI), the remedial alternative analysis and the remedial action.⁸¹ The PASI, the RI, the remedial alternative analysis and the remedial action can be done sequentially or simultaneously, depending on the priority of the site.⁸²

1. Background

The number of sites that can go through the remediation pro-

⁷⁴ N.J. ADMIN. CODE tit. 7, §§ 26C-5.1 to -5.6 (1993) (providing scope and requirements of an ACO).

⁷⁵ N.J. ADMIN. CODE tit. 7, §§ 26C-3.1 to -3.3 (1993) (providing the scope and requirements of a Memorandum of Agreement).

⁷⁶ N.J. ADMIN. CODE tit. 7, §§ 26C-5.1 to -5.6 (1993).

⁷⁷ N.J. ADMIN. CODE tit. 7, §§ 26C-3.1 to -3.3 (1993).

⁷⁸ N.J. ADMIN. CODE tit. 7, §§ 26E-1 to -7 (1993) (providing requirements for remedial investigations, remedial alternative analysis, remedial action, permits, preliminary assessment and site investigation, and quality assurance for laboratory analysis).

⁷⁹ The other set of regulations, Procedures for Department Oversight of the Remediation of Contaminated Sites, N.J. ADMIN. CODE tit. 7, §§ 26C-1 to -5.6 (1993), will be discussed *infra* part II.C.

⁸⁰ N.J. ADMIN. CODE tit. 7, §§ 26E-3.1 to -6.6 (1993) (providing requirements for site investigation and remedial action).

⁸¹ N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to 1.11 (1993) (providing background information and requirements for each of these areas).

⁸² The Technical Regulations also include general provisions, general sampling and quality assurance requirements, and permit identification and application provisions. See N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -2.2, -7.1 (1993).

cess is restricted by the length of time it takes the NJDEPE to conduct an individualized review of all the technical data developed at the site and to permit the responsible party to move to the next step in the process.⁸³ Previously, the NJDEPE had to review each site to determine the appropriate investigatory and remedial requirements applicable to that site. Providing technical oversight for each of the 25,000 contaminated sites on an individualized basis requires a massive increase in staffing and resources at the NJDEPE and reduces the level of consistency in site remediation. Therefore, this process is time consuming, costly and cumbersome for all parties involved.

The prospect of an individualized review of each site provided the impetus to codify the NJDEPE's technical requirements for conducting an environmentally sound remediation.⁸⁴ Instead, the NJDEPE has provided a minimum list of tasks to be completed at every site through the adoption of the Technical Regulations.⁸⁵ The Technical Regulations are primarily based on various NJDEPE guidance documents that the NJDEPE and the regulated community have been using for many years.⁸⁶ This codification will dispense, for the most part, with inefficient, individualized decision

⁸³ 24 N.J. Reg. 1695 (1992) (voluntary action will help expedite the process as both the actual and prospective property holders do not want to convey contaminated land).

⁸⁴ *Id.* (technical regulations developed out of the need to have some form of regulation over the voluntary actions).

⁸⁵ N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -6.5 (1993).

⁸⁶ Prior to proposing the Technical Regulations, the NJDEPE set forth the technical requirements on how to investigate and cleanup a contaminated site in the regulations, guidance documents and internal policies particular to each statutory program. In an attempt to bring the threads from these programs together, the NJDEPE formed the Industrial Advisory Committee. The Industrial Advisory Committee was comprised of departmental personnel and various interested parties. The purpose of the Industrial Advisory Committee was to develop systematic and consistent remediation methodologies. The Technical Advisory Subcommittee of the Industrial Advisory Committee was formed to attempt to consolidate the regulations, guidance documents and internal policies from the various statutory programs. Subsequently, the NJDEPE's Division of Responsible Party Site Remediation developed two guidance documents that consolidated these regulations into the "Remedial Investigation Guide" and the "Cleanup Plan Guide." The Technical Regulations represent the consolidation of the NJDEPE's "Remediation Investigation Guide," "Cleanup Plan Guide," Administrative Consent Order Technical Appendices, the Bureau of Underground Storage Tank's "Scope of Work" and the Division of Publicly Funded Site Remediation's Request for Proposals. 24 N.J. Reg. 1695(a) (1992).

making and will eventually increase the number of sites that can go through the remediation process.

Hopefully, the process set forth in the Technical Regulations will alleviate the budgetary pressure on the NJDEPE with the reduction of individualized oversight. At the same time, the voluntary cleanup program will be more attractive because a person can conduct remedial activities, at a non-priority site, with limited or no NJDEPE oversight by following the standardized recipe for remediation set forth in the Technical Regulations. Once a site moves up the CSL and receives a ranking that characterizes it as a priority site, the NJDEPE reviews the remedial steps taken by the party for consistency with the Technical Regulations and ensures that the contaminants have been remediated to acceptable site remediation standards.

The Technical Regulations require that remediation is done in phases. The regulations mandate that, at the end of each phase of the remediation, the private party either submit the results in a report to the NJDEPE for a determination that no further action is necessary, or proceed with the next phase until no further action is required.⁸⁷ "If an investigation reveals the absence of all contaminants, or the presence of contaminants which are below the applicable cleanup standards, a 'no further action' determination can be made" by the NJDEPE.⁸⁸

The premise of the Technical Regulations is to work in conjunction with the voluntary cleanup program⁸⁹ by encouraging limited NJDEPE oversight through carefully documenting work completed at the site that is consistent with the Technical Regulations. By providing a set of minimum technical requirements and departmental oversight only when it is necessary, the Technical Regulations may provide more predictability in the remediation of contaminated sites.

Meanwhile, the Technical Regulations apply one set of comprehensive minimum remediation standards to every site, without providing any guidance as to which requirements apply to the site whether it is a complex chemical plant with dozens of areas of con-

⁸⁷ *Id.* at 1698; 25 N.J. Reg. 2281(b) (1993).

⁸⁸ See *infra* note 103.

⁸⁹ See N.J. ADMIN. CODE tit. 7, §§ 26C-1.1 to -5.6 (1993) (Chapter 26 deals with department oversight of the remediation of contaminated sites).

cern, a medium sized industrial establishment which is going through the ISRA/ECRA process or a gasoline station with a single leaking underground storage tank.⁹⁰ Therefore, there is some loss of flexibility in favor of uniformity.

The Technical Regulations do allow a private party the opportunity to set its own remediation priorities and perform multiple phases of the remediation without waiting for the NJDEPE to review the work for consistency with the regulations.⁹¹ While work had previously been performed "at risk," the new regulations take much of the risk out of proceeding without NJDEPE oversight.⁹² Eventually, all sites will "come under the [NJDEPE's] overview, either when the party remediating the site requests the [NJDEPE to] review the [remedial] work . . . through a[n MOA] or when the site becomes a priority site, [to either] requiring the responsible party [either] sign an [ACO or review the work completed at risk]." ⁹³

Also, the application of uniform requirements may discourage innovation because, without the flexibility to develop new methods to remediate the site, private parties will not have the incentive to invest in new technologies. The NJDEPE has stated that the Technical Regulations actually encourage the use of innovative technologies by allowing for alternative methods in certain instances to be used without first receiving NJDEPE approval⁹⁴ and allowing variance procedures for additional flexibility.⁹⁵ Whether the NJDEPE will liberally grant a variance, which is essential to applying uniform requirements to a wide variety of sites, remains to be seen.

2. Area of Concern

One of the most important definitions in the Technical Regulations is the "area of concern" (AOC).⁹⁶ The purpose of identify-

⁹⁰ 24 N.J. Reg. 1695(a) (1992).

⁹¹ 25 N.J. Reg. 2281(b) (1993).

⁹² N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -6.5 (1993).

⁹³ 24 N.J. Reg. 1697-98 (1992).

⁹⁴ N.J. ADMIN. CODE tit. 7, § 26E-1.6(c) (1993) (listing the criteria the department uses to evaluate the alternate methods).

⁹⁵ An important part of the Technical Regulations provides that any person responsible for conducting the remediation may petition the NJDEPE for a variance on the requirements of N.J. ADMIN. CODE tit. 7, §§ 26E-2.1 to -6.1 (1993). See N.J. ADMIN. CODE tit. 7, § 26E-1.6(d) (1993).

⁹⁶ N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993). Area of concern, or AOC, is defined

ing AOCs is to direct the focus of the site investigation to those areas of a contaminated site where discharge may have occurred.⁹⁷ The AOC triggers the investigatory requirements in the Technical Regulations. The definition of AOC, however, is very broad.⁹⁸ The NJDEPE lists seven general AOCs, which are intended to include all potential areas to be considered when conducting a preliminary assessment.⁹⁹ If there is no reasonable potential for contamination at an AOC, then sampling is not required and documentation supporting the decision not to sample must be provided when the appropriate report is submitted to the NJDEPE.

While it appears that the definition of an AOC will be particularly burdensome on large facilities, the NJDEPE states that this burden is relieved by the flexibility of the phased approach to investigation of all the defined AOCs.¹⁰⁰ The phased approach to AOCs allows the grouping of AOCs to meet the facility's budgetary constraints. It is important to note that an AOC is not synonymous with the contaminated site.¹⁰¹

3. Phased Approach

The Technical Regulations are based upon the grouping of tasks within sequential phases. The most effective way to investi-

as any existing or former location where contaminants are or were known or suspected to have been discharged. *Id.*

⁹⁷ N.J. ADMIN. CODE tit. 7, §§ 26E-3.2 to -3.3 (1993); 25 N.J. Reg. 2281(b) (1993). Site investigations are used to determine the presence of contaminants at a site or if no further action is required. N.J. ADMIN. CODE tit. 7, § 26E-3.3(a) (1993). The areas of most probable contamination are targeted for investigation first. N.J. ADMIN. CODE tit. 7, § 26E-3.3(d) (1993).

⁹⁸ N.J. ADMIN. CODE tit. 7, § 26G-1.8 (1993). The preliminary assessment report focuses on determining whether the area of concern is contaminated. N.J. ADMIN. CODE tit. 7, § 26E-3.2 (1993).

⁹⁹ These general areas of concern are: bulk storage tanks and appurtenances; storage and staging areas; drainage systems and areas; discharge and disposal areas; other areas of concern (e.g. floor drains, trenches, pits or sumps, etc.); ground water areas of concern (e.g. seepage pits, dry wells, lagoons, etc.); and surface waters. N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993).

¹⁰⁰ 25 N.J. Reg. 2281(b) (1993) (regarding replacement of complex Superfund feasibility studies with shorter and simpler remedial action alternatives); N.J. ADMIN. CODE tit. 7, § 26E-3.3(d) (1993) (site investigation samples the most likely contaminated areas of concern first).

¹⁰¹ Contaminated sites are defined as "all portions of environmental media at a site that contain one or more contaminants at a concentration which fails to satisfy any applicable remediation standard." N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993) (emphasis added).

gate a potentially contaminated site is to evaluate all potential AOCs in a phased approach. At the end of each remedial phase, if contamination is not found to be above the applicable remediation standards for a particular AOC, then no further action would be required for that AOC. Depending upon the priority of the site, the phases can be taken out of sequence, or several phases can be conducted at the same time. The only phase that must be completed in all site remediations is the preliminary assessment (PA).¹⁰² The site investigation (SI) process then determines which of these actual AOCs are contaminated.

All of the potential AOCs have to be evaluated to determine whether there is evidence of a known or suspected discharge when an application is made for a no further action (NFA) determination for the entire site.¹⁰³ An alternative to an NFA determination is a request for the determination to be made for each AOC where the remediation activities were conducted. Once an AOC has been cleared by the NJDEPE, it will not be subject to review in the future unless additional discharges have occurred.

The NJDEPE addresses the cleanup of each site in order of priority, based on its CSL ranking. Remedial activities conducted pursuant to the Technical Regulations do not have to receive NJDEPE approval while the site remains a non-priority site. Even-

¹⁰² N.J. ADMIN. CODE tit. 7, § 26E-3.1 (1993). The Preliminary Assessment is defined "as the initial search and evaluation of existing site specific operational and environmental information to determine if further investigation concerning the documented, alleged, suspected or potential discharge of any contaminant is required" by the NJDEPE. N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993). The PA examines all potential AOCs and identifies those areas where a discharge is known or suspected to have occurred. N.J. ADMIN. CODE tit. 7, § 26E-3.1 (1993).

¹⁰³ Upon completion of the PA phase, the person conducting the remediation may apply for a "no further action" letter from the NJDEPE. N.J. ADMIN. CODE tit. 7, § 26E-3.1 (1993). An NFA letter is not considered a release or waiver of liability, even if the person conducts a cleanup that results in compliance with the applicable site remediation standards. If a person conducting remedial activities is also responsible for the discharge that caused the contamination, and the remediation standards change by an order of magnitude such that the contaminants remaining at the site would cause significant health risks if left unremediated, then the NJDEPE would reevaluate the site and determine if further remediation is necessary. If it is determined that additional remediation activities are necessary at the site to protect human health and the environment, then the NJDEPE would look to the person who is responsible for the discharge. The NJDEPE has represented that this will only be done on a case-by-case basis upon the discovery of new information not available at the time of initial remediation. *See generally* 25 N.J. Reg. 2289-91, 93-95 (1993) (for a commentary on risk assessment and on the meaning of "no further action").

tually, when the site becomes a priority site subject to NJDEPE oversight, the person who conducted remedial activities at the site pursuant to these regulations would present information in report form allowing the NJDEPE to issue an NFA letter.

4. Impact on Cost Recovery Actions Under CERCLA

The significant steps taken to reform the site remediation program in New Jersey will also have a significant impact on the federal site remediation program. The Technical Regulations do not parrot the technical requirements under the Superfund Program.¹⁰⁴

A majority of the most serious and high priority sites, also the most expensive and contentious, are dealt with under the Superfund Program.¹⁰⁵ The private parties who remediate these sites under NJDEPE oversight will have to comply with the newly adopted cleanup procedures.¹⁰⁶ Pursuant to the Spill Act, the remediation of contaminated sites must comply, "to the greatest extent possible," with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).¹⁰⁷ While portions of New Jersey's remedial requirements are inconsistent with the NCP,¹⁰⁸ CERCLA requires that cleanup procedures be in strict compliance with the NCP.¹⁰⁹ Therefore, a potentially responsible party may be left in a quandary of which cleanup rules to follow.

The portions of the Technical Regulations that are inconsistent and not in strict compliance with the NCP include the absence of public notice and opportunity to comment on proposed remedies, the provision waiving the feasibility study when an on-site per-

¹⁰⁴ N.J. ADMIN. CODE tit. 7, § 26E-1.1 (1993) (dealing with the scope of these technical requirements to investigate and remediate contaminants at the site). For example, there is no requirement for a baseline risk assessment to be conducted under N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -1.7 (1993), nor is there a requirement to conduct a Superfund feasibility study. Compare 40 C.F.R. §§ 300.31 to 300.920 (1992) with N.J. ADMIN. CODE tit. 7, §§ 26E-1.1 to -6.8 (1993) (differences between the NJDEPE's Technical Regulations and the EPA's Superfund requirements).

¹⁰⁵ 42 U.S.C. § 9604 (1993). See, e.g., 40 C.F.R. § 300.420 (1992) (listing the criteria for evaluating remedial sites); 40 C.F.R. § 300.425 (1992) (listing the criteria used for establishing remedial priorities, including the National Priorities List of sites already targeted for remediation).

¹⁰⁶ N.J. ADMIN. CODE tit. 7, §§ 26E-6.1 to -6.6 (1993).

¹⁰⁷ N.J. STAT. ANN. § 58:10-23.11(f)(a)(3) (West 1977).

¹⁰⁸ See *infra* note 111.

¹⁰⁹ 42 U.S.C. § 9621 (1993); 40 C.F.R. §§ 300.2 to -.3 (1992).

manent remedy is proposed, the lack of a baseline risk assessment and the requirement for permanent remediation at all sites.¹¹⁰ Consequently, if a private party is ordered to cleanup a contaminated site in New Jersey, it may not be able to recover its costs utilizing the favorable private party cost recovery provisions under section 106 of CERCLA because following the minimum technical requirements for site remediation will not put the site in compliance with the NCP.¹¹¹ Thus, a private party who anticipates filing a cost recovery action under section 106 of CERCLA should go beyond the minimum technical requirements found in the Technical Regulations and comply with the cleanup obligations mandated by the NCP.

In addition to complying with the cleanup provisions of the NCP, the NJDEPE may require additional work beyond the minimum technical requirements to ensure the adequate protection of human health and the environment.¹¹² The criteria for going beyond the minimum technical requirements include a number of factors the NJDEPE considers in requiring additional remedial work to be conducted at the site.¹¹³ The Technical Regulations include definitions that will have a significant impact on the way a site is remediated.¹¹⁴

5. General Sampling and Quality Assurance

The Technical Regulations¹¹⁵ require the person responsible for conducting the remediation ensure that quality assurance procedures be followed for all sampling and laboratory analysis activi-

¹¹⁰ Compare 40 C.F.R. § 300.100, 300.430(d)-(f) (1992) with N.J. ADMIN. CODE tit. 7, §§ 26E-5 to -6 (1993) (differences between the NJDEPE's Technical Regulations and the EPA's regulations).

¹¹¹ See, e.g., 40 C.F.R. § 300.315 (1992) (documentation required for cost recovery for oil removal); sec. 25-34, 1993 N.J. Sess. Law Serv. at 380-89 (general discussion of costs).

¹¹² N.J. ADMIN. CODE tit. 7, § 26E-1.7(a) (1993).

¹¹³ *Id.* These factors include: the number or magnitude of the discharges being investigated, the nature of the substances discharged, the distance to and sensitivity of the receptors and the identification of additional exposure pathways not otherwise fully investigated pursuant to the minimum requirements. *Id.*

¹¹⁴ N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993). Some of the more important definitions include "area of concern," "diligent inquiry," "method detection limit," "permanent remedy," "practical quantitation level," "preliminary assessment," "remedial alternative analysis," "remedial investigation" and "site investigation." *Id.*

¹¹⁵ N.J. ADMIN. CODE tit. 7, §§ 26E-2.1 to -2.2 (1993).

ties.¹¹⁶ The NJDEPE's "Field Sampling Procedures Manual"¹¹⁷ sets forth the applicable industry standards for sampling methods,¹¹⁸ sample preservation requirements,¹¹⁹ sample handling times,¹²⁰ decontamination procedure for field equipment¹²¹ and frequency of field blanks, field duplicates and trip blanks.¹²²

Reduced laboratory data deliverables may be submitted for all analyses, except for potable water and polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans sample results, which require full laboratory data deliverables. The person responsible for conducting the remediation must include the method detection limit and the practical quantification for each sample analysis as part of the reduced laboratory data deliverables.¹²³

The Technical Regulations set forth the requirements of a Quality Assurance Project Plan (QAPP).¹²⁴ The submission of a QAPP is not mandatory and only necessary when required pursuant to the NJDEPE oversight document or the specific regulatory program.

¹¹⁶ N.J. ADMIN. CODE tit. 7, § 26E-2.1(a) (1993) sets forth in significant detail the quality assurance/quality control [hereinafter QA/QC] requirements for all sampling and laboratory analysis activities. N.J. ADMIN. CODE tit. 7, § 26E-2.1(a) (1993) sets forth certification requirements for certified laboratories performing specified analyses of aqueous and non-aqueous samples. The QA requirements also set forth the particular conditions for laboratories performing sample analysis using EPA contract laboratory program analytical methods. Section Two sets forth the basis for which the NJDEPE can reject analytical data. *See, e.g.*, N.J. ADMIN. CODE tit. 7, § 18-2.12(b) (1993) (rejecting data based on decertification or suspension of a laboratory).

¹¹⁷ SCOTT A. WEINER, COMMISSIONER, NEW JERSEY DEP'T ENVTL. PROTECTION & ENERGY, FIELD SAMPLING PROCEDURES MANUAL (1992).

¹¹⁸ *Id.* at 6.

¹¹⁹ *Id.* at 20-65.

¹²⁰ *Id.* at 17.

¹²¹ *Id.* at 11-14.

¹²² *Id.* at 15-18.

¹²³ The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported within 99% confidence that the analyte concentration is greater than zero and is determined from the analysis of a sample in a given matrix that contains the analyte. Meanwhile, practical quantitation level (PQL) is defined as the lowest quantitation level of a given analyte that can be reliably achieved among laboratories within the specific limits of precision and accuracy of a given analytical method during routine laboratory operating conditions. The PQL is generally less restrictive than the MDL. N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993).

¹²⁴ N.J. ADMIN. CODE tit. 7, § 26E-2.2 (1993). The QAPP is the document that describes the specific QA/QC activities to be implemented that will achieve the data quality goals or objectives for specific remedial activities. *Id.*

6. Preliminary Assessment and Site Investigation

The PA is the first, and mandatory, phase of the RI.¹²⁵ The PA is described in the Technical Regulations as a thorough paper review of the site history, operations and physical setting to determine if there are any AOCs on the site.¹²⁶ If the PA identifies one or more AOCs, an SI is required to determine if contamination is in excess of the applicable remediation standards. The PA is based upon a diligent inquiry¹²⁷ by the person conducting the remedial activities at the site.

The purpose of the SI is to determine if contaminants are present above the appropriate remediation standard.¹²⁸ Representative samples for a particular AOC should reflect the highest contaminate concentrations, both horizontally and vertically, for that particular AOC, to determine whether further remediation is required. Sampling to define the complete extent of the contamination is conducted in the RI. The requirements for the PASI rely heavily on biased sampling,¹²⁹ rather than random sampling, because, at the majority of sites, suspected discharge areas can be readily identified through an evaluation of current and historic site use in the PA.

The SI may be conducted using a phased approach. The first phase could include the sampling of the AOCs identified in the PA

¹²⁵ N.J. ADMIN. CODE tit. 7, § 26E-3.1(b) (1993).

¹²⁶ N.J. ADMIN. CODE tit. 7, §§ 26E-3.1 to -3.2 (1993).

¹²⁷ Diligent inquiry is defined as conducting a diligent search of all present and historical documents that are reasonably likely to contain information related to the object of the inquiry. Diligent inquiry also includes "[m]aking reasonable inquiries of current and former employees and agents whose duties include or included any responsibility for hazardous substances, hazardous wastes, hazardous constituents or pollutants." N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993).

¹²⁸ N.J. ADMIN. CODE tit. 7, § 26E-3.3(a) (1993).

¹²⁹ Sampling is biased to the suspected location of greatest contamination. Samples are also "biased based on professional judgement, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators." N.J. ADMIN. CODE tit. 7, § 26E-3.4(a) (1993). As a general rule, AOCs only need to be sampled either if there has been a discharge in the area, or if there is physical evidence that a discharge may have occurred, such as soil discoloration or stressed vegetation. Contaminants discharged at low concentrations or contaminants that are colorless, however, may not leave physical evidence when discharged. Sampling is required, therefore, at potential discharge locations to determine whether a discharge has occurred. *See generally* N.J. ADMIN. CODE tit. 7, § 26E-3.6 to -3.9 (1993) (listing the requirements of a site investigation for soil, ground water and surface water).

as the most likely to be contaminated. Even if the first phase of the SI does not detect any contamination above cleanup standards, the rest of the AOCs at the site must be sampled. As soon as any contamination in excess of the cleanup standards is detected, the investigation may move into the RI, even though all AOCs on the site have not been sampled.¹³⁰ All information identified or collected in the SI must be presented in an SI report.¹³¹

7. Remedial Investigations

An RI¹³² is necessary at each AOC where the contaminants exceed the applicable remediation standards.¹³³ The Technical Regulations set forth the RI requirements for building interiors,¹³⁴ ground water, soils, surface water, wetlands and sediment, landfills, and, in the future, ecological receptors.¹³⁵ The NJDEPE may require an RI work plan prior to beginning the RI.¹³⁶ Once the RI is

¹³⁰ N.J. ADMIN. CODE tit. 7, § 26E-3.3(d) (1993).

¹³¹ N.J. ADMIN. CODE tit. 7, § 26E-3.10(a) (1993).

¹³² The RI is defined as the

actions to investigate contamination and the problems presented by a discharge. The remedial investigation emphasizes data collection and site characterization, and is generally performed concurrently and in an interactive fashion with the remedial alternative analysis. The [RI] includes sampling and monitoring, as necessary, and includes the gathering of sufficient information, to determine the necessity for remedial action and to support the evaluation of remediation alternatives.

N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993). An RI is meant to delineate the horizontal and vertical extent of the contaminants in all media at the site, determine the general surface and subsurface characteristics of the site, including depth of ground water; "[i]dentify the migration paths and actual or potential receptors of contaminants on or through the air, soil, bedrock, sediment, ground water, surface water and structures at a contaminated site"; collect and evaluate all data necessary to evaluate remedial action alternatives; "[c]ollect and evaluate all data necessary to evaluate the ecological impacts of contaminants"; "[c]ollect all data necessary to develop permit limitations for any discharge to an environmental medium which may be required for any remedial action alternative under consideration"; "[c]haracterize all natural resource damages, including the nature and extent of injury or damage to flora and fauna, caused by the potential contaminants at the site"; and "[i]dentify containment and/or stabilization activities to prevent contaminant exposure to on-site receptors and to prevent the off-site migration of contaminants while remedial alternatives are being evaluated." N.J. ADMIN. CODE tit. 7, § 26E-4.1(a) (1993).

¹³³ N.J. ADMIN. CODE tit. 7, § 26E-4.1(a) (1993).

¹³⁴ See N.J. ADMIN. CODE tit. 7, § 26E-4.2 (1993). When the NJDEPE revises the Technical Regulations, the requirement for building interiors will be deleted or modified.

¹³⁵ N.J. ADMIN. CODE tit. 7, §§ 26E-4.1 to -4.8 (1993).

¹³⁶ The RI work plan is required if the remediation is being performed with

completed, the NJDEPE may require the submission of an RI report.¹³⁷

8. Remedial Alternative Analysis and Remedial Action

The NJDEPE, in reaction to the adoption of ISRA, deleted the need for the feasibility study as a technical requirement for the remediation of a site.¹³⁸ While it may sound dramatic that the NJDEPE has deleted the need for the onerous feasibility study, the NJDEPE merely has changed the name from "feasibility study" to "remedial alternative analysis,"¹³⁹ to prevent confusion with the requirements under Superfund.

The purpose of a remedial alternative analysis is to identify and evaluate remedial action alternatives that are appropriate to the particular characteristics of the AOC that is undergoing remediation. The NJDEPE states a strong preference for a permanent remedy when the various remedial alternatives are considered.¹⁴⁰

NJDEPE oversight, or pursuant to ISRA/ECRA or the UST Act. The RI work plan is the proposal to complete the tasks required in an RI. N.J. ADMIN. CODE tit. 7, § 26-4.8 (1993).

¹³⁷ Remedial reports prepared pursuant to the Technical Regulations are cumulative. For example, an RI report includes all the requirements for an SI report, and presents and discusses any additional information collected pursuant to the RI. N.J. ADMIN. CODE tit. 7, § 7:26E-4.9(a) (1993). An SI report, pursuant to N.J. ADMIN. CODE tit. 7, § 26E-3.10 (1993), sets forth a specific format and details the particular information to be included, such as the historical information gathered pursuant to the PA and includes information set forth in the PA report. N.J. ADMIN. CODE tit. 7, § 26E-3.2 (1993).

¹³⁸ N.J. ADMIN. CODE tit. 7, §§ 26E-5.1 to -5.3 (1993).

¹³⁹ Remedial alternative analysis is defined as "a study to develop and evaluate options for remedial action." N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993). Meanwhile, feasibility study is defined in the NCP as a study to develop and evaluate options for remedial action. 40 C.F.R. § 300.5 (1992).

¹⁴⁰ N.J. ADMIN. CODE tit. 7, §§ 26E-5.1 to -5.3 (1993). The Technical Regulations state "[t]he person remediating the site shall select a permanent remedy for the site or area of concern unless otherwise approved by the [NJDEPE]. The [NJDEPE's] preference for remedy selection is, in order of decreasing preference: (1) on-site permanent remedies; (2) off-site permanent remedies; (3) on-site disposal; and (4) off-site disposal." N.J. ADMIN. CODE tit. 7, § 26E-5.1(b) (1993). "The person responsible for conducting the remediation shall have to conduct a remedial alternative analysis [if the remedial action is either] . . . [a]n on-site permanent remedy; or [] [a]n off-site permanent remedy when the total volume of contaminated material taken off-site for an entire site, not just the individual [AOC] undergoing remediation, is less than [100] cubic yards." N.J. ADMIN. CODE tit. 7, § 26E-5.1(c) (1993).

The remedial alternative analysis emphasizes data analysis and may be performed concurrently, and in an interactive fashion, with the RI. Data gathered during the RI is used to develop the conceptual remedial action alternatives, based upon the characterization of the nature and extent of contamination. The steps of the remedial alternative analysis include identification of the remedial action alternatives that may be appropriate for the site or AOC, and a "detailed" and "comparative analysis" of the potential performance of each of the alternatives that remain after the initial identification.¹⁴¹ The factors included in the screening of each of the remedial action alternatives include effectiveness, ease of use, timeliness and cost.¹⁴²

The NJDEPE also requires the preparation of a remedial alternative analysis report.¹⁴³ The remedial alternative analysis report is required to include all data and information obtained in the RI relating to treatability and bench or pilot scale studies.¹⁴⁴ Once the remedial alternative analysis is completed, and the remedial action¹⁴⁵ is selected, the NJDEPE must approve the remedial action

¹⁴¹ N.J. ADMIN. CODE tit. 7, § 26E-5.2(a) (1993).

¹⁴² N.J. ADMIN. CODE tit. 7, § 26E-5.2(c) (1993).

¹⁴³ The remedial alternative analysis report is required to provide the following:

A list of the remediation standards applicable to the contamination in the [AOC]; [a] discussion of the initial screening process[,] including a presentation of all remedial action alternatives considered for the site pursuant to [N.J. ADMIN. CODE tit. 7, §] [26E-5.2(c) [(1993)]; [] [a] list of the remedial action alternatives that remain after initial screening; [] [t]he evaluation and assessment of each remedial action alternative against the criteria specified in [N.J. ADMIN. CODE tit. 7, §] [26E-5.2(d) [(1993)]; and [] [a] comparative analysis of the alternatives to evaluate the relative performance of each remedial action alternative in relation to each specific evaluation criterion in [N.J. ADMIN. CODE tit. 7, §] [26E-5.2(d) [(1993)]].

N.J. ADMIN. CODE tit. 7, § 26E-5.3(a) (1993).

¹⁴⁴ N.J. ADMIN. CODE tit. 7, § 26E-5.3(b) (1993).

¹⁴⁵ Remedial action is defined as:

[T]hose actions taken at a contaminated site as may be specified in a decision document, record of decision or other document the [NJDEPE] determines appropriate. The term includes, but is not limited to, such actions at the location of a contaminated site as compliance with the applicable remediation standards, storage, confinement, perimeter protection using dikes, trenches, or ditches, clay or other covers, neutralization, cleanup of discharged contaminants and associated contaminated materials, ground water pumping and treatment, recycling or reuse, diversion, destruction, segregation of wastes, dredging or excavations, repair or replacement of leaking containers, collection of leachate and runoff, treatment, off-site transport and off-site storage, treatment, destruction, or

prior to its implementation,¹⁴⁶ unless the remedial action is a permanent remedy.¹⁴⁷ It is important to note that the NJDEPE will accept single phase remediations.¹⁴⁸

The Technical Regulations¹⁴⁹ also set forth the specific contents of a remedial action work plan (RAW).¹⁵⁰ The RAW is required to include the RI work plan, the RI report, "[t]he identification of all applicable remediation standards[, a] detailed description of the remedial action and the remedial technology to be conducted for each [AOC,] . . . [a] list of all required permits[,] [a] detailed description of site restoration plans[,] . . . " and a cost estimate of the remedial action.¹⁵¹

While the regulations do not identify specific remedies to be utilized, they set forth specific remedial action requirements.¹⁵² In addition, general requirements for remedial actions, post-remedial actions¹⁵³ and site restoration requirements are also provided.¹⁵⁴ The NJDEPE mandates submission of a remedial action report presenting and discussing all data and information collected in compliance with the specific remedial action requirements. Furthermore, specific post-remedial action requirements must be

secure disposition of contaminants and associated contaminated materials, or any monitoring required to assure that such actions protect human health or the environment. The term includes the temporary or permanent relocation of residents and businesses and community facilities where the [NJDEPE] determines that, alone or in combination with other measures, such relocation is more cost-effective than, and environmentally preferable to, the transportation, storage, treatment, destruction, or secure disposition off-site of such contaminants, or may otherwise be necessary to protect human health and the environment. The term includes the restoration of natural resources.

N.J. ADMIN. CODE tit. 7, § 26E-1.8 (1993).

¹⁴⁶ N.J. ADMIN. CODE tit. 7, § 26E-6.1(b) (1993).

¹⁴⁷ See N.J. ADMIN. CODE tit. 7, § 26E-5.1(c) (1993); N.J. ADMIN. CODE tit. 7, § 26E-6.1(b),(c) (1993).

¹⁴⁸ "Single phased remediations [occur] where the remedial action is conducted concurrently with sampling to delineate the contamination and to confirm the contaminant removal. . . ." N.J. ADMIN. CODE tit. 7, § 26E-6.1(c) (1993).

¹⁴⁹ N.J. ADMIN. CODE tit. 7, §§ 26E-6.1 to -6.6 (1993).

¹⁵⁰ See N.J. ADMIN. CODE tit. 7, § 26E-6.2 (1993).

¹⁵¹ *Id.*

¹⁵² N.J. ADMIN. CODE tit. 7, § 26E-6.3 (1993) (stating that the first priority is to contain or stabilize contaminants to prevent their movement).

¹⁵³ Post-remedial action requirements include sampling frequency. N.J. ADMIN. CODE tit. 7, § 26E-6.4 (1993).

¹⁵⁴ N.J. ADMIN. CODE tit. 7, § 26E-6.4(b)(2),(3) (1993).

presented in a format that includes the minimum set of requirements required for the implementation of a remedial action.

9. Permit Identification and Application Schedule

The permit application requirements ensure that the person implementing the remedial action identifies all necessary permits and approvals early on in the process.¹⁵⁵ Frequently, cleanups are delayed through failure to allow adequate time for the NJDEPE to process the permits. This section anticipates delay, and sets in motion the permit requirements in conjunction with the early investigatory steps. In a rather disturbing list, the NJDEPE sets forth twenty-five separate permits that may be necessary when implementing a remedial action.¹⁵⁶

¹⁵⁵ N.J. ADMIN. CODE tit. 7, § 26E-7.1 (1993).

¹⁵⁶ There are a plethora of permits that may be required for a remedial action. *See, e.g.,* N.J. ADMIN. CODE tit. 2, § 90 (1990) (soil erosion and sediment control plan certification for land disturbance control permit); N.J. ADMIN. CODE tit. 7, § 27-8 (1976) (construct/install/alter air quality control apparatus/equipment permit); N.J. ADMIN. CODE tit. 7, § 27-8 (1976) (air quality control apparatus/equipment certificate); N.J. STAT. ANN. §§ 13:19-1 to -21 (West 1973) (Coastal Area Facility Review Act (CAFRA) Permit); N.J. STAT. ANN. § 12:5-3 (West 1979) (waterfront development/upland waterfront permit); N.J. STAT. ANN. §§ 13:9A-1 to -10 (West 1991) (wetlands permit); N.J. STAT. ANN. §§ 13:9B-1 to -30 (West 1991) (freshwater wetlands/open water fill permit); N.J. ADMIN. CODE tit. 7, § 21-5.5 (1982) (stream encroachment permit—construction within a flood plain); N.J. STAT. ANN. §§ 58:10A-1 to -13 (West 1992) (State Water Quality Certificate); N.J. STAT. ANN. § 23:5-29 (West 1940) (De-watering Permit and/or Water Diversion Permit); 33 U.S.C. § 1404 (1992) (U.S. Army Corps of Engineering Dredge and Fill Permit); N.J. STAT. ANN. §§ 32:20-1 to -52 (West 1990) (Delaware River Basin Commission Docket Approval); N.J. STAT. ANN. §§ 13:17-1 to -86 (West 1991) (Hackensack Meadowlands Development Commission-Zoning Certificate); N.J. STAT. ANN. §§ 13:18A-1 to -49 (West 1991) (New Jersey Pinelands Letter of Approval); N.J. ADMIN. CODE tit. 7, § 1E (1993) (Discharge Prevention and Discharge Cleanup and Removal Plans—Pertaining to Storage and Transfer of Petroleum and other Hazardous Substances); N.J. STAT. ANN. §§ 58:10A-21 to -60 (West 1992) (Registration of Underground Storage Tank; UST Installation Permit and Closure Approval); N.J. ADMIN. CODE tit. 7, § 15 (1993) (Water Quality Management Plan Consistency Determination); N.J. ADMIN. CODE tit. 7, § 14A (1993) (New Jersey Pollutant Discharge Elimination System); N.J. ADMIN. CODE tit. 7, § 10-11 (1991) (Treatment Works Approval); N.J. ADMIN. CODE tit. 7, § 14A (1993) (Sewer Connection Permit); N.J. ADMIN. CODE tit. 8, § 60-4 (1990) (Employer License (Asbestos)); N.J. ADMIN. CODE tit. 8, § 60-6 (1990) (Asbestos Worker or Asbestos Supervisor Permit Certification of Training Agencies and Asbestos Work Notification Requirements); N.J. ADMIN. CODE tit. 7, § 26-2.7 (1989) (Landfill Disruption/Closure Approval); N.J. ADMIN. CODE tit. 7, § 26 (1992) (Hazardous Waste Facility Registration); N.J. ADMIN. CODE tit. 7, § 7E-1.1 to -1.6 (1993) (Well Drilling Permit, and Well Certification Forms

C. *Procedures for NJDEPE Oversight of the Remediation of Contaminated Sites*

In the past, contaminated sites remediated without strict NJDEPE oversight were considered "at-risk" cleanups. If a person performing a cleanup did not have a mechanism allowing the NJDEPE to sign-off on the remedial steps undertaken, then the person ran the risk that the method of investigation, and the selection of the remedial alternative, would later be disapproved by the NJDEPE. The number of sites remediated at any one time was limited due to the length of time it took NJDEPE to review the technical information that was submitted, approve the method of the remedial investigation, and negotiate cleanup agreements with the person conducting the cleanup. The procedural issues relevant to strict NJDEPE oversight, combined with the large number of sites needing remediation, meant that the number of sites that actually made it through the remediation process was disappointingly low.¹⁵⁷

The Procedures for Department Oversight of the Remediation of Contaminated Sites (Oversight Regulations) were promulgated as a solution.¹⁵⁸ The Oversight Regulations address sites where either the person remediating chooses to have NJDEPE oversight or the site has been designated as a priority site.¹⁵⁹ The result is the same either way because if the site has been ranked a priority site then the NJDEPE will require oversight.¹⁶⁰ If the site is not a priority site, then remediation may be conducted in any order of

A & B); N.J. ADMIN. CODE tit. 7, § 26 (1993) (Hazardous Waste Generator Identification Number).

Any person conducting a remedial action shall apply for and obtain all required permits prior to initiating the remedial action including any other federal, state or local approvals that may be required. Additionally, any person conducting a remedial action pursuant to an oversight document or the ECRA or UST programs shall develop a permit application schedule to identify the time frames for application and issuance/approval pursuant to N.J. ADMIN. CODE tit. 7, § 26E-6.5(a) (6) (1993).

¹⁵⁷ SITE REMEDIATION REPORT, *supra* note 2, at 13-15.

¹⁵⁸ 25 N.J. Reg. 2002(a) (1993) (codified at N.J. ADMIN. CODE tit. 7, §§ 26C-1.1 to -5.6 (1993)).

¹⁵⁹ N.J. ADMIN. CODE tit. 7, §§ 26C-1.1 to -5.6 (1993).

¹⁶⁰ N.J. ADMIN. CODE tit. 7, § 26C-1.1(c) (1993). Priority site means "a site which has been evaluated based on the Department's remedial priority scoring system and is scheduled to be remediated with public funds unless a person executes an administrative consent order pursuant to . . . subchapter [7:26C]." N.J. ADMIN. CODE tit. 7, § 26C-1.3 (1993).

phases, without NJDEPE oversight, except when implementing a remedial action that does not involve a permanent remedy. The Oversight Regulations identify the documents that will provide NJDEPE oversight to a person who participates in either the remediation of a contaminated site or the investigation of a potentially contaminated site. The Oversight Regulations also contain the procedures to determine the applicable oversight document¹⁶¹ for a particular site.

In the past, the NJDEPE's oversight of remedial activities at contaminated sites has included departmental review of reports submitted pursuant to a specific regulatory regime, such as ECRA¹⁶² and the UST Act.¹⁶³ The typical oversight document was the Administrative Consent Order (ACO), such as the ECRA ACO or the Spill Act ACO.¹⁶⁴ The Oversight Regulations set forth four oversight documents to be used at contaminated sites, depending upon certain circumstances. If a person elects to perform a remediation at a site that the NJDEPE has not identified as a priority site and the site is not subject to ISRA/ECRA or the UST Act, the appropriate oversight document for a particular remedial phase is a memorandum of agreement (MOA).¹⁶⁵ If the NJDEPE

¹⁶¹ An oversight document is defined as any document that the NJDEPE issues pursuant to the oversight regulations to define the role of a person conducting the remediation of a contaminated site, and may include an administrative order, an ACO, a Spill Act Directive, court action, memorandum of understanding or an MOA. N.J. ADMIN. CODE tit. 7, § 26C-1.3 (1993). *See also* N.J. ADMIN. CODE tit. 7, §§ 26C-2.1 to -2.7 (1993) (listing the procedures to identify an appropriate oversight document).

¹⁶² N.J. ADMIN. CODE tit. 7, §§ 26B-1.1 to -14.1 (1993) (implementing N.J. STAT. ANN. §§ 13:1K-6 to -35 (West 1991)).

¹⁶³ N.J. ADMIN. CODE tit. 7, § 14B-1.1 to -1.6 (1990).

¹⁶⁴ This oversight document focused upon the legal responsibility of the party to remediate the site under ECRA or the Spill Act. ECRA ACOs were utilized to allow the owner or operator of an industrial establishment to complete the transaction while ensuring remediation of the industrial establishment. According to the NJDEPE, a significant amount of time and resources were spent in negotiating the final form of the ACO between the NJDEPE and the owner or operator of the industrial establishment. 24 N.J. Reg. 1281(b) (1992).

The same experience applied to the negotiation of an ACO under the Spill Act and the UST Act. While the standard Spill Act ACO generally dealt with large, complex contaminated sites, including Superfund sites, the NJDEPE attempted to consolidate its efforts on negotiation of the ACOs into drafting a standard consent order to be applied to all sites. N.J. ADMIN. CODE tit. 7, § 26C-5.4 (1993).

¹⁶⁵ An MOA is defined as a written agreement between the NJDEPE and one or more persons concerning the NJDEPE's oversight of remediation pursuant to the regulations. N.J. ADMIN. CODE tit. 7, § 26C-1.3 (1993). By signing an MOA, a party does not admit to any fact, fault, or liability for conditions existing at the site before, dur-

has identified a contaminated site as a priority site, and the site is not subject to ISRA/ECRA or the UST Act, the appropriate oversight document is a responsible party ACO, unless the party is a public entity, which would require a memorandum of understanding.¹⁶⁶ If the NJDEPE has elected to conduct the remediation itself, and any person elects to pay the NJDEPE for the cost of remediation, the appropriate oversight document is a publicly conducted ACO.¹⁶⁷

The NJDEPE's approach to site remediation is premised upon establishing a priority case list, in which the worst sites get cleaned up first.¹⁶⁸ At the worst sites, the NJDEPE generally requires the responsible parties to enter into an ACO, which includes mandatory financial assurances and stipulated penalties for future violations.¹⁶⁹ Responsible party ACO's are problematic because they tend to be financially burdensome, and obligate the responsible party to perform particular remedial activities under the threat of penalties.¹⁷⁰ Thus, with the use of the ACO for high priority sites, the NJDEPE achieves the cleanup of the worst sites first while the responsible party avoids having the NJDEPE expending public funds and suing for treble damages.

ing, or after the execution of the MOA. N.J. ADMIN. CODE tit. 7, § 26C (1993) (Appendix A).

¹⁶⁶ A memorandum of understanding is defined as "an oversight document issued by the [NJDEPE] to a public entity, similar to a form of an [ACO], but without the stipulated penalties and financial assurance provisions." N.J. ADMIN. CODE tit. 7, § 26C-1.3 (1993).

¹⁶⁷ N.J. ADMIN. CODE tit. 7, §§ 26C-5.1 to -5.6 (1993). A publicly conducted ACO, for sites where the NJDEPE has elected to conduct the remediation itself and the person elects to pay the NJDEPE for the cost of remediation, is found in Appendix D of the oversight regulations. Other Appendices in the oversight regulations include the standard letter of credit (Appendix E), the standard standby trust agreement (Appendix F), the standard fully funded trust agreement (Appendix G) and the standard surety bond (Appendix H). *Id.* An administrative consent order is defined as an administrative order issued by NJDEPE that is consented to by one or more persons. It may be in the form of a memorandum of understanding for public entities at the discretion of the NJDEPE. N.J. ADMIN. CODE tit. 7, § 26C-1.3 (1993).

¹⁶⁸ See SITE REMEDIATION REPORT, *supra* note 2, at 12-13.

¹⁶⁹ N.J. ADMIN. CODE tit. 7, § 26C-5.4 (1993) (Appendix C).

¹⁷⁰ Maximum penalties of \$25,000 per day for major violations and \$10,000 for all other violations are imposed. Major violations include failure to submit RI work plans and RA work plans, failure to implement either work plan, failure to submit permit applications, failure to satisfy any financial assurances, failure to pay oversight costs or failure to implement or record permanent use and/or access restrictions. N.J. ADMIN. CODE tit. 7, § 7:26C (1993) (Appendix C, § XII(b)-(c)).

By adopting the Oversight Regulations, the NJDEPE responded to the difficulties arising from remedial activities conducted by the regulated community that were either not subject to strict oversight by the NJDEPE or required an expedited pace inconsistent with the environmental priorities set by the NJDEPE. The regulated community, particularly lenders who wanted to ensure that the property was clean before accepting it as collateral for a loan, or prospective tenants who wanted to make sure the leasehold was not contaminated prior to entering into the lease, were interested in having the NJDEPE sign off on the remedial activities that would take place at the site. Accordingly, the NJDEPE developed a voluntary cleanup program that encouraged private parties to come forward on a voluntary basis to remediate contaminated sites that were not designated priority sites by the NJDEPE.¹⁷¹

At lower priority sites, the NJDEPE recognized the need to encourage cleanups utilizing private funds. With the worst-case-first approach, the lower priority sites would either have to wait until the NJDEPE reestablished its priorities to include the site as a priority site, or perform an at-risk cleanup. The NJDEPE has sought to encourage the voluntary remediation of lower priority sites by offering oversight through an MOA. The incentive for voluntary site remediation is that the party can cleanup any portion of the property or conduct any phase of a cleanup without any further commitment to conduct the remediation of the entire site in the future.¹⁷² Financial assurances, stipulated penalties or further commitments, typically found in an ACO, are not required at the time of entering into the MOA, but the party conducting the remediation would be required to pay the NJDEPE's oversight costs.¹⁷³

The person interested in obtaining an MOA submits to the NJDEPE an application that identifies the applicant, the site, the location, all discharges and environmental permits. The NJDEPE reviews the application and determines whether it is necessary to

¹⁷¹ The NJDEPE describes the priority site as a site which has been evaluated on the NJDEPE's CSL and is scheduled to be remediated with public funds, unless a person executes an ACO pursuant to the Oversight Regulations. *SITE REMEDIATION REPORT*, *supra* note 2, at 14 (1992).

¹⁷² *Id.* at 15. In all, 297 responsible parties signed MOAs between 1991 and June 1992 under the Voluntary Cleanup Program. *Id.*

¹⁷³ N.J. ADMIN. CODE tit. 7, § 26C (1993) (Appendix A).

perform a PASI at the site within thirty calendar days of receipt of the completed application. If the NJDEPE receives an application for any remedial phase other than a PASI, the NJDEPE will submit an MOA for the applicant's signature. The NJDEPE is required to execute each signed MOA within fourteen days of receiving the applicant's signed MOA.¹⁷⁴ In Appendix A of the Oversight Regulations,¹⁷⁵ the NJDEPE includes a standard MOA that will apply to the various remedial phases.¹⁷⁶ It is important to note that an MOA requires the applicant to perform all work pursuant to the Technical Regulations and to pay the NJDEPE for its costs in overseeing the work.¹⁷⁷ In return, the NJDEPE agrees to specific time frames for responding with written comments on any submissions and approvals.¹⁷⁸

A responsible party is permitted to remediate a high priority contaminated site by entering into an ACO with NJDEPE.¹⁷⁹ If the NJDEPE is going to expend public resources for site remediation, it will notify the responsible party that, unless the responsible party executes an ACO, the site will be remediated with public funds.¹⁸⁰

¹⁷⁴ N.J. ADMIN. CODE tit. 7, § 26C-3.2 (1993).

¹⁷⁵ N.J. ADMIN. CODE tit. 7, § 26C (1993) (Appendix A).

¹⁷⁶ An MOA contains a short description of the background (location of property, name of private party), types of remedial activities to be conducted, reservation of rights, schedule for remedial activities and submission of reports, oversight costs, cost of conducting the remedial activities and general conditions. N.J. ADMIN. CODE tit. 7, § 26C (1993) (Appendix A).

¹⁷⁷ Another portion of the MOA requires the person conducting the remediation to submit to the NJDEPE a schedule of the work to be performed, including the timing of the submission of documents and reports to the NJDEPE for review. The NJDEPE is required to review the document for administrative completeness and note any deficiencies to the party conducting the remediation within 30 days. Appendix I sets forth all costs associated with the review in accordance with the oversight costs formula. N.J. ADMIN. CODE tit. 7, § 26C (1993) (Appendix I).

¹⁷⁸ N.J. ADMIN. CODE tit. 7, §§ 26C-3.1 to -3.3 (1993). See *infra* note 187.

¹⁷⁹ The Oversight Regulations set the degree, the manner and scope of a responsible party's participation in the remediation of high priority contaminated sites and require NJDEPE to provide notification to the responsible party for a particular site that has been identified as a priority site. N.J. ADMIN. CODE tit. 7, §§ 26C-5.1 to -5.6 (1993).

¹⁸⁰ The standard responsible party ACO is found in Appendix C of the Oversight Regulations. The NJDEPE has identified in N.J. ADMIN. CODE tit. 7, § 26C-5.4 (1993) certain variations of the standard responsible party ACO order found in Appendix C. Some of these variations include sites that have multiple responsible parties interested in conducting the RI and remedial alternative analysis only, ACOs for public entities and ACOs for persons implementing a remedial action necessary to address an immediate environmental concern.

D. *Conclusion*

Therefore, the Oversight Regulations provide a uniform and predictable process for requesting NJDEPE oversight for remediating a contaminated site. The NJDEPE has intelligently furthered its own internal goals of encouraging private parties to voluntarily remediate the lower priority sites and applying uniform agreements requiring remediation of the higher priority sites, while streamlining its process by applying uniform technical requirements to all contaminated sites. Simultaneously, the NJDEPE has responded to the regulated community's desire for more predictability and consistency in the remedial process by applying the Technical Regulations to all sites, allowing private parties to conduct the requisite investigative steps and remediate the lower priority sites without receiving pre-implementation review and approval from NJDEPE.

While NJDEPE has taken a number of positive steps forward, the process imposed by the adoption of the Technical Regulations and the Oversight Regulations also has weaknesses. The application of uniform standards and agreements to all contaminated sites fails to recognize that nature rarely conforms to the "typical" site. Moreover, the large RCRA regulated industrial sites with many potential AOCs will have different technical and financial priorities than the gasoline station with a petroleum spill. The NJDEPE has built in some appeal and variance procedures to address the differences in the size of the site and conditions found at the site, but it may be resistant to approaches not referred to in the two sets of regulations. Since the NJDEPE is the final arbiter of priorities, the business community will be unable to assign legal, financial and technical priority to the many contaminated sites, leaving serious uncertainties in the conduct of everyday business. Thus, until NJDEPE opens the process of developing the CSL to the general public, priorities for contaminated sites will continue to be based upon perceived political risks rather than actual scientifically supportable risks that should determine the priority of the sites.

III. *Legislative Solutions to the Complexities of Site Remediation*

The enactment of ISRA on June 16, 1993, made major revisions to ECRA, and minor revisions to the Spill Act, the UST Act, the WPCA and other statutes that deal with the discharge of haz-

ardous substances.¹⁸¹ The revisions sought to provide more predictability to the remediation process by codifying many of the concepts found in the Technical Regulations and in the Cleanup Standards for Contaminated Sites Regulations (Cleanup Regulations).¹⁸²

The NJDEPE recognized that there was not enough public money to fund remediation of all the contaminated sites.¹⁸³ As a result, the NJDEPE began its "enforce first" policy¹⁸⁴ putting a serious financial burden on the regulated community to fund the billion dollar short-fall for remediation of the 25,000 potentially contaminated sites in New Jersey.¹⁸⁵ With the adoption of ISRA, however, the legislature removed any doubt that NJDEPE was to be more reasonable in its administration of the various site remediation programs. The language in ISRA and the legislative history made it clear that the legislature was attempting to make the process more pro-business. For example, ECRA was amended to read:

[A]nd that it is in the interest of the environment and the State's economic health to promote certainty in the regulatory process by incorporating that knowledge to create a more efficient regulatory structure and to allow greater privatization of that process

¹⁸¹ Industrial Site Recovery Act, ch. 139, 1993 N.J. Sess. Law Serv. 359 (West) (amending N.J. STAT. ANN. §§ 13:1K-6 to -18, 58:10B-1 to -20, 58:10-23.11(g) (West 1991)). The remediation standards set forth in ISRA apply to the Spill Act, N.J. STAT. ANN. §§ 58:10-23.11 to -23.11Z (West 1992), the Water Pollution Control Act, N.J. STAT. ANN. §§ 58:10A-1 to -18 (West 1992), the Solid Waste Management Act, N.J. STAT. ANN. §§ 13:1E-1 to -48 (West 1991 & Supp. 1993) the Comprehensive Regulated Medical Waste Management Act, N.J. STAT. ANN. §§ 13:1E-48.1 to -48.28 (West 1991), the Major Hazardous Facility Siting Act, N.J. STAT. ANN. §§ 13:1E-49 to -92 (West 1991), the Sanitary Landfill Facility Closure and Contingency Fund Act, N.J. STAT. ANN. §§ 13:1E-100 to -176 (West 1991), the Regional Low-Level Radioactive Waste Disposal Facility Siting Act, N.J. STAT. ANN. §§ 13:1E-177 to -207 (West 1991), or any other law or regulation that compels a person to perform remediation activities on contaminated property. *Id.*

¹⁸² 24 N.J. Reg. 373(a) (1992). The Cleanup Regulations were never adopted by the NJDEPE.

¹⁸³ SITE REMEDIATION REPORT, *supra* note 2, at 3.

¹⁸⁴ *Id.* "The Site Remediation Program will maximize the utilization of the responsible party funds by operating under an 'enforce first' principle. This approach entails offering responsible parties the opportunity to conduct any necessary remediation activities, under Department oversight, at a contaminated site. The amount of time provided for a responsible party to respond will depend upon the nature of the remediation needed and the risks posed by the site." *Id.*

¹⁸⁵ *Id.*

where it is possible to do so without incurring unnecessary risks to the public health or the environment.

The Legislature therefore declares 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; that these policies can be achieved by streamlining the regulatory process, by establishing summary administrative procedures for industrial establishments that have previously undergone an environmental review, and by reducing oversight of those industrial establishments where less extensive regulatory review will ensure the same degree of protection to public health, safety, and the environment; and that the new procedures established pursuant to this act shall be designed to guard against redundancy from the regulatory process and to minimize governmental involvement in certain business transactions.¹⁸⁶

The Assembly Statement also encourages the NJDEPE to act reasonably, eliminate redundant and unnecessary requirements and instill maximum flexibility in the process.¹⁸⁷ Thus, not only did the Legisla-

¹⁸⁶ Sec. 2, § 2, 1993 N.J. Sess. Law Serv. at 360 (amending N.J. STAT. ANN. § 13:1K-7 (West 1991)). Moreover, the legislative history states:

The primary objective of the substitute, as amended by the committee, is to reform the site remediation process in order to promote faster cleanups of contaminated property while at the same time furthering the State's economic well-being and the development by improving the State's business climate. To achieve these objectives, the amended version of the substitute is designed to eliminate, to the greatest extent possible, the unnecessary time-consuming procedures and bewildering maze of regulations that created much uncertainty and unpredictability for the business community under the current ECRA program. . . .

S. 1070, 205th N.J. Legis. 2d Sess. (1993) (Assembly Policy and Rules Committee Statement) at 1 [hereinafter Assembly Statement].

¹⁸⁷ The Statement of Legislative Intent includes the following declarations:

Streamline the ISRA process by eliminating redundant and unnecessary requirements; privatizing the process as much as possible where qualified private professionals are available; providing for expedited compliance processes under certain conditions and reducing [NJ]DEPE involvement in the process to the greatest extent possible.

. . . .

Require the [NJ]DEPE, until regulations are adopted authorized by this act, to act reasonably in the interim period when reviewing applications and petitions and all other interactions with the public.

Allow cleanups that do not remediate property to pristine levels, provided that appropriate and DEPE approved engineering or institutional controls are implemented.

ture give industry the tools to gain clarity and finality to the process, but compelled the NJDEPE by legislative directive to weigh business interests against its primary purpose of protecting the environment.

A. ISRA's Revisions to the ECRA Process

ISRA/ECRA made a number of changes to the statutory definitions on which the NJDEPE's Technical Regulations were based.¹⁸⁸ While the events that trigger compliance are essentially unchanged, some of the other definitions have been altered.¹⁸⁹ The new or modified definitions in ISRA/ECRA fall into three categories: the triggering event,¹⁹⁰ the phases of the process,¹⁹¹ and the scope of the remediation.¹⁹²

The statute requires that within five days of closing operations or the execution of an agreement to transfer ownership or operations, the owner or operator of the industrial establishment give notice to the NJDEPE by submitting a general information statement (GIS).¹⁹³ In addition, the amendments to ECRA require that upon closing or prior to the transfer, the owner or operator obtain from the NJDEPE a negative declaration, a no further action letter,

.....
Provide, to the greatest extent possible, finality to compliance with ISRA.

.....
In recognition of this determination [of the applicability of strict, joint and several liability by the NJDEPE and the Attorney General's Office], until action is taken to modify strict joint and several liability pursuant to Section 48, the [NJ]DEPE shall consider the inequity in the system and shall be reasonable in assessing liability when applying joint and several liability.

Assembly Statement, *supra* note 186, at 17-18.

¹⁸⁸ Sec. 3, § 3, 1993 N.J. Sess. Law Serv. at 360-64.

¹⁸⁹ See N.J. STAT. ANN. § 13:1K-8 (West 1991); sec. 3, § 3, 1993 N.J. Sess. Law Serv. at 360-64.

¹⁹⁰ Sec. 3, § 3, 1993 N.J. Sess. Law Serv. at 360-64. The triggering event definitions include: "industrial establishment," "closing operations," "change in ownership," "transferring ownership or operations," "indirect owner," "direct owner or operator," "owner," and "operator." *Id.*

¹⁹¹ *Id.* The phase of process definitions include: "preliminary assessment," "site investigation," "remedial investigation," "remedial action work plan," "no further action letter" and "negative declaration." *Id.*

¹⁹² *Id.* The scope of remediation definitions include: "discharge," "area of concern," "remediation standards," "industrial establishment," "hazardous waste" and "hazardous substance." *Id.*

¹⁹³ N.J. STAT. ANN. § 13:1K-9 (West 1991).

or approval of either a RAW, or a remediation agreement that includes the establishment of a remediation funding source.¹⁹⁴

ISRA/ECRA requires the owner or operator to proceed with at least one of the following sequential phases: a PASI, RI or a remedial action for soil, surface water and ground water.¹⁹⁵ The NJDEPE will review the results of the remedial work performed when an application for a negative declaration¹⁹⁶ is submitted. When submitting a negative declaration, the owner or operator must be capable of demonstrating to the NJDEPE that either there has been no discharge at the site, or that there are no contaminants present at or migrating from the site above the applicable remediation standards. The NJDEPE approves a negative declaration with an NFA letter.¹⁹⁷

If the NJDEPE determines that further action is necessary, based upon the submission of the owner or operator, the NJDEPE will require either further remediation or the submittal of a RAW.¹⁹⁸ Once the RAW is approved by the NJDEPE, and a remediation funding source¹⁹⁹ is established, the owner or operator may transfer ownership or operations. An owner or operator

¹⁹⁴ *Id.*

¹⁹⁵ Regarding a description of the components and requirements of each remedial phase, see discussion *supra* part II.B.

¹⁹⁶ N.J. STAT. ANN. § 13:1K-8 (West 1991). A negative declaration is a written declaration, submitted by the owner or operator of an industrial establishment to the NJDEPE, certifying that there has been no discharge of hazardous substances or hazardous wastes on the sites, or if there was a discharge it has been remediated pursuant to the Technical Regulations and Cleanup Standards. *Id.*

¹⁹⁷ A "no further action letter," as defined by ISRA, is a written determination by the NJDEPE that, based upon an evaluation of the historical use at or the remedial investigation of the site, there were no discharged hazardous substances or wastes at the site, and if there were such discharges, that they have been remediated to the NJDEPE's satisfaction. N.J. STAT. ANN. § 13:1K-8 (West 1991); sec. 3, § 3, 1993 N.J. Sess. Law Serv. at 363.

¹⁹⁸ N.J. ADMIN. CODE tit. 7, § 26E-6.2 (1993). A RAW, previously referred to as a "cleanup plan" in ECRA, is a plan for the remedial action to be undertaken as a result of contamination that is on-site and/or has migrated off-site. Pursuant to ISRA/ECRA, the RAW is required to describe in sufficient detail the remedial action that will take place, have a time schedule and have an estimate of the cost of implementing the remedial action. *Id.*

¹⁹⁹ The three types of remediation funding sources mentioned in § 25 of ISRA/ECRA are an environmental insurance policy, a remediation trust fund and a line of credit or a self guarantee. The criteria for a self guarantee is a tangible net worth at least three times the estimated cleanup costs, plus a demonstration of sufficient cash flow. Sec. 25(a), 1993 N.J. Sess. Law Serv. at 381.

may also transfer ownership or operations of the industrial establishment, prior to approval of a negative declaration or a RAW, upon approval by the NJDEPE of a remediation agreement.²⁰⁰

Furthermore, the owner or operator is also required to provide the NJDEPE with satisfactory documentation that a remediation funding source has been established. The remediation funding source is required to be in effect for a term not less than the actual time necessary to perform the remediation at the site.²⁰¹ A major divergence from the concept of the ECRA financial assurance is that the remediation funding source can be used to pay for the remediation.²⁰²

The NJDEPE is required to make a written finding that the person who established the remediation funding source has failed to perform the remediation.²⁰³ A copy of the written determination is delivered to the person, who was required to establish the remediation funding source, and to any transferee of the property pursuant to ISRA/ECRA. The NJDEPE is then authorized to perform the remediation in place of the non-performing person utilizing the remediation trust fund, the line of credit or to make claims upon the environmental insurance policy. Alternatively, once the NJDEPE makes a written determination of non-performance, the transferee is permitted to petition the NJDEPE, with a copy being sent to the owner or operator, for authority to perform the remediation at the industrial establishment. The NJDEPE may grant the transferee's petition authorizing it to perform the remediation as specified in the approved RAW, or remediation

²⁰⁰ The remediation agreement is meant to be a substitute for the ACO, a document previously used under ECRA to force responsible parties to cleanup the industrial site. The remediation agreement is required to have an estimate of the cost of remediation, approval of the remediation by the NJDEPE, and a certificate of the statutory liability of the owner or operator to perform and complete a remediation at the site in the manner and time limits provided by the NJDEPE. N.J. ADMIN. CODE tit. 7, §§ 26E-6.1 to -6.6 (1993). The certification of statutory liability will not be construed as an admission of liability or imposed liability on the owner or operator under the Spill Act or common law. N.J. STAT. ANN. § 13:1K-9(e) (West 1991).

²⁰¹ Sec. 25(a), 1993 N.J. Sess. Law Serv. at 381; N.J. STAT. ANN. § 13:1K-9(e) (West 1991).

²⁰² Compare N.J. STAT. ANN. § 13K-9(b)(3) (West 1991) with sec. 25(b), 1993 N.J. Sess. Law Serv. at 381 (ECRA requires the posting of a bond to ensure cleanup costs will be provided for, however, ISRA allows the funding source to be used to pay for the remediating).

²⁰³ Sec. 25(g)(1), 1993 N.J. Sess. Law Serv. at 383.

agreement, and to avail itself of the monies in the remediation trust fund, line of credit or make claims on the environmental insurance policy established by the owner or operator. Once the NJDEPE has begun to perform the remediation in place of the owner or operator, the NJDEPE is not allowed to permit the owner or operator to continue its performance of obligations, except by agreement with the NJDEPE and the transferee, or upon a determination by the NJDEPE that the transferee is not adequately performing the remediation. Generally, pre-implementation review and approval of a PASI or RI is not required under ISRA/ECRA, but the NJDEPE may require it as part of a remediation agreement.²⁰⁴

The owner or operator may apply for an expedited review by the NJDEPE if the industrial establishment, regulated under ISRA/ECRA, has previously undergone remediation.²⁰⁵ The application should also include a certification that the owner or operator has performed remedial activities at the industrial establishment that are consistent with the Technical Regulations. The basis for an expedited review is that the NJDEPE has previously approved the remediation and no new contamination is present at the site. An application can be made to the NJDEPE to receive a waiver of the need for remediation at a particular AOC, referred to as an AOC waiver, at the site if that previous AOC was approved by the NJDEPE or the EPA. An application pursuant to an AOC waiver should include a certification that: (1) the NJDEPE or the EPA previously approved a remediation at the AOC; (2) the agency issued

²⁰⁴ The RAW for the remediation of soil must be submitted to the NJDEPE for its review and approval if the remedial action cannot reasonably be expected to achieve the standards, criteria and time schedules established by the NJDEPE within five years of the commencement of the implementation of the remedial action. Also, the NJDEPE may want to review the RAW prior to its implementation if the owner or operator of the industrial establishment is closing operations and the remediation will meet the established minimum non-residential use soil remediation standards, or the soil remediation does not meet either the established minimum residential or non-residential use soil remediation standards adopted by the NJDEPE. See discussion regarding differential cleanup standards, *infra* parts II.B.3-4.

²⁰⁵ An application for an expedited review includes: (1) the submission of a GIS; (2) a certification that a RAW has previously been implemented for the industrial establishment; and (3) (a) a no further action letter has been issued pursuant to ISRA, or (b) a negative declaration has been previously approved by the NJDEPE or the EPA, pursuant to the RCRA or CERCLA, or (c) any other law has previously approved a remediation of the industrial establishment equivalent to that performed pursuant to the provisions of ISRA.

an NFA letter or an equivalent approval of the remediation for that AOC; (3) the performance of remedial activities in the AOC are consistent with current regulations established by the NJDEPE; and (4) there have been no discharges of hazardous substances or wastes at the AOC since the issuance of an NFA letter or equivalent approval.

If any discharge has occurred, it is necessary to submit to the NJDEPE a certification listing the details of any discharge and describing the action taken to remediate the discharge. The certification must also state that the remediation was performed in accordance with procedures established by the NJDEPE and the applicant must attach a copy of the document evidencing departmental approval.²⁰⁶ When there have been interim discharges or small AOCs, the owner or operator of the industrial establishment can request limited site review by following the same procedures as under an expedited review.

The owner or operator of an industrial establishment does not have to comply with the provisions of ISRA/ECRA if the industrial establishment is already in the process of a remediation equivalent to that performed pursuant to ISRA/ECRA. With another cleanup pending at the site, there is no need for a "second sale" ACO²⁰⁷ or the filing of other paperwork to remain in compliance, so long as the remediation is pending and a remediation funding source has been established.

The owner or operator of an industrial establishment may apply to the NJDEPE to close its operations, transfer ownership, or transfer its operations at the industrial establishment without obtaining departmental approval. This procedure can be utilized if the only AOCs or discharges are from an underground storage tank regulated pursuant to the UST Law.²⁰⁸

The owner or operator may also bypass the ISRA/ECRA compliance sections if discharges at the industrial establishment are of

²⁰⁶ If applicable, the certification must also state that any underground storage tanks located on the site are in compliance with the UST Law, N.J. STAT. ANN. §§ 58:10A-21 to -37 (West 1992).

²⁰⁷ Previously, the sale of a business or triggering event was permitted to go forward under an ECRA ACO, but before the cleanup was completed, another triggering event required another ACO. N.J. STAT. ANN. § 13:1K-16(a) (West 1991).

²⁰⁸ N.J. STAT. ANN. §§ 58:10A-21 to -37 (West 1992).

a minimal environmental concern.²⁰⁹ Upon the completion of a PASI or RI conducted pursuant to ISRA/ECRA, the owner or operator may submit a certification to the NJDEPE that the discharge at an industrial establishment is of minimal environmental concern.²¹⁰

B. ISRA's Reform of the Site Remediation Standards

The EPA and the NJDEPE have been struggling with providing an answer to the age-old environmental question of "how clean is clean?"²¹¹ In February 1992, the NJDEPE proposed the Cleanup Regulations attempting to apply uniform cleanup standards to every contaminated site.²¹² Unfortunately, the Cleanup Regulations raised more issues than they resolved and were not adopted by the NJDEPE.²¹³ With the adoption of ISRA, however, the New Jersey Legislature joined in the fray with a number of provisions that dictated the process for developing remediation standards for human health and the environment.²¹⁴ In attempting to set consistent cleanup standards, the Legislature balanced the need for protecting human health and the environment with the realization that remediating contaminated property to a pristine condition may not be economically feasible in New Jersey.²¹⁵

The main provisions of the new law require the NJDEPE to adopt minimum remediation standards, establish the Environment Advisory Task Force²¹⁶ to make recommendations on ecology-

²⁰⁹ Sec. 18(a), 1993 N.J. Sess. Law Serv. at 375.

²¹⁰ The certification must establish that no more than two AOCs at the industrial establishment are contaminated at levels above the applicable remediation standards, and that remedial action at those two AOCs can be completed pursuant to standards in criteria established by the NJDEPE within six months of the owner's or operator's receipt of the approval of the application by the NJDEPE. The certification also includes a requirement that a RAW will be prepared and implemented pursuant to the standards and criteria established by the NJDEPE within six months of the owner's or operator's receipt of the approval of the application by the NJDEPE. Sec. 18(a)(1)-(3), 1993 N.J. Sess. Law Serv. at 375-76.

²¹¹ 24 N.J. Reg. 373(a) (1992).

²¹² *Id.*

²¹³ *Id.* They were not adopted within the one year required under the Administrative Procedure Act.

²¹⁴ Sec. 35(a), 1993 N.J. Sess. Law Serv. at 389.

²¹⁵ Assembly Statement, *supra* note 186, at 1-2.

²¹⁶ Sec. 37, 1993 N.J. Sess. Law Serv. at 395-96. The Environmental Advisory Task Force (EATF) is comprised of representatives from the NJDEPE and scientists from business and academia. It is required to review all scientific and other relevant mate-

based remediation standards, mandate the use of differential remediation standards for residential and non-residential uses, and allow the use of engineering and institutional controls in exchange for use of a more permissive remediation standard.

ISRA's direction on the applicable cleanup standards will have a significant impact on the federal site remediation program in New Jersey. The selection of the "applicable or relevant and appropriate requirements" (ARARs),²¹⁷ under section 121 of CERCLA,²¹⁸ may be impacted by New Jersey's proposed and adopted

rial to identify the manner in which the NJDEP can use environment risk assessments, the way other entities set remediation standards for ecological-based remediation standards, and identify public policies usually involved in the development of remediation standards protective of the environment. The EATF is required to release the proposed recommendations to the public allowing written and oral comments. Following the public release of its proposed recommendations, the EATF will submit its final recommendations to the NJDEP concerning the adoption of remediation standards protective of the environment. It appears that the remediation standards protective of the environment will be more stringent than the residential and non-residential standards. The EATF is required to make recommendations to the NJDEP on the feasibility, development and application of remediation standards protective of the environment. In formulating its recommendations, the EATF is required to review the relevant scientific data to allow the development of remediation standards protective of the environment and establish contaminant concentration levels necessary to protect against adverse effects of contamination on ecological receptors. The EATF is also required to review scientific literature on the methods, procedures and uses of environmental risk assessments. *Id.*

²¹⁷ "Applicable requirements mean those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance at a CERCLA site." 40 C.F.R. § 300.5 (1992). If a requirement is not applicable, it still may be relevant and appropriate. "Relevant and appropriate requirements mean those cleanup standards [that] . . . address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site." *Id.* See also 40 C.F.R. § 400(g) (1992).

²¹⁸ Section 121(d)(2) of the CERCLA, as amended by the 1986 Superfund Amendments and Reauthorization Act, requires that on-site remedial actions must attain (or waive) federal and more stringent state applicable or relevant and appropriate requirements (ARARs) of environmental laws upon completion of the remedial action. See CERCLA, 42 U.S.C.A. §§ 9601-9615 (West 1983 & Supp. 1993). See also Superfund Amendments and Re-authorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (codified at 10 U.S.C.A. §§ 2701-2707, 2721, 2810 (West 1983 & Supp. 1993); 26 U.S.C.A. §§ 1-26, 59A, 164, 275, 936, 1561, 4041-4042, 4221, 4611-4612, 4661, 4671-4672, 4681-4682, 6154, 6420-6421, 6425, 6427, 6655, 9502-9503, 9506-9508 (West 1983 & Supp. 1993); 29 U.S.C.A. § 655 (West 1983 & Supp. 1993); 33 U.S.C.A. § 1416 (West 1983 & Supp. 1993); 42 U.S.C.A. §§ 6921, 6926, 6928, 6991, 9601-9609, 9611-9614, 9616-9626, 9631-9633, 9641, 9651, 9653, 9656-9662, 9671-9675, 9681, 9691,

standards for the minimum acceptable contaminant levels in the soil, ground water and surface water. Corrective actions under RCRA may also be affected by the new cleanup standards applied to the remediation of contaminated sites. On state initiated cleanups of Superfund sites, the evaluation of the nature and extent of the hazard, the development and selection of a remedial action and the determination of when no further action is necessary may be directly affected by the statutory and regulatory changes made to the manner in which site remediation is conducted in New Jersey.

1. Risks to Human Health and the Environment

When codifying remediation standards, the legislature made a distinction in ISRA between remediation standards protective of human health and remediation standards protective of the environment, the so called ecology-based standards.²¹⁹ This distinction is premised upon the sensitivity of the receptors: humans are not as sensitive to risks posed by contaminants as other species in the environment, such as plants. Accordingly, the human health-based standards may not be as restrictive as those protecting more sensitive species found in the environment. ISRA allows the NJDEPE to set soil, groundwater and surface water standards for human health, but takes away the NJDEPE's complete discretion on setting ecology-based standards for soils.²²⁰ Instead, the Legislature has delegated the responsibility of setting ecological standards to the EATF.²²¹

The risk a contaminant poses to human health is measured by a baseline risk assessment.²²² The primary purpose of the baseline

11,001-11,005, 11,021-11,023, 11,041-11,050 (West 1983 & Supp. 1993)). The revised National Contingency Plan of 1990 requires compliance with ARARs during remedial actions as well as at completion, and compels attainments of ARARs during removal actions to the extent practicable, considering the exigencies of the situation. *See* 40 C.F.R. § 300.415(i) (1992); 40 C.F.R. § 300.435(b)(2) (1992).

²¹⁹ Sec. 35(d), 1993 N.J. Sess. Law Serv. at 390.

²²⁰ Sec. 38, 1993 N.J. Sess. Law Serv. at 396.

²²¹ Sec. 37, 1993 N.J. Sess. Law Serv. at 395-96.

²²² The NCP calls for a site-specific base risk assessment as part of the RI. 40 C.F.R. § 300.430(d)(1)(1992). The NCP states that the baseline risk assessment should "characterize the current and potential threats to human health and the environment that may be posed by contaminants migrating to ground water or surface water, releasing to air, leaching through soil, remaining in the soil, and bioaccumulating in the food chain." 40 C.F.R. § 300.430(d)(4) (1992).

risk assessment is to provide risk managers with an understanding of the actual and potential risks to human health and the environment posed by the site and any uncertainties associated with the assessment.²²³ This information may be useful in determining whether a current or potential threat to human health or the environment exists that warrants remedial action.²²⁴ A risk assessment is an analytical report that provides qualitative and quantitative indications of the risks to human health attributable to exposure to a contaminant and assists in the selection of the remedial alternative.²²⁵ The risk assessment's results guide the NJDEPE in making screening,²²⁶ priority setting²²⁷ and standard setting decisions.²²⁸ The process of making priority setting and standard setting decisions is referred to as risk management²²⁹.

Widespread public concern over the risk of cancer has caused the legislature to set numerical "bright lines" in ISRA to control the risk management process. Quantification of human health risks, and the resulting minimum standards, is often based upon the ability of the contaminant to cause cancer.²³⁰ While the health risks posed by non-carcinogens can be great, the risk of cancer typically receives more stringent standards than other health risks.²³¹ Accordingly, the Legislature has statutorily mandated the uniform lifetime cancer risk level for carcinogens at one in one million under ISRA.²³²

²²³ Memorandum from Don R. Clay, Assistant Administrator, United States Environmental Protection Agency, Office of Solid Waste and Emergency Response, Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions 2 (Apr. 22, 1991) [hereinafter OSWER Memo] (on file with the *Seton Hall Legislative Journal*).

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ Alon Rosenthal et al., *Legislating Acceptable Cancer Risk From Exposure to Toxic Chemicals*, 19 *ECOLOGICAL* L.Q. 269, 272 (1992). Screening decisions determine whether exposure to a particular chemical may pose adequate risk to justify a more detailed risk assessment. *Id.*

²²⁷ *Id.* Priority-setting decisions identify chemical exposures that are serious enough to justify regulation. *Id.*

²²⁸ *Id.* Standard-setting decisions consist of setting specific limitations on discharges to adequately protect the human health from chemical exposures. *Id.*

²²⁹ *Id.*

²³⁰ OSWER Memo, *supra* note 223, at 3.

²³¹ UNITED STATES GEN. ACCOUNTING OFFICE, *REPRODUCTIVE AND DEVELOPMENTAL TOXICANTS: REGULATORY ACTIONS PROVIDE UNCERTAIN PROTECTION* 16 (1991). Some of the health risks posed by non-carcinogens include: kidney damage, developmental and reproductive effects and neurobehavioral deficits. *Id.*

²³² Sec. 47(b), 1993 N.J. Sess. Law Serv. at 402.

There are some significant problems of statutorily setting a numerical risk level for carcinogens. In the past, environmental laws contained a narrative description of the acceptable level of risk when setting cleanup standards. The replacement of that narrative approach with a bright line numerical risk level, that is applicable to all sites, raises questions of promoting public health at the cost of economic efficiency.²³³

2. Minimum Remediation Standards

Pursuant to section 35 of ISRA, the NJDEPE is required to adopt contaminant specific minimum remediation standards for soil, ground water and surface water protective of human health and the environment.²³⁴ ISRA also requires that remediation standards are developed to ensure that the potential harm to human health and the environment is minimized to acceptable levels.²³⁵ In developing remediation standards, the NJDEPE is to take into consideration a number of relevant factors, including the location, surroundings, the intended use of the property, the potential exposure to the discharge, and the surrounding ambient conditions, whether naturally occurring or man made.²³⁶

ISRA requires that the NJDEPE promulgate minimum remediation standards protective of human health for soil, ground water and surface water.²³⁷ The NJDEPE is also required to promulgate minimum remediation standards protective of the environment for ground water and surface water, but not for soils until

²³³ Professor Alon Rosenthal, of the Harvard School of Public Health, set forth some of the problems with legislatively mandated numerical risk levels:

In considering whether particular bright lines are a good idea, Congress should consider the ramifications for both public health efficiency and economic efficiency. By public health efficiency, we mean the maximization of public health protection given limited rule making and enforcement resources. By economic efficiency, we mean placing some upper limits on the amount of societal resources that will be expended to achieve a given amount of public health protection.

Rosenthal et al., *supra* note 226, at 345.

²³⁴ Sec. 35(a), 1993 N.J. Sess. Law Serv. at 389.

²³⁵ Sec. 35(d), 1993 N.J. Sess. Law Serv. at 390.

²³⁶ Sec. 35(a), 1993 N.J. Sess. Law Serv. at 389.

²³⁷ According to ISRA, the minimum remediation standards for human health are to be based upon: (1) generally accepted and peer reviewed scientific evidence; (2) exposure scenarios using assumptions that are likely to occur, rather than theoretically possible to occur; and (3) the avoidance of redundant conservative assumptions. Sec. 35(b), 1993 N.J. Sess. Law Serv. at 389.

recommendations are made by the Environmental Advisory Task Force.²³⁸ Until the minimum remediation standards are adopted, the NJDEPE is required to set standards for contamination at a site on an individualized basis.²³⁹

In developing minimum remediation standards for soil, ground water and surface water, ISRA requires that the NJDEPE base its standards upon generally accepted and peer reviewed scientific evidence or methodologies.²⁴⁰ The NJDEPE is also required to base its standards upon reasonable exposure scenarios, particularly as to the amount of contaminants that humans or other receptors will be exposed, when and where the exposures will occur and the amount of that exposure.²⁴¹ The Legislature specifically stated the NJDEPE is to avoid the use of redundant conservative assumptions by using parameters that provide an adequate margin of safety and that avoid the use of unrealistic conservative exposure parameters.²⁴² To this end, the NJDEPE is instructed to make use of the guidance and regulations for exposure assessment developed by the EPA pursuant to CERCLA.²⁴³

3. Differential Ground and Surface Water Standards

Section 35(c) of ISRA allows the NJDEPE the ability to set differential remediation standards for surface water and ground water.²⁴⁴ These differential standards would take into account the current, planned, or potential use of the surface or ground water in accordance with the federal Clean Water Act,²⁴⁵ and the state Water Pollution Control Act.²⁴⁶ While this section will have limited application to most contaminated sites in New Jersey, it does take into account that all ground water and surface water are not created equal.²⁴⁷

²³⁸ Sec. 37, 1993 N.J. Sess. Law Serv. at 395-96.

²³⁹ Sec. 35(a), 1993 N.J. Sess. Law Serv. at 389.

²⁴⁰ Sec. 35(b)(1), 1993 N.J. Sess. Law Serv. at 389.

²⁴¹ Sec. 35(b)(2), 1993 N.J. Sess. Law Serv. at 389.

²⁴² Sec. 35(b)(3), 1993 N.J. Sess. Law Serv. at 389.

²⁴³ *Id.*

²⁴⁴ Sec. 35(c), 1993 N.J. Sess. Law Serv. at 389-90.

²⁴⁵ 33 U.S.C. §§ 1251-1270 (1988).

²⁴⁶ N.J. STAT. ANN. §§ 58:10A-1 to -14.6 (West 1992).

²⁴⁷ For example, ground water contamination of a Class IV aquifer does not require the same remediation standards of a Class I aquifer. *See* N.J. ADMIN. CODE. tit. 7, § 9-6.1 to -6.11 (1993).

4. Differential Soil Standards

The use of differential remediation standards²⁴⁸ for soils will have a greater impact on the cleanup of contaminated sites than differential standards for surface and ground water.²⁴⁹ The residential and non-residential soil remediation standards are required to protect the ground and surface water against contaminants that are mobile and transportable to ground water. Residential soil remediation standards are to be set at concentration levels based upon the use of that property for residential or similar uses.²⁵⁰

Residential remediation standards require the unrestricted use of the property.²⁵¹ Residential remediation standards will require that contaminant levels for carcinogens at a cleanup level do not exceed the health risk levels for human carcinogens as categorized by the EPA²⁵² or will not result in additional cancer risk of one in one million²⁵³ for non-carcinogens. The health risk levels are for any one contaminant and are not for the cumulative effects of more than one contaminant at a site. The NJDEPE is required to promulgate regulations setting both residential and non-residential cleanup standards by January 1995.²⁵⁴ Until the new regulations are promulgated, the NJDEPE may not disapprove the use

²⁴⁸ Differential standards refers to the fact that the cleanup level that will be required for non-residential (industrial and commercial) property will be less restrictive than the cleanup level required for residential property. This distinction is based upon the assumption that there is less risk to human health and the environment at non-residential property. Sec. 4(g)(2), § 4, 1993 N.J. Sess. Law Serv. at 367.

²⁴⁹ The standards for soil remediation shall be devised to ensure that potential harm be minimized by taking into consideration the surroundings. Sec. 35(a), 1993 N.J. Sess. Law Serv. at 389.

²⁵⁰ Sec. 35(c)(1), 1993 N.J. Sess. Law Serv. at 389-90.

²⁵¹ *Id.*

²⁵² OSWER Memo, *supra* note 223, at 4.

²⁵³ ISRA established an Environmental Risk Assessment and Risk Management Study Commission to assess the scientific basis for the risk management standard of one in one million. Sec. 47(b)(1), 1993 N.J. Sess. Law Serv. at 402.

²⁵⁴ The use of non-residential standards must meet the following criteria:

1. The standards must be protective of public health, safety and the environment;
2. Access to the area of concern must be restricted to unauthorized persons;
3. The transferee must agree to their use;
4. The impact on other sites from the remaining contaminants must be limited;
5. Relative cost of using residential standards must be considered; and
6. There should be consistency with the Pinelands Commission pursuant to N.J. STAT. ANN. §§ 13:18A-1 to -49 (West 1991).

Sec. 4(i)(1)-(6), § 4, 1993 N.J. Sess. Law Serv. at 367-68.

of the minimum non-residential soil remediation by the responsible party except upon a finding that the use of the non-residential soil remediation standards at the site would not be protective of public health, safety, or the environment. ISRA prohibits the NJDEPE from denying the use of non-residential soil standards if the difference in cost between implementing the two standards is *de minimis*.²⁵⁵

The NJDEPE is required to impose conditions on the use of non-residential soil remediation standards and engineering or institutional controls²⁵⁶ when used in lieu of remediating a site to meet remediation standards for soil, ground water or surface water. One of the most important conditions listed in ISRA for the use of control measures includes restricting the use of the property in a manner that limits exposure. Other conditions include notice to prospective property owners and tenants, notice to the local municipality and the posting of signs in areas of limited access.²⁵⁷ Recording the use of non-residential standards and/or institutional and engineering controls in real estate recordings, including restrictive covenants and easements, is not permitted.

Section 35(f) of ISRA allows the person performing a remediation of contaminated real property, in lieu of using the established minimum soil remediation standard for either residential or non-residential use, to submit to the NJDEPE a request to use an alternative residential or non-residential use soil remediation standard.²⁵⁸ The use of a less restrictive alternative soil remediation standard would be based upon either site specific factors, including the physical site characteristics that vary from those used by the

²⁵⁵ ISRA defines *de minimis* as a cost difference not exceeding 10% of the cost of implementing the non-residential standards. Sec. 4(i)(1)-(6), § 4, 1993 N.J. Sess. Law Serv. at 367-68.

²⁵⁶ Engineering controls are mechanisms to contain or stabilize contamination or ensure the effectiveness of the selected remedial action, including impervious caps, covers, dikes, trenches, signs and leachate collection systems. Institutional controls are mechanisms used to ensure the effectiveness of a remedial action over time, limit human exposure to contaminants by restricting activity at or near a contaminated site, including use restrictions, well restriction areas and deed notices. Sec. 36(a)(1), 1993 N.J. Sess. Law Serv. at 393.

²⁵⁷ Sec. 36(a)(2)-(3), 1993 N.J. Sess. Law Serv. at 393. If the owner of the real property does not consent to a recording of a notice, the NJDEPE will require that the property be remediated to residential soil remediation standards. Sec. 36(a)(2), 1993 N.J. Sess. Law Serv. at 393.

²⁵⁸ Sec. 35(f), 1993 N.J. Sess. Law Serv. at 390-91.

NJDEPE in the development of the soil remediation standards, or a site specific risk assessment.²⁵⁹

ISRA also gives the NJDEPE the discretion to require a more restrictive alternative remediation standard for a particular contaminant or for a specific real property site, in lieu of using the established residential and non-residential soil standards.²⁶⁰ The NJDEPE may require a more restrictive alternative remediation standard if there is convincing scientific evidence demonstrating that the specific physical site characteristics of the property warrant a finding that the use of the adopted residential or non-residential use soil remediation would not be protective of public health, safety or of the environment.

In determining the appropriate remedial action for a particular site, ISRA requires that the NJDEPE base its selection of a remedial action on several factors. While non-permanent remedies are acceptable, even though there is an inherent preference for permanent remedies, it is acceptable to leave contamination on site, at levels or concentrations that exceed the minimum soil remediation standards for residential or non-residential use, if the implementation of institutional or engineering controls at the site will result in the protection of public health, safety and the environment. If all areas of a site, where a person may come into contact with soil, are remediated to meet the residential soil remediation standards and it is clearly demonstrated that for all other areas of the property, engineering and its institutional controls can be implemented and maintained to meet the health risk level as established under ISRA, the site may be utilized.

ISRA/ECRA also exempts the owner or operator of an industrial establishment from complying with the provisions of ISRA/ECRA²⁶¹ if there is de minimis quantity of hazardous substances and hazardous wastes located at the site.²⁶² The remedy will be

²⁵⁹ The site specific risk assessment may consider exposure scenarios and assumptions that take into account the form of the contaminant present, natural bio-degradation, fate and transport of the contaminant, and available toxicological data that are based upon generally accepted and peer review scientific evidence or methodologies. Sec. 35(f)(1), 1993 N.J. Sess. Law Serv. at 390-91.

²⁶⁰ Sec. 35(f)(2), 1993 N.J. Sess. Law Serv. at 391.

²⁶¹ N.J. STAT. ANN. § 13:1K-9 (West 1991).

²⁶² ISRA defines de minimis as the total quantity of hazardous substances and hazardous wastes generated, manufactured, refined, transported, treated, stored, handled, or disposed of at the industrial establishment at any one time during the

considered permanent if the property is remediated beyond the regional natural background levels²⁶³ for any particular contaminant. ISRA's definition gives new meaning to the concept of background levels by restricting the use of "region" to a portion of the site that is being cleaned up. Also, ISRA does not utilize the "naturally occurring" standard that is usually associated with background levels. It may be difficult to find a piece of industrial property that has not been influenced by "localized human activity." The NJDEPE will be developing regulations that set forth the process to identify background levels of contaminants for a particular region. As distinguished from natural background levels, remediation is not required for contamination coming onto the site from another property owned and operated by another person unless the owner or operator is in any way responsible for the discharge.²⁶⁴ The NJDEPE cannot force the use of minimum residential use soil remediation standards if the cost of all available permanent remedies is unreasonable as determined by regulations to be adopted by the NJDEPE by January 1995.²⁶⁵

One significant limitation on the extent of remediation relates to sites containing large quantities of "historical fill."²⁶⁶ At sites

owner's or operator's period of ownership or operations does not exceed 500 pounds or 55 gallons, or if a hazardous substance or hazardous waste is mixed with a non hazardous substance, the total quantity in the mixture does not exceed 500 pounds or 55 gallons, or if, in the aggregate, hydraulic or lubricating oil does not exceed 220 gallons. Sec. 9(a)-(c), 1993 N.J. Sess. Law Serv. at 369-70.

²⁶³ "Regional natural background levels" is defined as the concentration of a contaminant consistently present in the environment of the region of the site that has not been influenced by localized human activities. Sec. 35(g)(4), 1993 N.J. Sess. Law Serv. at 391.

²⁶⁴ This off-site exception states that contaminated ground water shall not be required to be remediated to a level or concentration for any particular contaminant lower than the level or concentration that is migrating onto the property from another property owned and operated by another person. Sec. 35(g)(5)-(6), 1993 N.J. Sess. Law Serv. at 391.

²⁶⁵ Until the NJDEPE adopts regulations establishing the criteria and procedures for allowing a person to demonstrate that the cost of all available permanent remedies is unreasonable, the person is not required to perform a remedial action to implement a permanent remedy unless the cost of implementing the non-permanent remedy is 50% or more than the cost of implementing the permanent remedy. This requirement does not apply to ISRA/ECRA. Sec. 35(g)(8), 1993 N.J. Sess. Law Serv. at 392.

²⁶⁶ "Historic fill" material is defined as large volumes of non-indigenous contaminated material used to raise the topographic elevation of a site that is in no way connected to the operations or the location of the fill. The fill material can be construction debris, fly ash, incinerator residue, etc. The fill material can not be

containing historic fill, there is a rebuttable presumption that prevents the NJDEPE from requiring removal or treatment of the fill material. The NJDEPE can overcome this presumption that the fill should not be removed or treated by demonstrating that institutional or engineering controls will not be effective in protecting the environment.²⁶⁷

The legislative history states that the sole intended purpose of allowing the historic fill exception is to provide an opportunity for filled areas to undergo economic development that would not be otherwise possible if removal or treatment were required to remediate these areas. The NJDEPE, however, is required to adopt regulations that establish procedures by which a person may demonstrate and identify engineering or institutional controls to contain or stabilize contamination caused by historic fill materials.

Once a person performing a remediation submits to the NJDEPE a RAW that describes the extent of the contamination of the site and the remedial action to be implemented to address the contamination, the NJDEPE is not permitted to subsequently require a change to the RAW to implement a different remediation standard due to the fact that established remedial standards have changed. The only time the NJDEPE can impose a different remediation standard is when the difference between the new remediation standard and the approved remediation standard and the RAW differs by an order of magnitude. ISRA also does not allow the NJDEPE to amend the remediation standard unless it finds that a new standard is necessary to maintain the health risk levels that protect human health in the environment. Finally, the NJDEPE is not permitted to amend a health-based remediation standard to a level that would result in a health risk level more protective than the risk level set forth in ISRA.²⁶⁸

IV. Conclusion

For the past twenty years, the government has responded to the risks posed by hazardous chemicals and wastes by dramatically increasing the regulation of the private sector's generation, trans-

chromate chemical production waste or any other production waste, or waste from mining or processing of metal or mineral ores, residues, slags or tailings. Sec. 35(h)(1), 1993 N.J. Sess. Law Serv. at 392.

²⁶⁷ *Id.*

²⁶⁸ Sec. 35(j)-(l), 1993 N.J. Sess. Law Serv. at 393.

portation, treatment, storage and disposal of these chemicals and wastes. Unfortunately, the rapid growth in environmental regulation has resulted in a pattern of government reacting to each crisis by adopting laws and regulations that have been neither carefully thought out nor properly woven into the existing regulatory structure. In the next phase of governmental regulation, the laws should improve, coordinate and streamline the existing regulatory structure so that the state and federal regulators will be able to more effectively enforce the laws already on the books.

New Jersey, as one of the most contaminated states, has confronted these issues by reorganizing the manner in which contaminated sites are cleaned up. Motivated by economic downturn, New Jersey has successfully responded to the need for reform. Reform of existing environmental laws regulating contaminated sites has resulted in a better coordination of the various remediation programs and streamlined the review process for remedial tasks performed by the private sector. Additionally, the NJDEPE's attempt to bring a uniform technical approach to contaminated site remediation will result in a more consistent and predictable process in a very complex scientific field. Regulatory reform has also included both substantive incentives for the voluntary cleanup of non-priority contaminated sites and setting uniform cleanup priorities for all of the programs regulating site remediation.

Moreover, the New Jersey Legislature has reformed the transfer and closure of industrial operations by adopting ISRA. Procedurally, ISRA reforms the site remediation program by modifying technical requirements for compliance prior to transferring or closing operations at an industrial establishment. The procedural modifications include: (1) allowing the mandatory remediation funding source to pay for cleanup costs; (2) limiting the ability of the NJDEPE to reopen a case once stricter cleanup standards are adopted; (3) codifying a differential standard for industrial and residential property; (4) allowing engineering and institutional controls to ameliorate the risks to human health and the environment; and (5) establishing independent committees to advise the NJDEPE on risk levels and cleanup standards.

Thus, New Jersey has taken the lead in modifying its complex site remediation program by working within the present legal structure, retaining the parts of the program that protect health and the environment while reorganizing and streamlining the redundant

or non-working parts of the program. While the move to consistency and uniformity will have some negative impacts on flexibility and innovation, New Jersey has taken positive steps towards the formulation of a more cohesive response to the significant risks posed by the presence of hazardous wastes at contaminated sites.