

SUPREME COURT OF THE STATE OF NEW YORK  
COUNTY OF STEUBEN

In the Matter of the Application of

SIERRA CLUB, CONCERNED CITIZENS OF ALLEGANY  
COUNTY, PEOPLE FOR A HEALTHY ENVIRONMENT,  
INC., JOHN E. CULVER, AND BRIAN AND MARYALICE  
LITTLE

ORAL ARGUMENT  
REQUESTED

Petitioners,

For a Judgment Pursuant to Article 78 of the  
Civil Practice Law and Rules,

Index No. E2017-1384CV

–against–

NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION, BASIL SEGGOS,  
COMMISSIONER, AND HAKES C&D DISPOSAL INC.

Respondents.

**PETITIONERS' MEMORANDUM OF LAW  
IN SUPPORT OF THE VERIFIED PETITION**

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## **PRELIMINARY STATEMENT**

This proceeding challenges the action of Respondent New York State Department of Environmental Conservation (“DEC”) in issuing the Final Scoping Outline for the Draft Supplemental Environmental Impact Statement (“DSEIS”) for the expansion of the Hakes C&D Landfill in the Town of Campbell, Steuben County, New York on August 2, 2017 (the “Final Scope”) without including radioactivity issues.

Although DEC acknowledges in the Final Scope that the majority of comments received on the draft scoping document expressed concerns related to radioactivity issues with accepting more shale gas drilling wastes in the landfill, the final scope dismisses these concerns. The scope states that loads entering and leaving the landfill have not set off the radiation detector alarms in the past and that laboratory analysis of the landfill leachate has not revealed elevated levels of radioactivity. These statements indicate that DEC ignored the inadequacies of the radiation detector alarms installed at the landfill and ignored the significance of high levels of certain radionuclides, i.e., lead-214, and bismuth-214 in the leachate testing results the landfill submitted to them.

Fundamentally, it appears that DEC has failed to consider the relationships that occur among the different radionuclides in the uranium-238 decay chain, including radium-226, radon-222, lead-214, and bismuth-214. These relationships are identified and explained in the affidavits submitted by Petitioners’ experts Dr. Raymond Vaughan and Mr. Dustin May and their significance in understanding the truck and leachate test results explained. Dr. Vaughan shows that the single test of which Petitioners are aware of the type of radiation detector alarm used at the Hakes landfill, the test conducted on the radiation detector alarm at the McKean County, Pennsylvania landfill, did not consider or control for the loss of radon-222 and its breakdown

products such as bismuth-214 and lead-214 from the truck load studied for the test. A similar problem is presented by the radionuclide analytical results of the Hakes leachate tests. Dr. Vaughan and Mr. May point out that the leachate tests show far less radium-226 in the samples tested than lead-214 and bismuth-214, its daughter isotopes. Radon-222, which was not tested for in the leachate sampling, is intermediate in the breakdown chain between radium-226 and lead-214 and bismuth-214.

Petitioners' experts conclude that the variable and extremely high concentrations of lead-214 and bismuth-214 in the leachate samples are very concerning. As described in ¶21 of Mr. May's affidavit:

Of major concern regarding these results are the concentrations of lead-214 and bismuth-214 found in some of the leachate samples analyzed. In 9 of the 79 leachate samples analyzed from 2012 to 2017, lead-214 and bismuth-214 concentrations exceeded 1000 pCi/L and all of these samples showed good agreement between lead-214 and bismuth 214, indicating that these are unlikely to be false positives as lead-214 decays directly to bismuth-214. These elevated lead-214 and bismuth-214 concentrations were found in samples from Cells 3, 4, 5, 6, and 8B, all cells receiving drilling wastes. The highest observed lead-214 and bismuth-214 concentration was approximately 6000 pCi/L from an unfiltered leachate sample taken from Cell 8B take in Q2 2017. Of the 9 samples found to be extremely high in lead-214 and bismuth-214 concentrations, 6 of these samples were filtered in the laboratory prior to analysis. In a number of other samples, a substantial disequilibrium was observed, with the concentration of lead-214 and bismuth-214 greatly exceeding the concentration of radium-226 measured in the samples via EPA 903.1. These results indicate major potential enrichment of leachate with radon-222 gas; the half-lives of lead-214 and bismuth-214, 27 and 20 minutes, respectively, are too short for these radionuclides to exist independently during the time period between collection and analysis, they would have decayed away entirely. Thus, in order for these two radionuclides to be detectable in the samples weeks after collection, they would have to be supported and exist in an equilibrium state with radon-222 gas or radium-226.

The presence of high levels of these breakdown products raises the troubling prospect that high levels of radium-226 are present in the landfill even if not dissolved in the leachate and

that high levels of radon-222 are being generated by the breakdown of the radium-226. Radon-222, which is a heavy gas, may thus be traveling through the pore spaces in the landfill to the leachate, becoming dissolved in the leachate and exiting the landfill with the leachate. New tests that control for the problems identified by Petitioners' experts are needed to properly evaluate how much radon-222 and radium-226 are present in the landfill.

An affidavit from Dr. David Carpenter details the possible health risks presented by the presence of high levels of radionuclides in the landfill. It is imperative that these risks be evaluated in the DSEIS before any further expansion of the Hakes landfill is allowed.

### **STATEMENT OF FACTS**

The Hakes C&D landfill is located at the top of a high hill about three miles from the Village of Painted Post and the Cohocton River. The topography of the landfill site is shown in two figures from the DSEIS for the landfill expansion project released January 10, 2018. The figures are attached as Exhibit A and Exhibit B to the affirmation of Rachel Treichler dated January 19, 2018 ("Tr. Aff.").

Because the landfill is located about 20 miles north of the Pennsylvania border, it appears to be a convenient location to take waste from the extensive drilling operations that have taken place in recent years in the Northern Tier of Pennsylvania. A map from the Susquehanna River Basin Commission website showing the large numbers of gas drilling pads in northern Pennsylvania a short distance south of the Hakes landfill is attached as Exhibit C to Tr. Aff. Reports indicate that the Hakes landfill has been taking drill cuttings and other Marcellus shale gas drilling waste from Pennsylvania since 2010. According to a 2017 report by Environmental Advocates summarizing data collected by the Pennsylvania Department of Environmental Protection, the Hakes landfill has taken 167,238 tons and 332 barrels of fracking waste between

2010 to 2017. See *Licensed to Dump Addendum*, June 9, 2017, attached as Exhibit E to Tr. Aff., at 3. According to the EA report, Hakes landfill has taken more tons of solid waste from Pennsylvania than any other landfill in New York other than the Chemung County landfill in the hamlet of Lowman in Chemung County. Hakes landfill's own annual reports indicate that the actual amounts of drilling wastes deposited in the landfill may be much higher. HCDD's 2011 Annual Report shows that total tonnage of wastes received at the Hakes landfill in 2011 was 376,485.60 tons. Of this amount, the report says 89,837.42 tons came from Bradford County Pennsylvania and 81,121.57 tons came from Tioga County, PA. The combined tonnage from these two counties was 170,958.99 tons, or 45% of the total tonnage received in 2011. The types of wastes received from these counties are not broken down in the annual report, but it is likely that a substantial portion of these wastes were shale gas drilling wastes. See page from HCDD's 2011 Annual Report, attached as Exhibit E to Tr. Aff.

On April 4, 2017, DEC published notice in its Environmental Notice Bulletin ("ENB") that, as lead agency, it had determined that the application of Respondent Hakes C&D Disposal Inc. (HCDD) to expand the Hakes landfill may have a significant adverse impact on the environment and that a Draft Supplemental Environmental Impact Statement ("DSEIS") must be prepared. The ENB notice stated that DEC was accepting comments on the draft scoping document for the DSEIS through May 5, 2017. A copy of the April 4, 2017 ENB notice is attached as Exhibit F to Tr. Aff.

According to the Final Scope, the expansion project would increase the land area affected by the landfill by approximately 52 acres and would add more than 2.5 million cubic yards of disposal capacity, which would extend the life of the landfill by 5 to 10 years. See Final Scope attached as Exhibit G to Tr. Aff., p. 12. The scope states that, because the Hakes Landfill was the

subject of a Final Environmental Impact Statement (“FEIS”) in 2006, a Supplemental Environmental Impact Statement will be prepared for the expansion project. *Id.* p. 2. (The 2006 FEIS did not address issues with radioactivity in wastes entering the landfill.)

Petitioner Sierra Club filed comments on the draft scope on May 5, 2017. A copy of the Sierra Club comments is attached as Exhibit A to the affidavit of Roger Downs dated January 18, 2018. The Sierra Club comments asked that the DSEIS address the impacts of radioactivity in the shale gas drilling wastes that have already been placed in the Hakes landfill and consider the impacts of adding additional shale gas drilling waste to the landfill. *Id.* p. 2. The Sierra Club comments pointed to sources indicating significant levels of radioactivity associated with shale gas drilling wastes, including data described in the report commissioned by the Pennsylvania Department of Environmental Protection on Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) in shale gas drillings, and DEC’s own analysis of 13 samples of production brine from 12 gas wells being drilled in the Marcellus Shale in New York showing that seven samples contained levels of radium-226 above 1,000 pCi/L and two samples tested at almost 3,000 pCi/L. *Id.*

The Sierra Club comments stated that it is well-documented that Hakes C&D landfill is taking Marcellus shale drilling waste from Pennsylvania, that the impacts of this waste on the Hakes landfill are shown in the radium-226 levels in the landfill’s 2013 radiological test results and that additional testing is needed to determine whether water-soluble radioactive isotopes from the shale gas drilling wastes are currently present in the leachate produced by the landfill or in streams near the landfill and whether radioactive gases, such as isotopes of radon are being emitted from the landfill. *Id.* The comments stated that consideration of the possibility of radioactive leachate, surface and groundwater contamination and radioactive air emissions from

the landfill is necessary to ensure the preparation of an adequate DSEIS. *Id.* The comments pointed out that radioactive discharges and emissions could have serious health consequences on those living downstream or downwind from the landfill. *Id.* The comments expressed concern that the landfill's drive-through entrance monitors are not sufficient to detect radium and radon in wastes entering the landfill. *Id.*

The Sierra Club comments stated that, in conducting the necessary tests of wastes entering the landfill and leachate leaving the landfill, it is essential that appropriate testing methods be used to detect radioactivity. The comments noted that gamma radiation can be used to measure Ra-226 and Ra-228 in waste samples, but it may take up to 21 days in the laboratory for gamma radiation to emerge, as shale gas drilling wastes emit alpha and beta radiation much more strongly. "If appropriate testing methods are not used," the comments stated, "waste samples are not correctly analyzed, radiation concentrations in both waste and landfill leachate—and in turn the potential risks posed to health and the environment—may be underestimated." *Id.* For these reasons, the Sierra Club comments stated that it was important that the SDEIS for the Hakes landfill expansion address radioactivity in discharges and emissions from the Hakes landfill. *Id.*

On August 2, 2017, DEC emailed copies of the Final Scope for the Hakes landfill expansion to those parties who had commented on the draft scope. The cover letter stated that the Final Scope incorporated the public input received on the draft scope, and addressed comments that were determined not to be relevant or environmentally significant. Tr. Aff. Ex. G. at 1. The Final Scope did not include radioactivity issues in the outline for the DSEIS. Although the Final Scope acknowledged that the majority of comments received on the draft scope expressed concerns related to radioactivity issues, the final scope dismissed these

concerns. The Final Scope stated that these questions have been raised previously and addressed in a statewide manner by the DEC program policy on drill cuttings entitled, “Program Policy Memorandum: Recommended Permit Modifications and Operating Procedures for Landfills relating to Wastes from Drilling in the Marcellus Shale Formation” dated September 18, 2015. *Id.* The Final Scope stated that drill cuttings at the Hakes facility have been, and will continue to be, managed in accordance with this program policy. *Id.*

The Final Scope stated that all incoming waste and all outgoing leachate loads pass through the radiation detector at the scale. *Id.* The scope stated that no leachate loads have set off the radiation detector alarms. *Id.* The scope also stated that leachate from the Hakes Landfill is analyzed semi-annually for radioactivity and sediment from the leachate storage tanks is analyzed annually. *Id.* The scope stated that laboratory analysis has not revealed elevated levels of radioactivity in the leachate. *Id.* For these reasons, and because the Hakes expansion project does not involve a change in the wastes acceptable at the Hakes landfill, the Final Scope stated that “comments related to drill cuttings are beyond the scope of this SEQR action pending before the DEC for the expansion. Therefore, they do not require revision to the Draft Scope regarding the issues to be discussed in the DSEIS.” *Id.*

Following receipt of the Final Scope, Petitioners filed Freedom of Information Law requests for the Hakes landfill leachate radionuclide analytical reports and engaged experts to review the reports obtained. Tr. Aff. ¶ 10.

Based upon the initial evaluations of its experts, Petitioners filed this Article 78 proceeding on November 30, 2017 in Steuben County Supreme Court challenging DEC’s failure to include radioactivity issues in the Final Scope.



On January 10, 2018, DEC published notice in the ENB that it had accepted a DSEIS of the Hakes landfill expansion project for public review and had scheduled a legislative public hearing on the DSEIS on February 13, 2018 in Campbell. The notice stated that copies of the DSEIS were available in several local libraries and could be downloaded at <http://hakesexpansion.blogspot.com>. A copy of the ENB notice is attached as Exhibit H to Tr. Aff.

Petitioners experts' Dr. Raymond Vaughan, Mr. Dustin May and Dr. David Carpenter detail their evaluations of Hakes landfill leachate test reports and of a test of the type of radiation detector alarm used at the Hakes landfill and the environmental and health risks presented by those evaluations in three affidavits in dated January 18, 2018, January 17, 2018 and January 17, 2018 respectively. Their conclusions are summarized on pages 2 and 3 above.

### **ARGUMENT**

#### **DEC VIOLATED SEQRA IN FAILING TO TAKE A HARD LOOK AT RADIOACTIVITY ISSUES BEFORE EXCLUDING RADIOACTIVITY ISSUES FROM THE FINAL SCOPING DOCUMENT FOR THE HAKES LANDFILL EXPANSION DSEIS**

The legal issue presented by this case is whether or not DEC fulfilled its statutory duties under the New York State Environmental Quality Review Act, Environmental Conservation Law, Article 8 ("SEQRA") when it issued the final scoping document for the Hakes Landfill expansion project without requiring that the DSEIS address radioactivity issues.

#### **A. The Statutory Scheme of SEQRA**

SEQRA was enacted by the New York State Legislature in 1976. While SEQRA was patterned after its Federal counterpart, the National Environmental Policy Act (NEPA), 42 USCA 4332 *et seq.*, SEQRA was designed to provide greater protection to the environment than

NEPA. NEPA is merely a procedural statute that requires that environmental issues be considered by a decision maker prior to taking any action. In order that SEQRA provide greater protection to the environment, the New York legislature made significant changes from NEPA, including requiring that environmental impact statements be prepared in a much broader category of actions, and imposing substantive duties on decision makers to assure that the environmental consequences that are identified will be avoided or mitigated. As pointed out by the court in *City of Buffalo v New York State Department of Environmental Conservation*, 184 Misc.2d 243, 249 (Erie County 2000):

The substantive mandate of SEQRA is much broader than that of NEPA. 42 USCA § 4332 (2) (C) requires Federal agencies to prepare an EIS for any "major Federal actions significantly affecting the quality of the human environment." This should be contrasted with ECL 8-0109 which is more expansive in its terms. Subdivision (2) of this section requires an EIS for "any action [which is] propose[d] or approve[d] which may have a significant effect on the environment." Only a "low threshold" is required to trigger SEQRA review. *Onondaga Landfill Systems, Inc. v Flack*, 81 A.D.2d 1022 (4th Dept. 1981)."

New York courts have addressed the requirements and responsibilities of agencies pursuant to SEQRA on numerous occasions. Because of the importance placed upon SEQRA responsibilities by the Legislature, the courts have held that substantial compliance with SEQRA will not suffice. The statute must be strictly construed. *Matter of Rye Town/King Civic Association v Town of Rye*, 82 A.D.2d 474 (2nd Dept 1981), *app. dismiss.* 56 N.Y.S.2d 985 (1982); *Schenectady Chemicals v Flack*, 83 A.D.2d 460 (3rd Dept 1991). As the court in *Schenectady Chemicals* stated:

By enacting SEQRA, the Legislature created a procedural framework which was specifically designed to protect the environment by requiring parties to identify possible environmental changes 'before they have reached ecological points of no return.' At the core of this framework is the EIS, which acts as an environmental 'alarm bell.' It is our view that the substance

of SEQRA cannot be achieved without its procedure, and that any attempt to deviate from its provisions will undermine the law's express purposes. Accordingly, we hold that an agency must comply with both the letter and spirit of SEQRA before it will be found that it has discharged its responsibility thereunder.

83 A.D.2d at 478, citations omitted.

The heart of SEQRA lies in its provision regarding environmental impact statements ("EIS"). Under SEQRA, preparation of an EIS is required whenever an action *may* have a significant impact on the environment. ECL 8-0109(2). An EIS is required to contain all the information necessary to assure that the decision-making body, called the "lead agency," can ultimately determine to go forward or not with a project in a manner that will create the least negative impact to the environment. *Id.* If the project under consideration may have significant adverse environmental effects, the lead agency is required to prepare or to require the preparation of an EIS. The EIS is made available to the public so that they are apprised of possible adverse environmental consequences and to allow them to comment and propose mitigating measures. *Id.* Whether or not an EIS is prepared, a lead agency is required to "act and choose alternatives which, consistent with social, economic and other essential considerations, to the maximum extent practicable, minimize or avoid environmental effects." ECL 8-0109 (1).

In the present case DEC, the lead agency for the Hakes landfill expansion project, determined that HCDD's application to expand the Hakes Landfill may have a significant adverse impact on the environment and required the preparation of a Draft Supplemental Environmental Impact Statement ("DSEIS"). April 4, 2017 ENB Notice, Tr. Aff. Ex. F. DEC also initiated scoping for the Hakes DSEIS. Scoping is undertaken to focus the DSEIS on potentially significant adverse impacts and to eliminate consideration of impacts that are irrelevant or nonsignificant. 6 NYCRR 617.8. After having initiated scoping, however, DEC

ignored most of the comments on the draft scope and decided not to include radioactivity issues in the Final Scope and thus not to require that radioactivity issues be addressed in the DSEIS.

The remedy when an agency has violated the requirements of SEQRA is nullification of the action. On this point, the Court of Appeals decision in *Tri-County Taxpayers Association v Town of Queensbury*, 55 N.Y.2d 41 (1982) is instructive. In that case, the Court of Appeals overturned the decision of the Appellate Division which, with two judges dissenting on the issue of remedy, determined that nullifying a vote of the electorate that took place prior to SEQRA compliance “would serve no useful purpose to undo what has already been accomplished.” 79 A.D.2d 337 (3rd Dept 1981) at 342. The Court of Appeals adopted the position of the dissenters, holding that in order to properly insure that the goals of SEQRA would be met the vote had to be nullified. The Court stated:

It is accurate to say, of course, that by actions of rescission later adopted the Town Board could have reversed the action authorizing the establishment of the sewer district. As a practical matter, for several reasons, however, the dynamics and freedom of decision-making with respect to a proposal to rescind a prior action are significantly more constrained than when the action is first under consideration for adoption.

55 N.Y.2d at 64. Therefore, where a procedural violation of SEQRA is held to exist, in order to assure that the goals of SEQRA are met, the decision must be annulled.

The standard of review that is applied in determining whether or not a lead agency has given due consideration to pertinent environmental factors was first espoused in *H.O.M.E.S. v New York State Urban Development Corporation*, 69 A.D.2d 222 (4th Dept 1979), and eventually memorialized in the SEQRA regulations at 6 NYCRR 617.7(b). This standard is commonly called the “hard look standard.” See *H.O.M.E.S., Jackson v New York State Urban Dev. Corp.*, 67 N.Y.2d 400 (1986), *Chinese Staff & Workers Assn. v City of New York*, 68

N.Y.2d 359 (1986) and *Akpan v Koch*, 75 N.Y.2d 561 (1990). The standard requires that the agency:

- (1) Identify all areas of relevant environmental concern;
- (2) Take a “hard look” at the environmental issues identified; and
- (3) Present a reasoned elaboration for why these identified environmental impacts

will not adversely affect the environment in the event that it is determined that an Environmental Impact Statement need not be drafted.

This standard was elucidated by the Court of Appeals in the *Akpan case*:

[A]n agency, acting as a rational decision-maker, must have conducted an investigation and reasonably exercised its discretion so as to make a reasoned elaboration as to the affect of a proposed action on a particular environmental concern (see, *H.O.M.E.S. v New York State Urban Dev. Corp.*, 69 A.D.2d, at 231, *supra*). Thus, while a court is not free to substitute its judgment for that of the agency on substantive matters, the court must insure that, in light of the circumstances of a particular case, the agency has given due consideration to pertinent environmental factors.

75 N.Y.2d at 571.

For the reasons discussed below, DEC failed to apply the “hard look” standard set forth in these cases to the radioactivity issues indicated in the test results reported for testing of the landfill monitors and the leachate samples taken from the landfill before issuing the Final Scope for the Hakes DSEIS.

**B. DEC Failed to Take a “Hard Look” at the Radioactivity Issues Indicated in the Chemung Truck Monitor Correlation Report and the Hakes Leachate Testing Results**

The affidavits submitted by Petitioners’ experts Dr. Vaughan and Dr. May and summarized above demonstrate that, in relying on the adequacy of the radiation detector alarms at the landfill and on the laboratory analysis of the landfill leachate in determining to exclude

radioactivity issues from the Final Scope for the DSEIS, DEC ignored fundamental issues regarding appropriate testing methodologies for detecting radium-226 and its daughter products in truck and leachate tests.

The Vaughan and May affidavits demonstrate that the leachate test results show extremely high levels of lead-214, and bismuth-214 in the leachate samples tested and that the presence of these high levels of lead-214, and bismuth-214 raises the troubling prospect that high levels of radium-226 are present in the landfill and that high levels of radon-222 are being generated by the breakdown of the radium-226.

DEC's acceptance of the deficient truck and leachate testing results and its failure to require adequate testing methodologies demonstrates DEC's failure to take a "hard look" at the radioactivity issues presented by allowing shale gas drilling wastes to be accepted at solid waste and construction and demolition landfills in New York.

### **CONCLUSION**

For the reasons stated above, DEC's decision to exclude radioactivity issues from the Final Scope for the Hakes DSEIS must be annulled and the DSEIS accepted by DEC on January 10, 2018 must be amended to address radioactivity issues.

DATED:       Hammondsport, New York  
                  January 19, 2018

Respectfully submitted,



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