SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF ALBANY
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CITIZENS' ENVIRONMENTAL COALITION, INC., SIERRA CLUB, INC., NEW YORK PUBLIC INTEREST RESEARCH GROUP, INC., AND ENVIRONMENTAL ADVOCATES OF NEW YORK, INC.,

Petitioners,

-against-

THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, and the COMMISSIONER OF THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,

Respondents,

For a Judgment Pursuant to Article 78 of the New York Civil Practice Law and Rules.

VERIFIED PETITION

Index No.

Oral Argument Requested

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PETITIONERS CITIZENS' ENVIRONMENTAL COALITION, INC., SIERRA CLUB, INC., NEW YORK PUBLIC INTEREST RESEARCH GROUP, INC., AND ENVIRONMENTAL ADVOCATES OF NEW YORK, for their Petition for a judgment pursuant to Article 78 of the New York Civil Practice Law and Rules, allege as follows:

NATURE OF THE PROCEEDING

1. In this case, Petitioners Citizens' Environmental Coalition, Inc., Sierra Club, Inc., New York Public Interest Research Group, Inc., and Environmental Advocates of New York, Inc., ("Petitioners") seek judicial review of final regulations promulgated by the New York State Department of Environmental Conservation ("DEC") entitled "Environmental Remedial Programs." These regulations implement New York's new "Brownfield Cleanup Program,"

Article 27, Title 14 of the New York Environmental Conservation Law ("ECL") (Chapter 1 of the Laws of 2003), as well as the State Superfund Program (ECL Article 27, Title 13), created in 1979, and the Environmental Restoration Program (ECL Article 56, Title 5), created in 1996. The regulations became effective on December 14, 2006 and are published in chapter 6, part 375 of the New York Code of Rules and Regulations (6 NYCRR Part 375). *See* 28 N.Y. Reg. 15 (Nov. 29, 2006). Petitioners contend that portions of these regulations violate statutory requirements designed to protect public health and the environment, and that Respondents otherwise acted arbitrarily and capriciously in setting the cleanup standards contained in these regulations.

2. Petitioners request that the Court (1) declare that the challenged portions of the regulations are unlawful and/or arbitrary, (2) vacate certain portions of those regulations, and (3) remand the regulations to the DEC for appropriate revisions to be completed within a specified timeframe following the Court's decision.

THE PARTIES

3. Petitioner Citizens' Environmental Coalition, Inc. ("CEC") is a state-wide not-for-profit membership corporation founded in 1983 and incorporated in 1990 under the laws of the State of New York. *See* Affidavit of Steve Breyman (Exhibit A). CEC has offices in Albany and Buffalo and is New York State's only statewide group established for the purpose of fighting toxic contamination. *Id.* Consisting of 110 organizational members and 14,000 individual members across New York state, CEC educates, mobilizes, and inspires corporations and governments to clean up toxic contamination and to prevent present and future pollution. *Id.* Many of CEC's members have face-to-face experience with contaminated sites where cleanup

will be impacted by the challenged regulations. *See, e.g.,* Affidavit of Zac Moore, Affidavit of Dan Galvin (Exhibit A).

4. Petitioner Sierra Club, Inc. ("Sierra Club") is a non-profit membership organization devoted to promoting outdoor recreation and environmental conservation. *See* Affidavit of John Stouffer (Exhibit A). Sierra Club has approximately 750,000 members nationwide and is incorporated under California State Law. *Id.* The Sierra Club – Atlantic Chapter represents the 45,000 Sierra Club members who live in New York state. *Id.* The Atlantic Chapter has eleven local groups centered in Buffalo, Rochester, Ithaca, Syracuse, Binghamton, Albany, Poughkeepsie, Newburgh, Westchester County, New York City and Long Island. *Id.* The Sierra Club – Atlantic Chapter's members lobbied for the development and passage of the legislation that created Section 27-14 of the New York State Environmental Conservation Law and participated in public review and comment on 6 NYCRR Part 375. *Id.* Many of Sierra Club's members reside in areas that are burdened by brownfield sites and will be impacted by the challenged regulations. *See, e.g.*, Affidavit of Joseph A. Gardella, Jr. (Exhibit A).

5. Petitioner New York Public Interest Research Group, Inc. ("NYPIRG") is a student-directed not-for-profit membership corporation organized and existing under the laws of the state of New York. *See* Affidavit of Rebecca Weber (Exhibit X). NYPIRG is dedicated to protecting the environment and public health, supporting consumer rights, and improving government administration. *Id*. NYPIRG's student members are those students who voluntarily identify themselves as members at the 21 college campuses across the state where NYPIRG maintains chapters, including campuses in Albany, Binghamton, New York City, Buffalo, Cortland, New Paltz, Oswego, Purchase, Stony Brook, Syracuse, and Long Island. *Id.* Many of

NYPIRG's members reside in areas that are burdened by brownfield sites and will be impacted by the challenged regulations. *See, e.g.*, Affidavit of Stephanie Calderón (Exhibit A).

6. Petitioner Environmental Advocates of New York, Inc. ("Environmental Advocates") is a state-wide not-for-profit membership corporation, originally known as the Environmental Planning Lobby, incorporated in the state of New York in 1981. *See* Affidavit of Robert J. Moore (Exhibit A). Environmental Advocates is the state's government watchdog, holding lawmakers and agencies accountable for enacting and enforcing laws that protect our natural resources and safeguard public health. *Id.* Environmental Advocates has more than 7,000 individual members, with approximately 2,000 members residing in the metropolitan New York City region, approximately 3,500 in the four-county capital region of New York, and the remainder distributed throughout New York state. *Id.* Environmental Advocates has over a decade of experience working on brownfields issues in New York State and was a key participant in the process of negotiating the Brownfield Cleanup Program statute. *Id.* Many of Environmental Advocates' members reside in areas that are burdened by brownfield sites and will be impacted by the challenged regulations. *See, e.g.*, Affidavit of John Mylod (Exhibit A), Affidavit of Timothy Sweeney (Exhibit A).

7. Respondent New York State DEC is an executive agency of the State of New York responsible for the administration and enforcement of the state's environmental laws and regulations. Respondent Commissioner of the New York State DEC is charged with responsibility for issuing regulations to govern implementation of the Brownfield Cleanup Program. (hereinafter, both Respondents are referred to collectively as "Respondents" or "the DEC").

VENUE

8. Venue lies in the Supreme Court, Albany County pursuant to §§ 7804(b) and 506(b) of the New York Civil Practice Law and Rules because Albany County is where the principle office of the Respondent, the New York State Department of Environmental Conservation is located, and where the Respondent made the determinations challenged in this proceeding.

FACTS

BACKGROUND

9. Effective October 7, 2003, the New York state legislature passed the Brownfield Cleanup Program Act, contained in ECL §§ 27-1401 to 27-1433. The Brownfield Cleaup Program ("BCP") addresses the "thousands of abandoned and likely contaminated properties that threaten the health and vitality of the communities they burden." ECL § 27-1403. Specifically, the legislature designed the BCP "to encourage the voluntary clean up of hazardous waste sites and ultimate restoration of such sites to productive use, including restoration to the tax roles." *377 Greenwich LLC v. New York State Dept. of Environmental Conservation*, 14 Misc. 3d 417, 2006 N.Y. Slip. Op. 26453, at 2 (N.Y. Sup., New York County, 2006). In exchange for cleaning up a brownfield site to a level that is "fully protective of public health and the environment," ECL § 27-1403, a developer receives substantial tax credits, *see* New York Tax Law § 21, and release from future legal liability, *see* ECL § 27-1421.

10. The DEC is charged with responsibility for implementing the BCP. *See, e.g.*, ECL §§ 27-1407; 27-1409, 27-1411, 27-1419. Pursuant to ECL § 3-0301(2)(a), the DEC is authorized to promulgate regulations as needed to carry out the program's purposes and

provisions. *See also, e.g.*, ECL § 27-1415(4) (directing the DEC commissioner to "promulgate regulations which create a multi-track approach for the remediation of contamination.").

11. In 2005 and 2006, the DEC held public hearings and accepted written public comments on proposed BCP regulations. Petitioners participated in several of the public hearings and submitted extensive written comments on the proposal.

12. On November 29, 2006, the DEC published notice in the *State Register* of its adoption of final remedial program regulations, published at 6 NYCRR part 375. 28 N.Y. Reg. 15 (Nov. 29, 2006). The regulations became effective on December 14, 2006. *Id.*

13. As set forth below, Petitioners challenge certain aspects of 6 NYCRR Part 375 as affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

STATUTORY REQUIREMENTS

14. A "brownfield site" is defined in the statute as "any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant." ECL § 27-1405(2). The general purpose of the Act is "to encourage persons to voluntarily remediate brownfield sites for reuse and redevelopment." ECL § 27-1403. In passing the statute, the Legislature declared that the remediation of brownfield sites would "advance the policy of the state of New York to conserve, improve, and protect its natural resources and environment and control water, land, and air pollution in order to enhance the health, safety, and welfare of the people of the state and their overall economic and social well-being." *Id*.

15. Under the statute, "[a]ll remedial programs shall be protective of public health and the environment including but not limited to groundwater according to its classification pursuant to section 17-0301 of this chapter; drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish

and wildlife." ECL § 27-1415(1). The statute further specifies that "[a] remedial program that achieves a complete and permanent cleanup of the site is to be preferred over a remedial program that does not do so." ECL § 27-1415(3)(d).

Statutory Requirements Governing Soil Cleanup Objectives

16. The statute allows for different levels of soil remediation depending upon a site's "current, intended, and reasonably anticipated future land uses." ECL § 27-1415(3)(i).

17. Central to the program are "soil cleanup objectives" or SCOs, which are general, contaminant-specific soil remediation standards developed by the DEC. *See* ECL § 27-1415(6)(a). Different SCOs apply depending upon the anticipated future use of the site. *Id.* Specifically, the statute directs the DEC to include in its regulations "three generic tables of contaminant-specific remedial action objectives for soil based on current, intended, or reasonably anticipated future use, including: (i) unrestricted, (ii) commercial and (iii) industrial." *Id.*

18. The statute directs that all SCOs "shall be protective of public health and the environment pursuant to subdivision one of this section," ECL § 27-1415(6)(b), *i.e.*, they "shall be protective of public health and the environment including but not limited to groundwater according to its classification pursuant to section 17-0301 of this chapter; drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife." ECL § 27-1415(1).

19. The statute further provides that "the level of risk associated with remedial action objectives for individual contaminants listed in the table . . . shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points; provided, however, that if the background soil concentration for a contaminant in rural soils in New York state exceeds such risk level, the contaminant-specific action objective

for such contaminant may be established equal to such background concentration." ECL § 27-1415(6)(b).

20. The statute directs that in developing the SCOs, the DEC, among other things, "shall consider . . . (v) the feasibility of achieving more stringent remedial action objectives, based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or non-existent for a specific contaminant." ECL § 27-1415(6)(b).

Statutory Requirements Governing Cleanup Tracks

21. The statute establishes four different "tracks" that a developer can follow in remediating a site.

a. Under Track 1, a remedial program "shall achieve a cleanup level that will allow the site to be used for any purpose without restriction and without reliance on the long-term employment of institutional or engineering controls." ECL § 27-1415(4). With respect to soil remediation, the statute directs that Track 1 cleanups "shall achieve" the generic SCOs designed to allow for unrestricted future use of the property. *Id.*

b. Under Track 2, a remedial program "may include restrictions on the use of the site or reliance on the long-term employment of engineering and/or institutional controls." ECL § 27-1415(4). With respect to soil remediation, however, the statute directs that a Track 2 cleanup "shall achieve" the generic SCOs appropriate for the future use of the property "without the use of institutional or engineering controls to reach such objectives." *Id.*

c. Under Track 3, the developer does not need to achieve the generic SCOs, but instead "may use site specific data to determine" soil remediation objectives. ECL § 27-1415(4). Those site-specific objectives must "conform with the criteria used to develop" the

generic SCOs. *Id.* Like the generic SCOs, soil remediation objectives developed by the applicant pursuant to Track 3 "shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points," except where rural soil background contamination exceeds that risk level. ECL § 27-1415(6)(b). A Track 3 cleanup "shall achieve" the site-specific SCOs. ECL § 27-1415(4).

d. A Track 4 remedial program "shall achieve a cleanup level that will be protective for the site's current, intended or reasonably anticipated residential, commercial, or industrial use with restrictions and with reliance on the long-term employment of institutional or engineering controls to achieve such level." ECL § 27-1415(4). The statute instructs that "[f]or Track 4, exposed surface soils shall not exceed the generic contaminant-specific [SCOs] developed for unrestricted, commercial, or industrial use pursuant to this subdivision which conforms with the site's current intended, or reasonably anticipated future use." ECL § 27-1415(6)(d). The statute defines "exposed surface soils" as "two feet for sites used for residential use and one foot for sites used for commercial or industrial use." *Id.*

22. A developer who remediates a site to Track 1 standards receives a greater tax credit than is available for remediations under the other three tracks. *See* New York Tax Law § 21(a)(5).

THE REGULATIONS

23. Three subparts of 6 NYCRR Part 375 are at issue in this proceeding. Subpart 375-1 establishes "General Remedial Program Requirements," which apply to the BCP as well as the State Superfund Program and the Environmental Restoration Program. Subpart 375-3, entitled "Brownfield Cleanup Program," sets forth requirements applicable only to the BCP. Subpart 375-6 establishes the "Remedial Program Soil Cleanup Objectives," which are based on

the BCP statutory requirements, but apply to the BCP, the State Superfund Program and the Environmental Restoration Program.

Regulatory Limits on BCP Eligibility

24. Despite the broad statutory language defining "brownfield site" to include "any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant." ECL § 27-1405(2) (emphasis added), the BCP regulations state that "[i]n determining eligibility, the Department shall consider only contamination from on-site sources." 6 NYCRR § 375-3.3(a)(2).

25. Upon information and belief, the DEC does consider "historic fill" to be "contamination from on-site sources" under 6 NYCRR § 375-3.3(a)(2). The regulations define "historic fill material" as "non-indigenous or non-native material, historically deposited or disposed in the general area of, or on, a site to create useable land by filling water bodies, wetlands or topographic depressions, which is in no way connected with the subsequent operations at the location of the emplacement, and which was contaminated prior to emplacement. Historic fill may be solid waste including, but not limited to, coal ash, wood ash, municipal solid waste incinerator ash, construction and demolition debris, dredged sediments, railroad ballast, refuse and land clearing debris, which was used prior to October 10, 1962. Any soil or soil-like wastes from any area which was operated by a municipality or other person as a landfill is not considered historic fill. For purposes of a remedial program, historic fill does not include any material which is chemical production waste or waste produced on the site from processing of metal or mineral ores, residues, slag or tailings." 6 NYCRR § 375-1.2(x).

Regulatory Soil Cleanup Objectives

26. While the BCP statute refers to the establishment of "three generic tables of [SCOs] based on current, intended or reasonably anticipated future use, including: (i) unrestricted, (ii) commercial and (iii) industrial," ECL § 27-1415(6)(a), subpart 375-6 adds a fourth use category: "restricted residential." 6 NYCRR § 375-6.4(b). The SCOs for each of these four use categories are set at a level that DEC contends is sufficient to protect "public health," and thus, the regulations refer to the four generic tables pertaining to these use categories collectively as "[p]rotection of public health" SCOs. *Id.*

27. In addition to the protection of public health SCOs, the regulations establish separate protection of "groundwater" and "ecological resources" SCOs. 6 NYCRR § 375-6.4(c). Many of the groundwater and ecological resources SCOs are more stringent than the public health SCOs, *see* 6 NYCRR § 375-6.8(b), and are only considered "where applicable." 6 NYCRR § 375-6.4(c). The SCOs applicable to a particular site "shall be the lowest of the applicable contaminant-specific [SCOs] which are identified for the site." *Id*.

28. Groundwater SCOs are applicable, with some exceptions, "where contamination has been identified in on-site soil by the remedial investigation and groundwater standards are, or are threatened to be, contravened by the presence of soil contamination at concentrations above the protection of groundwater soil cleanup objectives." 6 NYCRR § 375-6.5(a).

29. Ecological resources SCOs "must be considered and applied . . . for the upland soils at sites where terrestrial flora and fauna and the habitats that support them are identified." 6 NYCRR § 375-6.6(a). However, the regulations declare that the ecological resource SCOs "do not and/or will not apply to . . . (ii) protection of the aquatic environment." 6 NYCRR § 375-6.6(a)(2).

30. The regulations state that "[t]he soil cleanup objectives presented in this subpart do not account for the impact of concentrations of contaminants in soil relative to surface water and surface water sediments attributable to a remedial site." 6 NYCRR § 375-6.7(b)(1).

31. The regulations state that "[t]he soil cleanup objectives presented in this subpart do not account for the impact of concentrations of contaminants in soil relative to soil vapor or vapor intrusion attributable to a remedial site." 6 NYCRR § 375-6.7(a)(1).

Regulatory Provisions Governing Consideration of Site Background Contamination in Determining the Required Level of Soil Remediation.

32. The regulations governing Track 4 cleanups provide that "exposed surface soils" need only be remediated if they exceed "the site background values for contaminants of concern." 6 NYCRR § 375-3.8(e)(4)(iii).

33. Similarly, though the regulations governing SCOs provide that with respect to "[s]oil brought to [a] site for use as a soil cover or backfill," the soil must "not exceed the applicable soil cleanup objectives for the site," 6 NYCRR § 375-6.7(d)(1), the DEC "may issue a site specific exemption" from that requirement, and others, "based on site specific conditions, including but not limited to . . . background levels of contamination in areas surrounding the site." 6 NYCRR § 375-6.7(d)(3).

RELEVANT PUBLIC COMMENTS ON THE PROPOSED REGULATIONS AND DEC'S RESPONSE

Comments on Surface Water and Aquatic Resource Protection

34. In public comments on the proposed regulations, Petitioners argued that the DEC violated ECL § 27-1415(6)(b) by failing to establish generic SCOs sufficient to protect surface water and aquatic resources, including fish. *See* CEC *et al.* Comments, Mar. 27, 2006, at 41-42 (Exhibit B), CEC, *et al.*, Comments, August 2006, at 28-29 (Exhibit C).

35. The DEC also received comments from Drs. Richards and Steenhuis of the Cornell Department of Biological and Environmental Engineering, in which the two scientists confirmed that leachate from contaminated soil can lead to surface water quality violations, and expressed concern that DEC's SCOs were insufficiently protective. *See* Richards and Steenhuis Comments (Exhibit D). Using copper as an example, they calculated that the percentage of a watershed that could have soils at the level of contamination allowed under the DEC's groundwater SCO without causing a violation of DEC surface water criteria ranges from 0.3% to 9.1%, while only 0.003 to 0.083% of a watershed could have soils at the restricted-industrial use SCO without violating water quality standards. *Id.*

36. With respect to surface water protection, the DEC admitted in its response to comments that it "did not factor the protection of surface water into the calculated SCOs." DEC June 2006 Response to Comments at D74 (Exhibit E). Instead, the regulations "require an evaluation at each site regarding the fate and transport of soil from the site to surface water bodies," and addresses surface water contamination "on a site specific basis." *Id.*

37. DEC did not specifically respond to comments pertaining to its failure to set SCOs at a level sufficient to protect the aquatic environment, including fish, other than to declare that it "declines to extend the protection of ecological resources to aquatic environments." *See,* DEC October Response to Comments at F3 (Exhibit F); *see also, generally*, DEC June 2006 Response to Comments (Exhibit E).

38. DEC admits that "[b]rownfield sites can contain or be situated adjacent to habitats such as . . . wetlands, streams, and rivers." DEC September Technical Support Document ("TSD"), at 268 (Exhibit G). DEC also admits that "[s]oil contaminants can enter the bodies of

fish directly from the water, or through the food chain, from microorganisms and algae, to zooplankton, invertebrates, and smaller fish." *Id.* at 141.

Comments on Indoor Air Quality Protection

39. In its Technical Support Document, the DEC describes how vapor intrusion contaminates indoor air. DEC Sept. TSD at 335 (Exhibit G). Specifically, the DEC explains, "[v]olatile contaminants (e.g., solvents, gasoline, elemental mercury) in subsurface soil may migrate into soil vapor and subsequently contaminate indoor air. Some of these contaminants may leach from soil into groundwater, and then migrate from groundwater into soil vapor and indoor air. In areas where the water table is elevated and in contact with buildings, contaminants in groundwater may volatilize directly into indoor air." *Id.*

40. In public comments on the proposed regulations, Petitioners argued that DEC violated ECL § 27-1415(6)(b) by failing to establish generic SCOs sufficient to protect against vapor intrusion, a significant contributor to indoor air pollution. *See* CEC *et al.* Comments, Mar. 27, 2006, at 43-44 (Exhibit B).

41. Also in public comments, Anthony Hay, Associate Professor of Soil Ecotoxicology at Cornell University, explained that "EPA's vapor intrusion-based groundwater target numbers could be used as a basis for arriving at SCOs that take vapor intrusion into account." Comments to DEC by Anthony Hay dated February 2006 (Exhibit H). Professor Hay informed the DEC that based on his calculations, it is likely that SCOs designed to protect against vapor intrusion would be "substantially lower (10-100 times) than the currently proposed SCOs which do not include vapor intrusion as a possible pathway of exposure." *Id.*

42. In response these comments, DEC conceded that "vapor intrusion may be an important exposure pathway at some brownfields," but admitted that "SCO values do not

account for the vapor intrusion pathway." DEC June Response to Comments, at D66 (Exhibit E). Instead of setting the SCOs at levels sufficient to protect against vapor intrusion, the DEC declared that it preferred to address vapor intrusion on a site-specific basis. *Id.*

Comments on DEC's Failure to Strengthen SCOs in Light of Historically Achieved Cleanup Levels

43. In public comments on the proposed regulations, Petitioners argued that the DEC arbitrarily and unlawfully failed to "consider . . . the feasibility of achieving more stringent remedial action objectives, based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or nonexistent for a specific contaminant" as directed by ECL § 27-1415(6)(b). *See, e.g.*, CEC Mar. 27 Comments, at 57-58 (Exhibit B). Though Petitioners did not have access to the DEC's database of historically achieved cleanup levels, they were able to provide some specific examples of historical cleanup levels that were more protective than the DEC's SCOs, based upon a 1998 summary compiled by the Department of Health of three years of State Superfund Record of Decision cleanup levels. *Id.* In particular, Petitioners pointed to historically achieved cleanup levels for arsenic, benzo(a)anthrocene, beno(a)pyrene, benzo(k)flouranthene, cadmium, cyanide, zylene, and zinc that were more protective than what is required under DEC's new SCOs. *Id.* Petitioners urged the DEC that if more stringent cleanup levels for contaminants are feasible and have been achieved historically, the SCO should be lowered accordingly. *Id*.

44. Public comments by Assemblyman Thomas P. DiNapoli, Chair of the New York State Assembly Committee on Environmental Conservation and the New York State Assembly sponsor of the statute which enacted the BCP, further emphasized the importance of considering historically achieved cleanup levels in setting the SCOs. *See* DiNapoli Comments at 37 (Exhibit I). According to Assemblyman DiNapoli, "[t]he clear intent of the law is for DEC and DOH to

consider feasibility in those situations where information on risk may be lacking and soil cleanup standards developed based on current knowledge may not be protective enough." *Id.*

45. In its Technical Support Document, the DEC asserted that "where the toxicological, exposure, or other pertinent data were inadequate or nonexistent for a particular contaminant, the Department elected not to develop an SCO for such contaminant." DEC Sept TSD at 343 (Exhibit G). Thus, the DEC did not consider historically achieved cleanup levels for such contaminants. *Id.*

46. For contaminants for which the DEC did set an SCO, the DEC acknowledged that "it may be possible to achieve cleanup values which are more stringent than those set forth in the SCO tables," but asserted that it was unnecessary to require more extensive cleanups because "both public health and the environment will be protected through the use of the SCOs and more stringent levels will not significantly increase this level of protection." DEC Sept. TSD at 343 (Exhibit G). In support of this assertion, the DEC referred generally to its Technical Support document and "various reference source documents," without offering any specific assessment of historically achieved cleanup levels for particular contaminants. *See, id.* The DEC did not identify those circumstances where SCOs are less stringent than historically achieved cleanup levels, did not address the specific examples of more stringent historically achieved cleanup levels provided in Petitioners' comments, and did not address whether establishing SCOs requiring cleanup to those historically achieved levels is feasible. *See, id.*

47. Upon information and belief, based on information provided by the DEC in its Technical Support Document and response to comments, there is substantial uncertainty regarding whether the DEC's SCOs are in fact sufficient to protect public health and the environment. Upon information and belief, this uncertainty is due in part to inadequate or

nonexistent data regarding the effect of a particular contaminant on segments of the population or natural resources.

48. For example, numerous commenters questioned the DEC's decision to set SCOs based on 50% percentile values, *i.e.*, at a level considered protective of 50% of the population. *See, e.g.,* Comments to DEC by Kathy Burns, Ph.D. at 11 (Exhibit J) ("In cases where standards are being set up to protect the population, it is highly advisable to select values on the upper end of a spectrum of measurements of exposure because it is inevitable that some portion of the population will be exposed at that level. The SCOs were developed using relatively low exposure assumptions leaving many people unprotected by their approach to exposure estimation. When a 50^{th} percentile value is chosen, it yields, by default, a value that is protective of only one half of the population."). The DEC responded that "there is considerable variability in the exposure scenarios used by others and no obvious consensus on scenarios. So, while the information was helpful [comments arguing that the DEC shouldn't use the 50^{th} percentile values], the Department found that it was not sufficient to provide a definitive technical basis for exposure scenario development." DEC June RTC at D22 (Exhibit E). DEC went on to reject the experts' arguments that a standard based on 95^{th} percentile values would be more appropriate, asserting: "Choosing to use 'upper-end' values for all factors can be problematic in that the data from which an 'upper end' value is derived may be limited (e.g., soil ingestion rate data), significantly reducing confidence in the value of the factor and the resulting SCO. . . . In calculating SCOs, the Department chose values that it considered to be generally representative of the majority of the potentially exposed population for a given scenario." *Id.* (emphasis added). In other words, upon information and belief, the DEC chose to set the SCOs based on the less

protective 50th percentile values because it lacked sufficient data to set the SCOs at a level sufficient to protect 95% of the exposed population.

49. Another example of inadequate or nonexistent data with respect to exposure impacts of a particular contaminant arises in the context of indoor ingestion of contaminated soil by young children. In comments to the DEC, Dr. Nathan Graber, M.D. contended that DEC inappropriately estimated indoor soil ingestion levels based on an average two-year-old, instead of on a younger child. *See* Graber Comments at 14 (Exhibit K). Dr. Graber, a fellow in Pediatric Environmental Health at Mount Sinai Hospital, explained, "very young children, starting around 6 months of age, begin to use their mouths as additional means of exploring their worlds. This behavior peaks between 16 months and 2 years of age but there is very wide variability in this. . . . Since children's mobility greatly increases around 9 months of age, . . . it would be more appropriate to apply the parameters for a 9 month old child." *Id.* Dr. Graber explained that "[a]pplication of this number would yield soil cleanup objectives which are one an [a] half times lower." *Id.* DEC responded:

> For calculating cancer and non-cancer ingestion and dermal SCOs, the Department chose not to include children less than one year of age because data to estimate exposure for such children are either not available or highly uncertain. For example, data for estimating soil/dust ingestion rates among children were derived from studies that did not include subjects under one year in age (Calebrese et al., 1989; Davis et al., 1990). Only one of the studies (Calebrese et al.) included children under the age of two years. Additionally, there would be substantial uncertainties in any estimates of how frequently such children may have opportunities for ingestion/dermal exposure indoors (i.e., time spent on floors/carpeting; frequency of mouthing or teething hands or toys). ... Therefore, the Department has decided not to change the SCOs based on the suggestion in the comments.

DEC June RTC at D22-D23 (emphasis added)(Exhibit E); *see also* DEC June RTC at D23 ("[T]he degree of uncertainty associated with incidental ingestion rates would be relatively high for very young children compared with other children and adults. The Department's confidence

in ingestion rate estimates is greater for older (i.e., two year-old) children than for the very young."). In sum, upon information and belief, the DEC refused to set its SCOs based upon the risk to children younger than one (or two, depending on the SCO) because it lacked sufficient information about exposure rates of these younger children.

50. In addition to the above examples, expert commenters reported a dramatic lack of data pertaining to the impact of toxic chemicals on young children, generally. *See, e.g.*, Graber Comments at 8 (Exhibit K)("For most of the substances on the priority list, the toxicological potential for adverse health effects in children has never been studied."). The DEC did not dispute this lack of data.

51. Throughout its Technical Support Document (Exhibit G), the DEC acknowledges additional circumstances in which it was confronted with inadequate data regarding safe exposure levels for particular contaminants. Examples include:

- "For almost all contaminants, however, the quantitative data on environmental and dietary levels are likely to be inadequate to determine accurately the relative contribution of each exposure source to the aggregate exposure for populations of concern (adults and children)," (DEC Sept. TSD at 169);
- "The human data on lead are inadequate for use in developing cancer toxicity values (i.e., cancer potency factor or inhalation unit risk) for lead . . . Thus, lead SCOs based on cancer effects are not derived." (DEC Sept. TSD at 213);
- "In most cases, human data are inadequate for use in dose-response assessment and most cancer potency factors and air unit risks are based on results from animal studies." (DEC Sept. TSD at 28);

- "There are very few studies of the bioaccumulation of soil-borne contaminants by amphibians and reptiles, so the food chain bioaccumulation model described herein only addresses impacts to birds and mammals." (DEC Sept. TSD at 272, fn.3);
- "Few articles have evaluated the potential risk of acute effects from a large single dose of a soil contaminant." (DEC Sept. TSD at 57);
- "[T]he acute toxicity data on children was not used to develop a provisional acute reference dose for lead because estimates of an acute does associated with acute effects are unavailable as are US EPA models to accurately convert an acute lead blood level into an acute dose." (DEC Sept. TSD at 60);
- "Although incidental soil ingestion by children has been widely acknowledged, relatively few investigators have conducted studies to yield quantitative estimates of soil ingestion rates." (DEC Sept. TSD at 103);
- "Limited information is available from which to derive soil ingestion rates for adults." (DEC Sept. TSD at 106);
- "Because estimates of concentrations of chemicals in animal products that originated from soil are highly uncertain, likely even more so than those of contaminants in vegetables, the calculation of SCOs does not quantitatively account for this exposure pathway." (DEC Sept. TSD at 155);
- "A metal's solubility or its potential to become soluble if conditions change depends on many factors associated with the metal form, particle size, weathering, and soil chemistry (NRC, 2003; Ruby et al., 1999). Another important factor is the likelihood of disturbances that would alter the soil conditions that determine solubility and bioavailability (Ruby et al., 1999). There are limited data on how these factors vary with

metals and soils and how these changes affect solubility and bioavailability. The missing data preclude accurate estimates of bioavailability of metals ingested with soils." (DEC Sept. TSD at 62);

- "The potential for organic chemicals to bioaccumulate can be crudely predicted using values for chemical parameters found in the literature such as octanol-water partition coefficients. However, the accuracy of these methods is limited, as they do not take into account a number of factors, including the persistence of the chemical in the environment or in biota. Empirically derived estimates of potential for bioaccumulation can be found in the literature for some chemicals. However, these empirically derived estimates are often based on aquatic bioconcentration, [and] are not directly applicable to terrestrial bioaccumulation. They are also not available for all contaminants." (DEC Sept. TSD at 149);
- "While there are some empirical data available to estimate the levels of contaminants in food that result from levels in local soils, these data are generally limited to a few highly bioaccumulative compounds. Even for these compounds, the exact contribution of the soil intake to animal body burden tends to be difficult to differentiate from contributions from other sources like atmospheric deposition to pasture grass or consumption of contaminated feed brought in from offsite. Furthermore, results reported in various studies suggest a range of possible food-to-soil ratios that spans several orders of magnitude." (DEC Sept. TSD at 151);
- "Although the use of human data on acute toxicity eliminates the uncertainties associated with extrapolating the results of animal studies to humans, there are substantial limitations and uncertainties associated with the use of available human data on barium,

cadmium, and nickel ... All the studies involved small numbers of people, and many of the reports provide little quantitative information on the extent and nature of the signs/symptoms of exposure. Confidence in the estimates of the doses from these studies is low because they contained very little data on intake." (DEC Sept. TSD at 61);

- "Because of the wide range of organisms that must be protected, the impossibility of characterizing toxicity thresholds for all exposure scenarios, and the necessity of using general models for deriving [ecological resource SCOs], there is uncertainty associated with the calculated risk thresholds . . . The use of median (or near median) values reduces the likelihood that the risk thresholds would be overprotective, but increases the chance that some level of toxicity might occur when soil concentrations are very close to the [ecological resource SCO] values." (DEC Sept. TSD at 285-286).

52. The DEC made no attempt to explain on a contaminant-specific basis why, even in the face of admitted data uncertainties, no significant environmental or public health benefit would be obtained by requiring cleanup to historically achieved levels. *See* DEC Sept TSD at 343 (Exhibit G).

Comments on Limiting Cleanups to Site Background Contamination Levels

53. In public comments on the proposed regulations, Petitioners argued that allowing contaminated soil to remain on a site (or indeed, adding it to a site) merely because the contamination level does not exceed "site background values" violates the BCP statute's remedial requirements. *See* CEC *et al.* March comments, at 21 (Exhibit B). They explained that a site is not exempt from the BCP statute's remedial requirements simply because it is located in a heavily polluted area. *Id.* They pointed out that the only exemption available with respect to background contamination levels is the statutory provision allowing DEC to set soil cleanup

objectives at a level equal to "the background soil concentration for a contaminant in rural soils in New York State," ECL § 27-1415(6)(b), and that exemption does not justify limiting soil cleanup to background contamination levels on and in the vicinity of a specific site. *Id.*

54. Comments by State Assemblyman Thomas P. DiNapoli further emphasized the danger in limiting cleanups to site background levels. *See* DiNapoli Comments at 38-39 (Exhibit I). He explained that "[h]istorically, DEC and DOH have determined "site background" at state Superfund sites based on the neighborhood surrounding a site. Such an approach is problematic because it allows high levels of pollution that may already exist in a community, such as that caused by industrial emissions, to dictate the level of cleanup at a contaminated site. The statute explicitly rejects this approach." *Id.*

55. In response to these comments, DEC insisted that considering site specific background levels "is completely consistent with past practice" and that it "does not consider soils exhibiting levels less than background to be contaminated as a result of activities at the site." DEC June RTC, at D21 (Exhibit E).

Comments on Excluding Sites Contaminated Solely by Off-Site Sources

56. In public comments on the proposed regulations, petitioners argued that the DEC's blanket exclusion from the BCP of any property contaminated solely by an off-site source or sources violates the BCP statute. *See* CEC, *et al.* March comments, at 26-27 (Exhibit B). Petitioners expressed particular concern that excluding such properties would exclude sites contaminated with historic fill. *Id. See also* DiNapoli Comments, at 44-45 (Exhibit I).

57. At a public hearing, the DEC received comments on this issue from the Director of New York City's Office of Environmental Coordination, who "expressed the view that the draft regulations mistakenly treat historic fill sites with less importance than other contaminated

sites although such areas may contain contamination that is equal to or greater than what exists at non-historic fill sites." April 2006 DEC hearing report, at 3 (Exhibit L).

58. The DEC rejected these comments, contending that excluding properties contaminated by off-site sources is consistent with the agency's historical practice. DEC June Response to Comments, at D6 (Exhibit E). The DEC asserted that "contamination on-site [that results from] an off-site source . . . would be more appropriately addressed at such source." *Id.* The DEC did not explain how historical fill contamination could be addressed at its source. *See, id.*

CAUSES OF ACTION

First Cause of Action—Respondents Unlawfully and Arbitrarily Failed to Set the SCOs at a Level Sufficient to Protect Surface Water Quality.

59. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 26-31, and 34-38 above.

60. Respondents were required by law to set the SCOs at a level that is "protective of public health and the environment pursuant to subdivision one of [ECL § 27-1415]," ECL § 27-1415(6)(b). Subdivision one, in turn, explains that "protective of public health and the environment" means that an SCO must protect, among other things, "surface water." ECL § 27-1415(1).

61. None of the SCOs established by Respondents in 6 NYCRR § 375-6 account for the impact of soil contamination on surface water.

62. Respondents' issuance of SCOs that do not take into account soil contamination levels that would be protective of surface water was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Second Cause of Action—Respondents Unlawfully and Arbitrarily Failed to Set the SCOs at a Level Sufficient to Protect Aquatic Ecological Resources.

63. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 26-31, and 34-38 above.

64. Respondents were required by law to set the SCOs at a level that is "protective of public health and the environment pursuant to subdivision one of [ECL § 27-1415]," ECL § 27-1415(6)(b). Subdivision one, in turn, explains that "protective of public health and the environment" means that an SCO must protect, among other things, "ecological resources, including fish and wildlife." ECL § 27-1415(1).

65. None of the SCOs established by Respondents in 6 NYCRR § 375-6 serve to protect aquatic ecological resources, including fish.

66. Respondents' issuance of SCOs that do not take into account the contaminant exposure levels that would be protective of aquatic ecological resources (including fish) was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Third Cause of Action—Respondents Unlawfully and Arbitrarily Failed to Set the SCOs at a Level Sufficient to Protect Indoor Air Quality.

67. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 26-31, and 39-42 above.

68. Respondents were required by law to set the SCOs at a level that is "protective of public health and the environment pursuant to subdivision one of [ECL § 27-1415]," ECL § 27-1415(6)(b). Subdivision one, in turn, explains that "protective of public health and the environment" means that an SCO must protect, among other things, "air (including indoor air)." ECL § 27-1415(1).

69. None of the SCOs established by Respondents in 6 NYCRR § 375-6 account for the impact of concentrations of contaminants in soil relative to soil vapor or vapor intrusion, a significant cause of indoor air pollution.

70. Because none of the SCOs are set at levels determined by Respondents to protect against vapor intrusion, none of the SCOs can be considered protective of indoor air.

71. Respondents' issuance of SCOs that do not take into account soil contamination levels that would be protective of indoor air was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Fourth Cause of Action—Respondents Unlawfully Failed to Consider Whether They Should Set SCOs Based on Historical Cleanup Levels With Respect to Contaminants for Which They Determined That Toxicological, Exposure, or Other Pertinent Data Were Inadequate or Nonexistent.

72. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 26-31, and 43-52 above.

73. The law directs that in developing the SCOs, Respondents "shall consider . . . (v) the feasibility of achieving more stringent remedial action objectives, based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or non-existent for a specific contaminant." ECL § 27-1415(6)(b).

74. Without considering historically achieved cleanup levels, Respondents simply chose not to develop an SCO at all whenever they concluded that toxicological, exposure, or other pertinent data were inadequate or nonexistent for a particular contaminant.

75. Respondents' failure to consider the feasibility of setting an SCO based on historically achieved cleanup levels for contaminants where toxicological, exposure, or other pertinent data are inadequate or nonexistent was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Fifth Cause of Action—For Contaminants for Which Respondents Set SCOs, Respondents Arbitrarily Refused Strengthen Those SCOs in Light of Historically Achieved Cleanup Levels.

76. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 26-31, and 43-52 above.

77. The law directs that in developing the SCOs, Respondents "shall consider . . . (v) the feasibility of achieving more stringent remedial action objectives, based on experience under the existing state remedial programs, particularly where toxicological, exposure, or other pertinent data are inadequate or non-existent for a specific contaminant." ECL § 27-1415(6)(b).

78. Respondents generically asserts that it is unnecessary to strengthen any of the SCOs in 6 NYCRR § 375-6 in light of historically achieved cleanup levels because it believes that its SCOs are already sufficient to public health and the environment and more stringent levels will not significantly increase this level of protection.

79. In making the above assertion, Respondents ignore their own admissions and other record evidence demonstrating that in setting the SCOs, they were confronted with inadequate or non-existent data regarding the threat to public health and the environment posed by various contaminants—particularly with respect to vulnerable subsets of the population such as young children. Furthermore, Respondents fail to explain why, in the face of these significant data gaps, no significant benefit would be gained by strengthening the SCOs to historically achieved levels.

80. Respondents' blanket refusal to consider strengthening any of its SCOs in light of historically achieved cleanup levels based on a generic assertion that all SCOs are already sufficiently protective of public health and the environment—without any analysis of the data uncertainties affecting SCOs for specific contaminants or the feasibility of setting the SCOs

based on historically achieved cleanup levels—was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Sixth Cause of Action—Respondents Unlawfully and Arbitrarily Authorized Track 4 Cleanups to Only Remediate Soil to Site Background Levels.

81. Petitioner repeats and re-alleges the allegations contained in paragraphs 1-23, 32, and 53-55 above.

82. With respect to Track 4 cleanups, the statute provides that "exposed surface soils shall not exceed the generic contaminant-specific remedial action objectives for soil [SCOs] developed for unrestricted, commercial, or industrial use pursuant to this subdivision which conforms with the site's current intended, or reasonably anticipated future use." ECL § 27-1415(6)(d).

83. Respondents' regulations governing Track 4 cleanups do not require "exposed surface soils" to be cleaned up to a level that meets the SCOs that conform with the site's current intended, or reasonably anticipated future use. *See* 6 NYCRR § 375-3.8(e)(4)(iii). Rather, Respondents' regulations only require remediation of exposed surface soils at Track 4 sites where contamination of these soils exceeds "the site background values for contaminants of concern." *Id.*

84. Respondents' issuance of regulations that do not require all exposed surface soils at a Track 4 site to be remediated to a level that meets the SCOs that conform with the site's current intended, or reasonably anticipated future use was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Seventh Cause of Action—Respondents Unlawfully and Arbitrarily Authorized Soil Cover and Backfill to Exceed the SCOs Based on Background Contamination Levels in Areas Surrounding a Site.

85. Petitioners repeat and re-allege the allegations contained in paragraphs 1-23, 33, and 53-55 above.

86. The law provides that SCOs "shall be protective of public health and the environment pursuant to subdivision one of this section" and that the level of risk associated with these objectives "shall not exceed an excess cancer risk of one in one million for carcinogenic end points and a hazard index of one for non-cancer end points." ECL § 27-1415(6)(b). The only exception to this requirement is "if the background soil concentration for a contaminant in rural soils in New York state exceeds such risk level," in which case "the contaminant-specific action objective for such contaminant may be established equal to such background concentration." *Id.*

87. The law further provides that a Track 1 site "shall achieve" the SCOs designed for unrestricted use, a Track 2 site "shall achieve" the generic SCOs appropriate for the future use of the property, a Track 3 site "shall achieve" site-specific SCOs that "conform with the criteria used to develop" the generic SCOs, and "exposed surface soils" at Track 4 sites "shall not exceed" the generic SCOs appropriate for the future use of the property. ECL § 27-1415(4).

88. Respondents' regulations governing "[s]oil brought to [a] site for use as a soil cover or backfill" provide that the soil must "not exceed the applicable soil cleanup objectives for the site," 6 NYCRR § 375-6.7(d)(1), but the DEC "may issue a site specific exemption" from that requirement "based on site specific conditions, including but not limited to ... background levels of contamination in areas surrounding the site." 6 NYCRR § 375-6.7(d)(3).

89. Respondents' issuance of regulations that allow soil cover or backfill brought to a site to exceed applicable SCOs based on "background levels of soil contamination in areas surrounding the site" was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

Eighth Cause of Action—Respondents Unlawfully and Arbitrarily Excluded From the BCP All Sites Contaminated Solely by Off-Site Sources.

90. Petitioners repeat and re-allege the allegations contained in paragraphs 1-25 and 56-58 above.

91. The law defines "brownfield site" to include "any real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant." ECL § 27-1405(2) (emphasis added).

92. Respondents' regulations state that "[i]n determining eligibility, the Department shall consider only contamination from on-site sources." 6 NYCRR § 375-3.3(a)(2).

93. Respondents' issuance of regulations that establish a blanket exclusion from the BCP for any property contaminated solely by an off-site source or sources, even where that contamination may complicate a property's redevelopment or reuse, was in violation of lawful procedure, affected by an error of law, arbitrary and capricious, and/or an abuse of discretion.

WHEREFORE, Petitioners respectfully request that this Court enter judgment against Respondents as follows:

(i) declaring that Respondents acted contrary to law, arbitrarily and capriciously, and/or abused its discretion in:

(a) setting the generic SCOs in 6 NYCRR 375-6 without taking into account the contaminant exposure levels that would be protective of surface water; aquatic ecological resources (including fish), and indoor air;

(b) failing to consider whether to set SCOs based on historically achieved cleanup levels for those contaminants for which toxicological, exposure, or other pertinent data were inadequate or nonexistent;

(c) failing to strengthen the SCOs set forth in 6 NYCRR § 375-6 in light of more stringent historically achieved cleanup levels;

(d) authorizing (in 6 NYCRR § 375-3.8(e)(4)(iii) Track 4 cleanups to only remediate soil to site background levels;

(e) authorizing (in 6 NYCRR § 375-6.7(d)(3)) soil cover or backfill brought to a site to exceed SCOs based on background contamination levels in areas surrounding the site;

(f) excluding from BCP eligibility any site contaminated solely by off-site sources (6 NYCRR § 375-3.3(a)(2));

(ii) vacating 6 NYCRR § 375-3.8(e)(4)(iii) (authorizing Track 4 cleanups to only remediate soil to site background levels);

(iii) vacating 6 NYCRR § 375-6.7(d)(3) (authorizing DEC to allow soil cover or backfill brought to a site to exceed SCOs based on background contamination levels in areas surrounding the site);

(iv) vacating 6 NYCRR § 375-3.3(a)(2) (only allowing consideration of contamination originating from on-site sources for purposes of determining BCP eligibility);

(v) remanding the generic SCOs in 6 NYCRR 375-6 to DEC for revision within six months of the court's decision as needed to protect surface water, indoor air quality, and aquatic

ecological resources, and for consideration of whether any should be strengthened in light of historically achieved cleanup levels;

(vi) directing Respondents to (a) consider, on a contaminant-specific basis, whether to set SCOs based on historical cleanup levels for those contaminants for which toxicological, exposure, or other pertinent data were inadequate or nonexistent, (b) release its analysis of this issue for public comment within 6 months of the court's decision, and (c) take final action with respect to setting SCOs for such contaminants (or deciding not to set such SCOs) within 12 months of the Court's decision;

(vii) awarding Petitioners attorneys' fees and the costs and disbursements of this action; and

(viii) granting such other and further relief as the Court deems just and proper.

Dated: March 26, 2007

EARTHJUSTICE, INC.

By: _____

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