

SUPREME COURT OF NEW JERSEY

Quincy Mutual Fire Insurance Co. v. Borough of Bellmawr, 172 N.J.
409

799 A.2d 499 (2002) · Decided June 25, 2002

SUMMARY

The Supreme Court of New Jersey addresses whether an insurer's policy was triggered under the continuous trigger theory by a municipality's disposal of waste in a landfill before groundwater contamination began. The court also considers how liability should be allocated among insurers whose policies are triggered during progressive environmental damage. The opinion discusses the timing of property damage and the appropriate allocation methodology for coverage relating to landfill contamination.

CASE DETAILS

COURT	Supreme Court of New Jersey
WRITING FOR THE COURT	Stein, J.; Poritz, J.; Coleman, J.; Long, J.; Zazzali, J.; Verniero, J.; LaVecchia, J.
JURISDICTION	New Jersey
DECIDED	June 25, 2002
DISPOSITION	reversed_and_remanded
PROCEDURAL POSTURE	Quincy appealed from a trial-court judgment holding it solely responsible for indemnifying the Borough of Bellmawr for environmental contamination liability. The Appellate Division affirmed. The Supreme Court of New Jersey granted certification, reversed, and remanded.
STANDARD OF REVIEW	De novo review of the legal interpretation and application of the continuous-trigger coverage and allocation rules; the Court relied on undisputed expert testimony concerning the landfill's operation.
PRECEDENTIAL VALUE	Published, precedential opinion of the Supreme Court of New Jersey
PARTIES	Quincy Mutual Fire Insurance Company v. Century Indemnity Company

TOPICS

insurance coverage

environmental law

hazardous waste

declaratory relief insurance

municipal law

PRACTICE AREAS

insurance coverage

environmental law

declaratory relief insurance

municipal law

QUESTIONS PRESENTED

1. Whether, under New Jersey's continuous-trigger theory, the initial depositing of toxic waste into an unlined landfill triggers coverage under a CGL policy in effect at the time of dumping, even though leachate could not reach groundwater until after that policy expired.
2. Whether allocation of liability among triggered insurers should be based on years or days on the risk when an insurer's coverage period includes only part of a year.
3. Whether the matter should be remanded for allocation of liability between Century and Quincy.

HOLDINGS

1. Under the continuous-trigger theory, exposure arising from the initial depositing of toxic waste into an unlined landfill constitutes the first trigger of coverage and an occurrence under the CGL policy in effect at that time, even if leachate does not reach groundwater until later.
2. When the underlying facts require precision, the Owens-Illinois pro rata allocation formula must measure the time each insurer was on the risk in days rather than automatically treating coverage as occurring in whole years.

KEY QUOTATIONS

"Based on the foregoing considerations, we conclude that exposure relating to the Borough's initial depositing of toxic waste into the Landfill is the first trigger of coverage under the continuous trigger theory and constitutes an "occurrence" under Century's policy." (172 N.J. at 434)

"We now hold specifically that the Owens-Illinois allocation formula should reflect days rather than years on the risk when the underlying facts require that degree of precision in the allocation of liability." (172 N.J. at 435-36)

FACTUAL BACKGROUND

The Borough deposited municipal waste, including hazardous pollutants, into the unlined Helen Kramer Landfill from approximately May 1978 through January 1981. Century's comprehensive general liability policy was effective from June 18, 1977, through June 18, 1978; Quincy's policies followed from June 18, 1978, through June 18, 1981. Expert testimony established that leachate from the unlined landfill would inevitably migrate downward into groundwater, although approximately 185 to 200 days would have been required for the landfill to reach field capacity and for groundwater contamination to begin. The EPA later identified hazardous contamination, ordered remedial action, and obtained a settlement in which the Borough paid \$449,036.39.

PROCEDURAL HISTORY

The Borough brought a declaratory-judgment action against its insurers concerning coverage for liability arising from contamination at the Helen Kramer Landfill. Quincy was ordered to indemnify the Borough and later sought allocation of indemnification responsibility between Quincy and Century. After a nonjury trial, the trial court held that only Quincy's policy was triggered because groundwater contamination began after Century's policy expired. The Appellate Division affirmed, and the Supreme Court granted certification.

DISPOSITION

reversed_and_remanded

REMAND INSTRUCTIONS

Remand to the trial court to allocate liability between the Quincy and Century policies consistently with the opinion, using the Owens-Illinois pro rata risk-allocation formula and days on the risk where the facts require that degree of precision.

CASES CITED

- Owens-Illinois, Inc. v. United Insurance Co., 138 N.J. 437, 650 A.2d 974 (1994)
- Astro Pak Corp. v. Fireman's Fund Insurance Co., 284 N.J. Super. 491, 665 A.2d 1113 (App. Div. 1995)
- Carter-Wallace, Inc. v. Admiral Insurance Co., 154 N.J. 312, 712 A.2d 1116 (1998)
- Hartford Accident & Indemnity Co. v. Aetna Life and Casualty Insurance Co., 98 N.J. 18, 483 A.2d 402 (1984)
- Keene Corp. v. Insurance Co. of North America, 667 F.2d 1034 (D.C. Cir. 1981)
- Chemical Leaman Tank Lines, Inc. v. Aetna Casualty and Surety Co., 89 F.3d 976 (3d Cir. 1996)
- New Castle County v. Continental Casualty Co., 725 F. Supp. 800 (D. Del. 1989), rev'd in part and aff'd in part, 970 F.2d 1267 (3d Cir. 1992)
- Harleysville Mutual Insurance Co. v. Sussex County, 831 F. Supp. 1111 (D. Del. 1993)
- Ayers v. Township of Jackson, 106 N.J. 557, 525 A.2d 287 (1987)
- Winding Hills Condominium Association, Inc. v. North American Specialty Insurance Co., 332 N.J. Super. 85, 752 A.2d 837 (2000)
- United States v. Kramer, 757 F. Supp. 397 (D.N.J. 1991)
- Muller Fuel Oil Co. v. Insurance Co. of North America, 95 N.J. Super. 564, 232 A.2d 168 (App. Div. 1967)
- GenCorp, Inc. v. AIU Insurance Co., 104 F. Supp. 2d 740 (N.D. Ohio 2000)
- Society Insurance v. Franklin, 233 Wis. 2d 207, 607 N.W.2d 342 (2000)

OPINION

PER CURIAM.

799 A.2d 499 (2002) 172 N.J. 409 QUINCY MUTUAL FIRE INSURANCE COMPANY, Plaintiff-Appellant, v. The BOROUGH OF BELLMAWR, a municipal corporation of the State of New Jersey, Harleysville Insurance Company, Maringo, Inc., Camden County Joint Insurance

Fund and ABC Insurance Companies (3-100), Defendants, and Century Indemnity Company f/k/a Cigna Companies f/k/a The Insurance Company of North America, Defendant-Respondent.

Supreme Court of New Jersey. Argued January 29, 2002. Decided June 25, 2002. *500 Fredric Paul Gallin, Westfield, argued the cause for appellant (Methfessel & Werbel, attorneys). Guy A. Cellucci, Philadelphia, PA, argued the cause for respondent (White and Williams, attorneys; Mr. Cellucci, Patricia B. Santelle and Michael E. DiFebbo, on the briefs). Gita F. Rothschild, Newark, submitted a brief on behalf of amici curiae, General Electric Company, International Specialty Products, Inc., R & F Alloy Wires, Inc., Anderson & Vreeland East, Inc. and N.J.C.

Holdings, Inc. (McCarter & English, attorneys; Alissa Pyrich, Gregory H. Horowitz and Steven H. Weisman, on the brief). The opinion of the Court was delivered by STEIN, J. This appeal raises two important issues relating to environmental pollution liability.

First, we must determine under the "continuous trigger theory" of liability whether an insurance policy in effect at the time the Borough of Bellmawr (Borough) was depositing waste in a landfill provides coverage for resulting environmental pollution claims against the Borough.

Although the trial record reveals that contaminants from the landfill could not have begun to be dispersed into the surrounding groundwater until after Century Indemnity Company's (Century) policy had expired, Quincy Mutual Fire Insurance Company (Quincy) contends that Century's policy is implicated because the Borough deposited hazardous waste in the landfill while Century's policy was in effect.

Second, we again must examine the appropriate allocation of coverage among the carriers whose policies have been triggered under the "continuous trigger theory." Quincy argues that if Century's policy is implicated its proportionate share of liability under the "continuous trigger theory" should be determined based on the number of years it was on the risk.

Century maintains that its responsibility should reflect the number of days it was on the risk, that is, from the time the Borough began dumping until the time its policy expired. The trial court concluded that Quincy was solely responsible for indemnifying the Borough for liability resulting from the contamination, thereby rejecting Quincy's argument that the act of discharging hazardous waste into the landfill constituted an "occurrence" under Century's policy.

The Appellate Division affirmed. The court also noted that if it had determined that Century's policy was implicated the appropriate allocation of liability would be based on days on the risk rather than years on the risk. *Quincy Mutual Fire Ins. Co. v. Borough of Bellmawr*, 338 N.J.Super. 395, 403 n. 2, 769 A.2d 1053 (2001).

We granted certification, 169 N.J. 609, 782 A.2d 426 (2001). I The Helen Kramer Landfill (Landfill), located in West Deptford, New Jersey, operated from approximately 1963 until 1981. In

April 1978, the Borough approved the Landfill as an appropriate *501 trash disposal site, and from May 1978 until January 1981, the Borough deposited municipal waste into the Landfill.

The Borough made no attempt to segregate harmful pollutants from the municipal trash that was deposited in the facility. In 1981, after complaints were registered relating to the Landfill, the Environmental Protection Agency (EPA) revoked the Landfill's registration and a New Jersey court ordered its closure. An extensive Remedial Investigation and Feasibility Study conducted by the EPA between 1983 and 1985 revealed the presence of hazardous chemicals in the soil, surface waters and ground waters at the Landfill.

On September 8, 1983, the Landfill was placed on the Superfund National Priorities List, a list of the nation's most threatening hazardous waste sites established pursuant to the Comprehensive Environmental Response Control and Liability Act (CERCLA), 42 U.S.C.A. § 9605(a). Two years later, in September 1985, the EPA ordered a series of remedial actions to clean up the contamination that had emanated from the Landfill.

In 1989, the EPA commenced a lawsuit against the hundreds of defendants and third party defendants, including the Borough, that allegedly had contributed to the contamination of the Kramer Landfill, to recover all response and remedial costs. *United States v. Kramer*, 757 F.Supp. 397 (D.N.J.1991).

In 1997, after extended negotiations, the Borough and several other defendants and third-party defendants agreed to settle with the EPA by paying \$95 million over a five-year period, which would contribute to the approximately \$123 million in cleanup costs incurred by the United States Government.

The Borough's financial contribution to those costs under the settlement agreement totaled \$449,036.39. The Borough maintained comprehensive general liability insurance (CGL) policies with two principal insurance carriers during the time it was depositing municipal waste into the Landfill. Defendant Century and plaintiff Quincy.

The Borough also maintained CGL policies with several other insurance carriers during the time the cleanup took place. The Century policy was in effect from June 18, 1977 until June 18, 1978 and the Quincy policies were in effect from June 18, 1978 until June 18, 1981.

In 1991, the Borough filed a declaratory judgment action against its insurance carriers Quincy, Century and the Harleysville Insurance Company (Harleysville). Harleysville was dismissed from the lawsuit in 1993. Thereafter, Quincy was ordered to indemnify the Borough for any liability relating to the Landfill, including litigation expenses, counsel fees and costs.

Quincy and Century subsequently entered into an agreement stating that Century and Quincy would pay the Borough's defense costs but that the carriers later could pursue the allocation of

indemnification costs between them.

In October 1996, Quincy filed suit seeking a declaratory judgment determining the respective liabilities pursuant to the insurance policies issued by Quincy and other insurance carriers. With the exception of Century, Quincy's claims against the other insurers were dismissed. During the ensuing non-jury trial, Dr. Ralph Lee Steiner testified for Century as an expert in landfill procedures and operations.

Dr. Steiner was familiar with the Landfill because he had inspected it several times in the 1970's. Dr. Steiner testified about leachate, the liquid that passes through contaminated material. He testified that because the Kramer Landfill was unlined, it acted like a "sponge" rather than a vessel or a tank. Dr. Steiner also testified that leachate could have been discharged from the Landfill only when its waste reached "field capacity," which is the maximum amount of liquid a landfill can hold before liquid seeps through the bottom and contaminates the groundwater.

Based on Dr. Steiner's calculations, including analysis of available rainfall data and the height of the landfill, it would have taken approximately 185 to 200 days from the time the Borough began dumping for the Landfill to reach field capacity.

Therefore, Dr. Steiner testified that it was not possible for waste deposited on May 1, 1978, the date the Borough began depositing waste in the Landfill, to generate contamination in the groundwater before June 18, 1978. Quincy did not rebut Dr. Steiner's testimony.

The trial court resolved the coverage issue in favor of Century, finding that Quincy was not entitled to contribution for the Borough's environmental liability. Relying on *Owens-Illinois, Inc. v. United Insurance Co.*, 138 N.J. 437, 650 A.2d 974 (1994) and *Astro Pak Corp. v. Fireman's Fund Insurance Co.*, 284 N.J. Super. 491, 665 A.2d 1113 (App.Div. 1995), the trial court concluded that the property damage necessary to trigger coverage under a CGL policy occurs not when waste is deposited in a landfill but when leachate escapes from it and contaminates the groundwater.

Therefore, based on Dr. Steiner's undisputed testimony that the groundwater could not have been contaminated by the Borough's waste until approximately 185 to 200 days after the Borough began depositing waste in the Kramer Landfill, the court held that Quincy's policy alone was in effect when the damage occurred.

In a published opinion the Appellate Division affirmed the trial court's disposition and held that the "continuous trigger of coverage" for liability from groundwater contamination began when the leachate reached the groundwater and not when the Borough dumped its waste. It thereby absolved Century from liability because its policy was in effect only at the time of the initial dumping of municipal waste.

Quincy, *supra*, 338 N.J.Super. at 399, 769 A.2d 1053. The court also rejected Quincy's argument that if Century's policy was implicated, Century's proportionate share of liability would equal twenty-five percent of the total liability because its policy was in effect for one of the four years in question. Instead, the court found that the appropriate allocation would be based on days of coverage.

Id. at 403 n. 2, 769 A.2d 1053. Dissenting, Judge Wecker also applied the continuous trigger theory but concluded that the initial trigger of coverage was the Borough's dumping of toxic waste in the Landfill beginning in April 1978. II A In general, insurance policies cover losses resulting only from "occurrences" that take place during the policy period.

The Century policy that was in effect at the time the Borough began dumping defines occurrence as "an accident, including injurious exposure to conditions, which results, during the policy period, in personal injury or property damage neither expected nor intended from the standpoint of the insured." (The record does not reflect how Quincy's policy defined "occurrence").

That type of policy language frequently is used and reflects the general principle that "the insured would reasonably expect to be covered, and the insurer would reasonably expect to pay, for damage or injury occurring during the policy period, assuming all other conditions precedent to coverage have been satisfied." David J. Howard, "Continuous Trigger" Liability: Application to Toxic Waste Cases and Impact on *503 the Number of "Occurrences", 22 Tort & Ins.

L.J. 624, 632 (1987). Therefore, when an insured has been covered by several policies over the relevant period of time, identifying the appropriate trigger of coverage, or when an occurrence took place, will be critical in determining which insurer is liable for the damages that have accrued. Litigation relating to the appropriate trigger of coverage results from the fact that insurance policies "do not refer [generally] to a `trigger.'" Owens-Illinois, *supra*, 138 N.J. at 447, 650 A.2d 974.

Instead, trigger is a shorthand term used to describe "the event or events that under the terms of the insurance policy determines whether a policy must respond to a claim in a given set of circumstances." *Ibid.* (quoting Robert D. Fram, End Game: Trigger of Coverage in the Third Decade of CGL Latent Injury Litigation, in 10th Annual Insurance, Excess, and Reinsurance Coverage Disputes 9 (PLI Litig. & Admin.

Practice Course Handbook Series No. 454, 1993)). "As so conceptualized, the trigger concept is not designed to determine coverage; rather, it acts as a gatekeeper, matching particular claims with particular periods of time and hence particular insurance policies." James M. Fischer, Insurance Coverage for Mass Exposure Tort Claims: The Debate Over the Appropriate Trigger Rule, 45 Drake L.Rev.

625, 631 (1997). In environmental contamination cases the damage that triggers liability often cannot be linked to a single event. Instead, the damage usually is attributable to events that begin, develop and intensify over a sustained period of time.

Therefore, the damage has "'occurred' or been 'triggered' along a continuous timeline during which several successive policies issued to the insured were in effect." Mary R. DeYoung & William R. Hickman, *Allocation of Environmental Cleanup Liability Between Successive Insurers*, 17 N. Ky. L.Rev. 291, 294 (1990). Courts apply various theories in determining when damage has occurred so as to trigger insurance coverage under CGL policies in the context of environmental contamination and toxic tort cases.

Those include the exposure, injury-in-fact, manifestation, and continuous trigger theories. Under the "exposure theory," the triggering occurrence takes place on "the date of exposure to the injury producing agent." Fischer, *supra*, 45 Drake L.Rev. at 643.

Under the "injury in fact" theory, a policy is triggered only "if the claimant was actually injured during the policy period." *Id.* at 641, 650 A.2d 974. Under the "manifestation theory," the policy is triggered "when the injury became reasonably apparent or known to the claimant." *Id.* at 643, 650 A.2d 974.

Finally, the "continuous trigger theory" provides that "all policies in effect during the aggregate trigger period, for example, during the period of exposure or injury in fact, are activated and may be called on to respond to a loss." *Id.* at 646, 650 A.2d 974.

In *Keene Corp. v. Insurance Co. of North America*, 667 F.2d 1034 (D.C.Cir. 1981), the District of Columbia Circuit Court of Appeals was the first court to apply the continuous trigger theory in determining coverage for asbestos-related claims.

In addition to the manifestation of asbestos-related injury, the court held that "coverage is also triggered by both inhalation exposure and exposure in residence." *Id.* at 1045. The court stated further: Inhalation of asbestos is an "occurrence" that causes injury for which Keene may be held liable.

The possibility that the insurers may not be liable arises solely because there is a period of time between the point at which the injurious process began and the point at which injury manifests itself. In this case, *504 during that interim period, the existence of latent injury among people who had worked with asbestos became predictable with a substantial degree of certainty.

The injury and attendant liability became predictable precisely because it was discovered that past occurrences were likely to have set in motion injurious processes for which Keene could be held liable. [*Id.* at 1046.] Subsequent to the decision in *Keene Corp.*, many jurisdictions have applied the continuous trigger theory in both asbestos and environmental contamination cases.

See *Zurich Ins. Co. v. Raymark*, 118 Ill.2d 23, 112 Ill.Dec. 684, 514 N.E.2d 150 (Ill. 1987) (applying continuous trigger theory to personal injury asbestos claims); *Fireman's Fund Ins. Co. v. Ex-Cell-O Corp.*, 662 F.Supp. 71, 76 (E.D.Mich.1987)(recognizing similarity between asbestos claims and hazardous waste claims and holding that continuous trigger theory implicates "each exposure of the environment to a pollutant"); *New Castle County v. Continental Cas.*

Co., 725 F.Supp. 800, 812 (D.Del.1989), rev'd in part and aff'd. in part, 970 F.2d 1267 (3d Cir.1992)(concluding in leachate pollution case that "the entire injurious process may constitute 'injury' under the terms of the policies"); *Harleysville Mutual Ins. Co., Inc. v. Sussex County*, 831 F.Supp. 1111, 1124 (D.Del.1993)(finding "slow leaching of pollutants from a landfill to adjacent property" constitutes a progressive injury requiring use of continuous trigger theory); *Northern States Power Co. v. Fidelity and Cas.*

Co. of New York, 523 N.W.2d 657, 664 (Minn.1994)(holding groundwater contamination is "continuous process in which the property damage is evenly distributed over the period of time from the first contamination to the end of the last triggered policy"); *United States Gypsum Co. v. Admiral Ins. Co.*, 268 Ill.App.3d 598, 205 Ill.Dec. 619, 643 N.E.2d 1226, 1257 (Ill.App.Ct.1994) (applying continuous trigger theory to asbestos-related property damage claims); *GenCorp, Inc. v. AIU Ins.*

Co., 104 F.Supp.2d 740, 749 (N.D. Ohio 2000)(holding that continuous trigger will be applicable when environmental contamination claimant is able to show that damage, like asbestosis, occurred on continuing basis); See also Howard, *supra*, 22 Tort & Ins. L.J. at 632-33 ("Courts faced with coverage determinations in the toxic waste setting are likely to... adopt the exposure, manifestation or continuous trigger theories rather than a 'single point in time' test, with those courts intent upon maximizing coverage to the greatest extent possible opting for the continuous trigger approach.").

In *Owens-Illinois*, *supra*, 138 N.J. at 449-51, 650 A.2d 974 we applied the continuous trigger theory of coverage to the asbestos-related personal injury and property damage claims at issue. Although we did not disturb the general rule that "the time of the occurrence of an accident within the meaning of an indemnity policy is not the time the wrongful act is committed but the time when the complaining party is actually damaged," *id.* at 452, 650 A.2d 974 (citing *Hartford Accident & Indem.*

Co. v. Aetna Life and Cas. Ins. Co., 98 N.J. 18, 483 A.2d 402 (1984)), we held that in asbestos-related personal injury cases the required damage occurs from the time asbestos fibers are inhaled and continues until and including the manifestation of an asbestos-related disease, *id.* at 454, 650 A.2d 974.

We also rejected the argument advanced by the defendant insurance companies that the record did not contain sufficient medical testimony to establish that inhalation of asbestos immediately

causes tissue damage, recognizing both the trial court's expertise in asbestos-induced disease cases and the "overwhelming weight of authority" acknowledging that injury "occurs when asbestos is inhaled and retained in the lungs." Id. at 454, 650 A.2d 974 (quoting *Lloyd E. Mitchell, Inc. v. Maryland Cas.*

Co., 324 Md. 44, 595 A.2d 469, 478 (Md.1991)). We contrasted that solid medical foundation to the record in *Hartford*, a case involving a drug manufacturer's liability for injuries resulting from the ingestion of one of its drugs, where the plaintiff had "failed to offer any evidence that the medication administered to the child had caused her any damage before the *Hartford* coverage took effect."

Id. at 453, 650 A.2d 974. Our decision in *Owens-Illinois* was compelled by important public policy considerations, including the need to adapt our tort law to the peculiarities of mass-exposure tort cases. We recognized that the Court previously had adapted the law to "the uncertainties of medical causation." Id. at 458, 650 A.2d 974 (citing *Ayers v. Township of Jackson*, 106 N.J.

557, 605, 525 A.2d 287 (1987)). For example, in *Ayers*, supra, 106 N.J. at 609, 525 A.2d 287, a case involving personal injury claims from water contamination, we had held that "mass-exposure toxic-tort cases involve public interests not present in conventional tort litigation" that "justify judicial intervention even when the risk of disease is problematic."

We concluded, therefore, that the continuous trigger theory would be better suited to address the public interest in enhancing available insurance coverage for environmental damages and would give courts the opportunity to "better channel the available resources into remediation of environmental harms." *Owens-Illinois*, supra, 138 N.J. at 480, 650 A.2d 974.

Although in *Owens-Illinois* we were dealing primarily with personal injuries related to asbestos exposure, we acknowledged the applicability of the continuous trigger theory to environmental contamination cases. We noted that "[p]roperty-damage cases are analogous to the contraction of disease from exposure to toxic substances like asbestos" and that "while property damage is not, of course, an insidious disease, many of the same considerations apply." Id. at 455, 650 A.2d 974 (quoting *Lac D'Amiante Du Quebec, Ltee. v. American Home Assurance Co.*, 613 F.Supp. 1549, 1561 (D.N.J.1985)).

We then held that "claims of asbestos-related property damage from installation through discovery or remediation (the injurious process) trigger the policies on the risk throughout that period." Id. at 456, 650 A.2d 974.

We concluded by observing that "when progressive indivisible injury or damage results from exposure to injurious conditions for which civil liability may be imposed, courts may reasonably treat the progressive injury or damage as an occurrence within each of the years of a CGL policy."

Id. at 478, 650 A.2d 974. *Astro Pak*, supra, 284 N.J.Super. 491, 665 A.2d 1113 a case involving environmental pollution claims resulting from landfill contamination, is factually somewhat similar to the case at hand.

In that case, the Appellate Division applied *Owens-Illinois* to hold that damage resulting from landfill contamination triggered coverage under two successive CGL policies. In 1976, disposal operations at the Kin Buc Landfill in Edison, New Jersey were terminated after it was discovered that leachate from the landfill was contaminating the adjoining Raritan River.

The damage occurred despite the fact that the landfill was constructed with a supposedly impervious barrier that was intended to prevent contamination of the surrounding land and water. The *Astro Pak* Corporation had discharged hazardous wastes in the landfill between 1973 and 1976. *Astro Pak*, a defendant in an action brought by the owner and operator of the landfill *506 against users of the landfill, sought a declaratory judgment to determine the respective liability of two of its principal insurers, the Fireman's Fund Insurance Company and the Hartford Insurance Company.

The court applied the continuous trigger theory to determine whether Hartford and the Fireman's Fund policies were liable for the property damage resulting from the pollution of the Kin Buc Landfill. The court observed that "*Astro Pak's* actions constituted possible pollution only because of the defective nature of the landfill.

The offending 'pollution' was the escape caused by this defect, not the placing of the pollutants into the landfill." Id. at 501, 650 A.2d 974. The court compared the leakage from a "presumably impervious landfill licensed by the State to accept the pollutants" to leakage from an enclosed above-the-ground or in-the-ground tank, and observed that in both instances it "would be difficult to say that the pollution had been caused each time" material is deposited inside.

Ibid. Based on that analysis, the court rejected Hartford's claim that its policies, which took effect after the landfill's closure, were not implicated because the manifestation of injury could not have occurred after the date of closure and after *Astro Pak* stopped depositing pollutants in the facility.

The court found that "the slow progression of [the] contaminants into the surrounding land and water continued" during Hartford's policy period. Id. at 500, 650 A.2d 974. Moreover, the court found that the Fireman's Fund's policy was implicated because *Astro Pak* deposited waste throughout the entire three-year policy period "when the escape of pollutants from the landfill was known to EPA, but not to *Astro Pak*."

Id. at 502, 650 A.2d 974. The court stated further that the pollution continued after the landfill's closure and that "[t]he property damage for which indemnification is sought thus occurred within both insurers' policy periods, even though *Astro Pak's* deposit of the pollutants may have preceded The Hartford's policies." *Ibid.* In conclusion, the court determined that by "focus[ing] on the

discharge" of leachate from the landfill the trial court correctly had imposed liability on both Hartford and the Fireman's Fund.

Ibid. In *Carter-Wallace, Inc. v. Admiral Insurance Co.*, 154 N.J. 312, 712 A.2d 1116 (1998), this Court expressly applied the continuous trigger theory in a case involving property damage resulting from the contamination of a landfill. Carter Wallace Inc., a manufacturer of pharmaceutical and consumer products, was a named defendant in a lawsuit brought by the EPA against parties responsible for generating the waste that contaminated the Lone Pine Landfill in Monmouth County, New Jersey.

Eventually, Carter Wallace took part in the clean-up. One of Carter-Wallace's insurers, the Commercial Union Insurance Company, denied coverage under its second-layer excess policy. In its opinion, the Court elaborated on its prior analysis regarding the proper allocation of liability when the continuous trigger theory implicates multiple insurance policies.

Citing to *Astro Pak*, the Court also acknowledged that the reasoning in *Owens-Illinois* applied to "progressive environmental property damage." *Id.* at 321, 712 A.2d 1116. In other cases involving environmental pollution and toxic-tort property damage claims, New Jersey courts consistently have applied the continuous trigger rule to determine liability coverage.

See *United States Mineral Products Co. v. American Ins. Co.*, 348 N.J.Super. 526, 550, 792 A.2d 500 (App.Div.2002)(citing extensively from *Owens-Illinois* and *Carter-Wallace* and supporting "proposition that losses in an environmental damages case must be treated as an occurrence in each of the *507 periods covered by a comprehensive general liability policy"); *Williams v. Port Authority of New York and New Jersey*, 345 N.J.Super.

549, 556, 786 A.2d 114 (App.Div.2001)(applying reasoning in *Owens-Illinois* and holding that "injury occurs during each phase of environmental contamination exposure, exposure in residence (defined as further progression of injury even after exposure has ceased), and manifestation of disease" to apply continuous trigger theory to worker's compensation case for exposure to toxic substances)(quoting *Owens-Illinois*, *supra*, 138 N.J. at 451, 650 A.2d 974); *Universal-Rundle Corp. v. Commercial Union Ins.*

Co., 319 N.J.Super. 223, 243-44, 725 A.2d 76 (App.Div.1999), *certif. denied*, 161 N.J. 149, 735 A.2d 574 (1999)(using continuous trigger theory to determine respective liability resulting from clean-up costs relating to soil and groundwater contamination); *Sayre v. Ins. Co. of North Amer.* 305 N.J.Super. 209, 211-12, 701 A.2d 1311 (App.Div.1997)(affirming trial court's use of continuous trigger liability analysis for progressive indivisible injury resulting from environmental contamination and cleanup of manufacturing site); *Gottlieb v. Newark Ins.*

Co., 238 N.J.Super. 531, 537, 570 A.2d 443 (App.Div.1990)(holding that "continuous trigger theory reflects the law of New Jersey" allowing plaintiffs to seek recovery for chemical poisoning

claims under successive policies). Cf. *Aetna Cas. & Surety Co. v. Ply Gem Indus. Inc.*, 343 N.J.Super. 430, 453, 778 A.2d 1132 (App.Div.2001)(finding that "the record before us does not require a finding of a 'continuous trigger' or 'progressive injury' commencing upon installation" of allegedly defective fire retardant wood).

B Despite the fact that many jurisdictions have applied the continuous trigger theory to asbestos claims and hazardous waste claims, no consensus among those jurisdictions exists regarding the scope or the commencement of the "injurious process" covered under the theory. Relevant to this appeal, courts have pinpointed different initial triggering events that set off the continuous trigger theory.

Some jurisdictions have held that the initial triggering event should be injury-in-fact. In *GenCorp, Inc. v. AIU Insurance Co.*, 104 F.Supp.2d 740 (N.D.Ohio 2000), the plaintiff brought a declaratory judgment action against its insurers to recover costs or indemnification for costs associated with the long-term disposal of industrial waste at several of the plaintiff's industrial facilities.

While preparing for trial, the parties requested that the court provide some guidance regarding the appropriate trigger for determining coverage. The court issued an opinion that held that the continuous trigger theory would apply if the plaintiff was able to demonstrate continuous property damage, but also held that under that theory the initial trigger would be injury-in-fact as opposed to mere exposure.

Id. at 749. The court's directive was based on the fact that the plaintiff was not faced "with an unreasonable task in proving the point of initial injury." *Ibid.* In *Joe Harden Builders, Inc. v. Aetna Casualty and Surety Co.*, 326 S.C. 231, 486 S.E.2d 89 (S.C.1997), the South Carolina Supreme Court replied to a federal district court's certified question regarding the appropriate trigger of coverage when defective construction results in progressive and continuous property damage.

The plaintiff contractor sought payment under a subcontractor's insurance policy. The court held that "coverage is triggered at the time of an injury-in-fact and continuously thereafter to allow coverage under all policies in effect from the time of injury-in-fact *508 during the progressive damage." *Id.* at 91. See also *Lincoln Electric Co. v. St. Paul Fire and Marine Ins.*

Co., 210 F.3d 672, 690 (6th Cir.2000)(holding in dispute over coverage for personal injury claims relating to welding fumes and asbestos exposure that exposure would presumably trigger defendant insurer's policy but remanding case to allow defendant to rebut this presumption with evidence of injury-in-fact); *Sentinel Ins. Co., Ltd. v. First Ins. Co. of Hawai'i*, 76 Hawai'i 277, 875 P.2d 894, 917 (Haw.1994)(remanding dispute over appropriate trigger for third-party liability relating to water infiltration at large apartment complex with order to apply injury-in-fact theory except in situation where "injury-in-fact occurs continuously over a period covered by different

insurers or policies, and actual apportionment of the injury is difficult or impossible to determine").

Some jurisdictions closely follow the reasoning in cases like *Keene Corporation* and have included initial exposure in the "injurious process" when applying the continuous trigger theory to environmental contamination claims.

In *Chemical Leaman Tank Lines, Inc. v. Aetna Casualty and Surety Co.*, 89 F.3d 976 (3d Cir.1996), the Third Circuit Court of Appeals held that under New Jersey law insurance coverage under the continuous trigger theory commences at the time of the initial discharge of pollutants.

The court explained that [u]nder the continuous trigger theory, exposure to the harm causing agent is sufficient to trigger potential coverage. Actual manifestation of the injury is not required, so long as there is a continuous, indivisible process resulting in damage. It is undisputed that Chemical Leaman discharged contaminated rinsewater into the unlined ponds and lagoons in every year from 1960-70.

Moreover, the district found as a factual matter that "contaminated rinsewater from the three settling ponds started migrating through the soil to underlying groundwater almost immediately after beginning pond operation in 1960."

Accordingly, the district court correctly concluded as a matter of law that property damage occurred upon initial exposure in 1960, and should have concluded as a matter of law that property damage occurred in each policy period from 1961-70. [Id. at 995-96 (citations omitted)(emphasis added).]

The court rejected the insurers' argument that the insured had failed to demonstrate "actual injury" during the relevant policy periods and held that "[u]nder the continuous trigger theory, proof of actual injury in the sense of manifestation of injury is not required." Ibid. See also *Armotek Indus., Inc. v. Employers Ins. of Wausau*, 952 F.2d 756, 763 (3d Cir.1991)(holding that "'exposure' and 'manifestation' occurred at the time of the damage causing [oil] spill").

In *Wisconsin Electric Power Co. v. California Union Insurance Co.*, 142 Wis. 2d 673, 419 N.W.2d 255 (Wis.Ct.App.1987), the Wisconsin Court of Appeals directly applied the reasoning in *Keene Corporation* to a case involving injury caused by stray voltage from a faulty power supply system and held that coverage commenced at the time of the initial discharge of pollutants and continued until the harm had been eradicated.

The court stated that [w]e agree with the reasoning of the *Keene* decision. Cal Union's policy states "[t]he word 'occurrence'... means... a continuous or repeated exposure to conditions which results in... property damage neither expected nor intended by the Assured. All... exposure to... the

same general conditions existing and/or emanating from *509 one location or source shall be deemed one occurrence."

A perfectly reasonable interpretation of this language, and the interpretation advanced by WEPCo, is that as long as there is harmful exposure to dangerous conditions, the occurrence is continuing. As in Keene, while any part of the single injurious process continues, the occurrence continues. This interpretation best protects the expectations and understandings of the insured.

We therefore hold that the "occurrence" triggering coverage of the insurance policies began with the installation of the power supply in 1970 and continued uninterrupted until the problem was resolved in 1982. [Id. at 680-81, 419 N.W.2d 255 (emphasis added) (citations omitted).] More recently, the Wisconsin Court of Appeals applied the reasoning in Wisconsin Electric, supra, to a case involving damage resulting from landfill contamination.

Society Ins. v. Franklin, 233 Wis.2d 207, 607 N.W.2d 342 (2000). The plaintiff municipality was insured by defendant insurer under consecutive one-year policies from 1972 to 1986. Defendant argued that only one of its policies was triggered because the contamination from the landfill used by the municipality seeped onto neighboring property in 1981.

The court rejected the insurer's argument and instead held that the continuous trigger theory applied "because we have concluded that the contamination was one ongoing occurrence," and "it would make no sense for us, or the trial court, to attempt to pinpoint when the occurrence happened." Id. at 348 (citing specifically to language in Wisconsin Electric that "installation" triggers coverage).

Therefore, the court concluded that all of the defendant's policies in effect from the time of the municipality's discharge until the date of remediation were triggered. In New Castle County, supra, the court held that the "injurious process" encapsulated by the continuous trigger doctrine included a municipality's initial discharge into a landfill and the gradual leaching of contaminants into surrounding property.

725 F.Supp. at 812 (noting that the "process that led to this property damage began as early as the first half of 1969" and referring to testimony indicating that "there had been a slight deterioration of the wells at Tybouts by July, 1969"). See also Fireman's Fund Ins. Cos. v. Ex-Cell-O Corp., supra, 662 F.Supp. at 76 (holding several defendant insurers liable where "policyholders allegedly exposed the sites to pollutants during" policy periods); United Technologies Corp. v. Liberty Mutual Insur.

Co., No. 877172, 1993 WL 818913, at *18 (Mass.Super.Aug.3, 1993)(citing New Castle County, supra, 725 F.Supp. at 812, for proposition that continuous trigger doctrine "embrac[es] [] dumping, leaching from the landfill, and discovery of the pollution damage"); Huntzinger v. Hastings Mutual Ins. Co., 143 F.3d 302, 315 (7th Cir.1998)(adopting continuous trigger theory and stating

that "exposure `occurs at the moment that hazardous wastes are improperly released into the environment" and that "manifestation `is judged by the time at which the leakage and damage are first discovered") (citations omitted); See also DeYoung & Hickman, *supra*, 17 N. Ky. L.Rev. at 295 ("`The dumping or discharge of the waste is akin to initial exposure to (i.e. inhalation of) asbestos; the leaching of the wastes into the ground and subsurface reservoirs is similar to exposure in residence; and the property damage ultimately discovered is analogous to the manifestation of asbestos-related diseases.") (citations omitted).

Although factually and procedurally distinct from the instant matter, a line of *510 cases interpreting the "owned-property" exclusion in CGL insurance policies also appears to define the "injurious process" more broadly. Many jurisdictions have held that an insured's on-site soil clean-up should not bar coverage under an "owned property" exclusion clause if the contaminants in the soil threaten to migrate to underlying groundwater or the surrounding property of others.

Arco Industries Corp. v. American Motorists Insurance Co., 232 Mich.App. 146, 594 N.W.2d 61, (Mich.Ct.App.1998), involved insurance claims related to the remediation of chemical contamination of an auto parts manufacturing plant.

In *Arco*, the Michigan Court of Appeals concurred with a lower court ruling that the "owned property" exclusion in the CGL policy at issue did not exclude coverage "because the failure to clean up the soil and seepage pond at the site would further contaminate the groundwater." *Id.* at 66.

The lower court had pointed to the "substantial threat" that the contaminants would migrate into the groundwater. *Id.* at 67. In *Aetna Casualty & Surety Co. v. Dow Chemical Co.*, 28 F.Supp.2d 448 (E.D.Mich.1998), the insured sought indemnification from its insurer for remediation costs resulting from the environmental contamination at several of its manufacturing sites.

The court held that Michigan law provided coverage for environmental remediation notwithstanding the owned property exclusion. Although the insured did not need to show actual damage had occurred to a third-party, that court held that the insured must first establish "the need for remediation to prevent imminent harm to a third party." *Id.* at 454.

As the court explained, [i]f an insured's subsoil is contaminated and will imminently affect the groundwater, the insured need not wait for the ground water to show contamination in order to obtain insurance coverage for remediation.

The requirement of imminent damage prevents insureds from passing off the cost of the property improvements to their insurers where third-party damage is purely speculative.... While the owned property provision does not bar coverage for remediation of third-party property, it also does not bar coverage where remediation was undertaken pursuant to a government mandate.

[Id. at 455.] Other jurisdictions also have held that insurers are required to indemnify remediation costs even when contamination has not spread beyond the insured's own property. See *Patz v. St. Paul Fire & Marine Ins. Co.*, 15 F.3d 699, 705 (7th Cir.1994)(holding that coverage was triggered despite applicability of "owned property" exclusion because government had mandated remediation of the environmental contamination); *Bankers Trust Co. v. Hartford Accident & Indem.*

Co., 518 F.Supp. 371, 373-74 (D.N.Y.1981)("[W]ork done on property to prevent further oil seepage was as a matter of law within the coverage of the policies... if the policy did not cover this situation, plaintiffs could have allowed the oil to continue to pollute the river and its shores, causing further social damage and damage to third parties, and ironically ultimately costing even Hartford more money.").

The courts in those cases reason that an insured's act of depositing waste may set off an unalterable process that threatens to damage other property. C The parties to this appeal do not dispute the applicability of the continuous trigger theory of coverage to environmental contamination claims and we see no reason to depart from the sound line of *511 cases and academic support recognizing the benefits of applying that theory to these types of claims.

See *Developments in the Law Toxic Waste Litigation*, 99 Harv. L.Rev. 1458, 1581 (1986) ("Because it avoids the dangers of the manifestation rule, and because it encourages all insurers to monitor risks and charge appropriate premiums, the continuous trigger rule appears to be the most efficient doctrine for toxic waste cases."). Instead, this case turns on how the theory should be applied.

Indeed, the majority and dissenting appellate division opinions, although both applying the continuous trigger theory, reached different conclusions concerning Century's coverage obligation. The majority opinion relied on *Astro Pak*, supra, 284 N.J.Super. 491, 665 A.2d 1113, for the proposition that in determining the initial trigger of the continuous trigger theory the focus should be on the discharge of contaminants from a landfill, rather than on the depositing of waste into that landfill.

Quincy Mutual, supra, 338 N.J.Super. at 400, 769 A.2d 1053. The court interpreted *Astro Pak* as holding that under the continuous trigger theory "the first pull of [the] trigger occur[s] only when there ha[s] been some `damage,' and that waste disposal (or dumping) by itself did not cause `damage.'" Ibid. Furthermore, the court rejected Quincy's comparison of the environmental contamination from the landfill in this case with the asbestos injury addressed in *Owens-Illinois*, supra, 138 N.J.

437, 650 A.2d 974, arguing that the court in *Owens-Illinois* "took pains to discuss and ultimately approve the trial court's conclusion that `an injury-in-fact' triggering coverage under the insurance

policies occurs on the inhalation of asbestos fibers." Quincy Mutual, *supra*, 338 N.J.Super. at 401, 769 A.2d 1053.

The court found that Quincy had presented no evidence demonstrating the presence of injury at the time toxic waste was deposited into the Landfill that was at all comparable to the scientifically proven tissue damage associated with the initial inhalation of asbestos. Instead, damage occurred only when "the toxic leachate forming part of that waste seeped out of the landfill and reached nearby ground water."

Id. at 402, 769 A.2d 1053. Therefore, because Dr. Steiner's uncontroverted testimony indicated that that seepage could not have occurred until at least approximately 185 days after the Borough first deposited waste in the Landfill, a date subsequent to the termination date of Century's CGL policy, the court concluded that Quincy was solely responsible for indemnifying the Borough.

Although the court correctly relied on the underlying principles set forth in *Owens-Illinois* and subsequent New Jersey cases applying the continuous trigger theory to toxic tort and environmental contamination cases, we disagree with its analysis. Instead, we would adopt the analysis of the dissent and its conclusion that Century is partially responsible for indemnifying the Borough.

In her dissent, Judge Wecker, applying the continuous trigger theory, concluded that coverage initially was triggered when the Borough first dumped toxic waste into the Kramer Landfill while Century's policy was still in effect. Like the majority, Judge Wecker relied on Dr. Steiner's uncontroverted expert testimony, albeit a different portion, to come to that conclusion.

As Judge Wecker's summary of Dr. Steiner's testimony demonstrates, the "injurious process" in this case is comparable to the "injurious process" involved in asbestos-related personal injury and property damage cases. Dr. Steiner described leachate as "a flow of liquid migrating downward through a porous material."

The downward movement "is a result of gravity and capillary action." He agreed that "contaminated leachate" from material deposited at the landfill eventually finds its way into the groundwater. It is clear from Dr. Steiner's testimony that the landfill was not the equivalent of an enclosed tank or container, and that by its very nature, toxic materials deposited in the landfill would, without fail, seep into the ground and run off as leachate into the groundwater, which in turn penetrates the soil below and downstream of the landfill.

The contaminated leachate therefore is not the product of some accidental leak. On the contrary, it represents the natural and unavoidable progression of the original dumping, which must be deemed the "exposure" that is the starting point of an "occurrence" that triggers coverage.

The fact that it may have taken some 200 days for the polluting leachate to reach a particular point does not mean that damage to property did not occur earlier. The property, that is, the landfill, was contaminated as soon as the toxic material was dumped, for that is when the toxins began their damaging journey through the ground just as the asbestos fibers in Owens-Illinois began their damaging journey through the air immediately upon installation of the insulation.

[Id. at 410, 769 A.2d 1053.][1] Based on Dr. Steiner's testimony, Judge Wecker concluded that the Borough's "damaging pollution set in motion a 'cumulative and progressive' process" that is analogous to the onset of asbestosis. Id. at 414, 769 A.2d 1053.

We believe that Dr. Steiner's testimony demonstrates the inescapable conclusion that the initial deposit of toxic wastes into the Kramer Landfill set off the injurious process resulting in groundwater contamination.

As one commentator has observed, "[t]oxic waste loss will be most analogous to asbestos loss when the leaching begins at the moment of dumping, since the resulting damage may be deemed to have resulted from one continuous, uninterrupted process or from continuous exposure to substantially the same general conditions." Howard, *supra*, 22 Tort & Ins. L.J. at 639.

Other jurisdictions similarly have held that the depositing of waste into a landfill triggers an unalterable and injurious process. In *Harleysville Mutual*, *supra*, 831 F.Supp. at 1124, although distinguishable from this case because the record did not provide scientific evidence indicating the approximate amount of time it took for leachate to move through the landfill, the court acknowledged the possibility that the "injurious process" could have been initiated when toxic waste was first dumped in the landfill: "Although testing by Weston *513 did not reveal contamination of third party property until 1989, the insurers themselves have argued that the geologic conditions at Landfill No. 5 were sufficient to foster the development of leachate contamination of the groundwater immediately upon the beginning of landfill operations in 1970."

Id. at 1124-25. Moreover, Dr. Steiner's testimony regarding the process by which leachate is generated and moves through an unlined landfill, such as the Kramer Landfill, demonstrates that the reasoning advanced by the court in *Keene Corporation* is applicable to the factual context in this appeal.

Although the initial exposure to the contaminants caused by the Borough's depositing of municipal waste was not "an immediate and discrete injury, the fact that it is part of an injurious process is enough for it to constitute 'injury' under the policies." *Keene Corp.*, *supra*, 667 F.2d at 1046 ("The injury and attendant liability became predictable precisely because it was discovered that past occurrences were likely to have set in motion injurious processes for which Keene could be held liable.").

See also *Chemical Leaman*, supra, 89 F.3d at 995-96 (holding that insured's initial discharge of contaminated rinsewater began "continuous indivisible process resulting in damage"); *New Castle County*, supra, 725 F.Supp. at 812 (holding that "injurious process" was initiated before leachate contamination); *DeYoung & Hickman*, supra, 17 N. Ky. L.Rev. at 295 (concluding that dumping of waste in landfill is directly analogous to inhalation of asbestos); *Aetna Cas. & Surety Co.*, 28 F.Supp.2d at 454 (recognizing that coverage could be triggered by need to prevent imminent contamination of groundwater).

The dissent below also rejected the majority's reliance on *Astro Pak*. As Judge Wecker explained, in *Astro Pak* the court was faced with "a dispute over the last pull of the triggerthe end of the covered `occurrence'and not (as here) in a dispute about the first pull of the trigger." *Quincy Mutual*, supra, 338 N.J.Super. at 411, 769 A.2d 1053 (Wecker, J., dissenting).

Moreover, the court in *Astro Pak* held that the discharge of leachate into the groundwater rather than the initial depositing of waste constituted pollution damage in part because of the way in which the landfill was constructed. Unlike the *Kramer Landfill*, as described by Dr. Steiner in his testimony, the landfill in *Astro Pak* was built with a liner designed to protect the surrounding groundwater from contamination.

Based on its physical qualities, the court compared it to an enclosed tank that had sprung a leak. Here, "there is no [] evidence to support an analogy between the leaching that occurred in the *Kramer landfill* and a leaking tank." *Ibid*. Furthermore, we are persuaded that a bright-line rule triggering coverage when toxic waste is first deposited in a landfill is more consistent with *Owens-Illinois* and subsequent toxic tort environmental contamination cases.

"From a theoretical point of view, when toxic material deposited in or on property creates a condition that is dangerous to life or health, the deposit itself affects the utility of the property, and the property is damaged thereby." *Quincy Mutual*, 338 N.J.Super. at 413, 769 A.2d 1053 (Wecker, J., dissenting). Our goal in *Owens-Illinois*, supra, was to fashion a standard that would "narrow the range of disputes and provide procedures better to resolve the disputes that remain."

138 N.J. at 480, 650 A.2d 974. Requiring "each insurer (or a court) to calculate the date when pollutants that were dumped into a landfill most likely leached into the groundwater in order to determine the start of the continuous trigger period" complicates an already complicated area of the law. *Quincy Mutual*, *514 supra, 338 N.J.Super. at 412, 769 A.2d 1053 (Wecker, J., dissenting).

We prefer to adopt a rule that takes into consideration the impossibility under certain circumstances of establishing exactly when the groundwater contamination began: "Unfortunately, life in a landfill is not so `clean.'

The geography of each site is unique, and thus it is not possible to generalize at what rate pollutants will migrate from the site." *New Castle County*, supra, 725 F.Supp. at 811. Moreover, we adopted the continuous trigger theory in *Owens-Illinois*, supra, in large part because of its ability to maximize coverage. 138 N.J. at 452, 650 A.2d 974.

We also recognized the ability of insurance companies to spread the costs of indemnification across the industry, and that the law should "not provide disincentives to parties to acquire insurance when available to cover the risks." *Id.* at 472-73, 650 A.2d 974. See also *Carter-Wallace*, supra, 154 N.J. at 322, 712 A.2d 1116 (stating that decision was "guided by our concern for the efficient use of resources to address the problem of environmental disease and by the demands of simple justice").

As Judge Pressler stated in *Winding Hills Condominium Association, Inc. v. North American Specialty Insurance Co.*, 332 N.J.Super. 85, 91, 752 A.2d 837 (2000), "the law's solicitousness for victims of mass toxic torts and other environmental contamination is entirely consistent with choosing that conceptually viable trigger theory affording the greatest ultimate redress."

See also *DeYoung & Hickman*, supra, 17 N. Ky. L.Rev. at 296 ("The more policies triggered, the more likely the insured's losses will be covered, and the more coverage potentially available to indemnify the insured for its loss."). Based on the foregoing considerations, we conclude that exposure relating to the Borough's initial depositing of toxic waste into the Landfill is the first trigger of coverage under the continuous trigger theory and constitutes an "occurrence" under Century's policy.

That result also is the most consistent with our previous decisions in the area of environmental contamination insurance law. III Based on our conclusion that Century's policy was implicated as a result of the Borough's depositing of hazardous waste into the Landfill, we now must determine the appropriate allocation of liability between the Quincy and Century policies.

Again, there appears to be no dispute among the parties that the pro rata risk allocation rule established in *Owens-Illinois*, supra, 138 N.J. 437, 650 A.2d 974, should apply. However, according to Quincy, under that rule Century should be responsible for the number of years it provided coverage during the continuous trigger period. Over the relevant time period one of Century's policies and three of Quincy's policies were triggered and each policy had a \$500,000 policy limit.

Therefore, Quincy contends that Century's share of the accumulative two million dollar policy limit is twenty-five percent. Although the Appellate Division concluded that Century's policy was not implicated under the continuous trigger theory, the court addressed Quincy's contention regarding the appropriate allocation of liability.

The court determined that, if both insurers' policies had been implicated, their respective liability would be allocated based on the number of days each policy provided coverage during the continuous trigger period.

Therefore, the court concluded that Century's proportionate share of liability would only be based on one or two months exposure (between commencement of dumping in April/May 1978 and *515 expiration of the Century policy on June 18, 1978) out of a total of some two and one-half years of dumping between May 1978 and January 1981. That would represent approximately forty-five days of a total of 880 days, or about .05 percent.

That number would be little more than de minimus. [Quincy Mutual, *supra*, 338 N.J. Super. at 403 n. 2, 769 A.2d 1053.] The Appellate Division based that analysis on our explanation of pro rata risk allocation in *Owens-Illinois*.

In *Owens-Illinois*, *supra*, we rejected the theory of allocation under which the continuous injury is collapsed into one year and one policy's coverage applies to that injury. 138 N.J. at 468, 650 A.2d 974. Instead, we determined that "[a] fairer method of allocation appears to be one that is related to both the time on the risk and the degree of risk assumed."

138 N.J. at 479, 650 A.2d 974. Therefore, we held that a "better formula" would allocate the "losses among the carriers on the basis of the extent of the risk assumed, i.e., proration on the basis of policy limits, multiplied by years of coverage." *Id.* at 475, 650 A.2d 974 (citing *Armstrong World Indus., Inc. v. Aetna Cas. & Surety Co.*, 26 Cal.Rptr.2d 35, 57 (Cal.Ct.App.1993)).

We then relied on the hypothetical facts we had used earlier in the opinion to explain the concept: If we were to accept the constant levels of the policy limits as evidence of constant risks assumed over the nine-year span from exposure to manifestation (in the case of disease manifested in the ninth year), the carriers on the risk in years four, five, and six would each pay one-ninth of the loss, or collectively thirty-three percent.

If the facts of coverage had been otherwise let us say policies had been in effect for years one through three in the amount of two million per year and in years four through six at three million per year we might assess the risk assumed in years seven through nine at four million per year. Carriers during the first three years would bear roughly twenty-two percent (6/27ths); carriers covering the middle three years would bear thirty-three percent (9/27ths); and the building owners would bear forty-four percent of the risk (12/27ths).

Of course, policy limits and exclusions must be taken into account. We recognize that such even mathematical proportions will not occur, and so we must repose a substantial measure of discretion in a master who must develop the formula that fairly reflects the risks assumed or transferred. [*Id.* at 475-76, 650 A.2d 974.]

As the Appellate Division explained, we spoke of years of coverage only because of the hypothetical example we used to explain allocation based on the extent of the risk assumed. The use of a hypothetical that focused on years rather than days provided a simplified explanation for the concept that "a company providing coverage over a longer period would normally bear a greater share of the insured's liability than one [that] was involved for a shorter period."

Quincy Mutual, *supra*, 338 N.J.Super. at 403 n. 12, 769 A.2d 1053. Later in the opinion we stated more generally that the appropriate theory of allocation "should be in proportion to the degree of the risks transferred or retained during the years of exposure." *Owens-Illinois*, *supra*, 138 N.J. at 475, 650 A.2d 974.

We did not specifically address how that formula would apply to the facts presented in this appeal where an insurer was on the risk only for a portion of a year that is included in the continuous trigger period. We now hold specifically that the *Owens-Illinois* allocation formula should reflect days rather than years on the risk when the underlying facts require *516 that degree of precision in the allocation of liability.

Our holding does not affect the capacity of the continuous trigger theory to afford maximum coverage in environmental contamination claims simply because in this case the insurer on the risk during the initial portion of the continuous trigger period will be responsible only for a de minimus portion of the Borough's liability.

Moreover, principles of "simple justice" dictate that we reject Quincy's argument that Century should be responsible for an entire year within the continuous trigger period merely because it was on the risk for a portion of that year. *Id.* at 473, 650 A.2d 974. IV The judgment of the Appellate Division is reversed and the matter is remanded to the trial court for an allocation of liability between the Quincy and Century policies that is consistent with this opinion.

LaVECCHIA, J., concurring in part, dissenting in part. This appeal raises the familiar question of when, in the context of a property damage claim, does an insured become legally obligated for damages to another, entitling the insured to coverage from an insurer.

The question is critical to the issue here concerning which insurers should be responsible for a landfill's liability for groundwater damage. Respectfully, the majority errs when it reverses the Appellate Division. The Court's holding misapplies the notion of "continuous injury" recognized in *Owens-Illinois, Incorporated v. United Insurance Company*, 138 N.J.

437, 650 A.2d 974 (1994). *Owens-Illinois* involved claims of asbestos liability. *Id.* at 441-42, 650 A.2d 974. In that declaratory judgment action brought by an asbestos manufacturer against its insurance carriers, the Court held that there was no question but that injury from asbestos, and damage therefrom, was instantaneous and continuous from the moment that asbestos was installed in the buildings in issue.

Id. at 456, 650 A.2d 974. The Court explained that scientific research had established that damages accrued continuously from the building inhabitants' inhalation of airborne asbestos particles, causing an injurious occurrence. Id. at 453-54, 650 A.2d 974.

Accordingly, the insurer's liability for coverage started with the moment of injury (and damages), and continued through discovery of the injury and its remediation. Id. at 456, 650 A.2d 974. In Owens-Illinois, and in previous decisions, this Court has reaffirmed the principle that the time of accrual of an insured's liability must be the determining factor to compel coverage when the basis of the claim is negligence.

Id. at 452-53, 650 A.2d 974 (citations omitted). That liability occurs when damage actually is suffered. The Court applied that principle in Owens-Illinois, relying on its prior decision in Hartford Accident & Indemnity Company v. Aetna Life and Casualty Insurance Company, 98 N.J. 18, 483 A.2d 402 (1984), which in turn cited extensively from Muller Fuel Oil Company v. Insurance Company of North America, 95 N.J. Super.

564, 578, 232 A.2d 168 (App.Div.1967) (stating that generally in context of indemnity policy, time of "'occurrence'... is not the time the wrongful act was committed but the time when the complaining party was actually damaged. 'The time of the accrual of the insured's liability is the determining factor, not the time of an event which ultimately results in liability.'").

The scientific evidence in Owens-Illinois persuasively established that bodily injury occurs immediately when asbestos is inhaled and retained in the lungs. 138 N.J. *517 at 454, 650 A.2d 974. Although the record was found to be less persuasive on the issue of property damage, the Court similarly concluded that claims of asbestos-related property damage begin at installation and continue throughout the period that friable particles detach and release into the air in normal degradation of the material, and then through the remediation process.

Id. at 454-56, 650 A.2d 974. No such evidence of injury and damage to third parties exists in this record during the period of coverage by Quincy. Quincy merely was on the risk at the time of lawful dumping of material that later seeped from the landfill after Quincy's policy period had concluded. That is not enough under our normal principles of accrual of liability to cause an insurer to be liable on a risk.

In my view, the majority decision of the Appellate Division concluded properly in this matter and that decision should not be disturbed. Writing for the majority, Judge Lesemann made the compelling point that liability for the dumping in issue here attached not as of the time that the material was deposited in the landfill, which was perfectly legal and authorized by all regulatory bodies at the time, but at the time that components of the dumped materials leached out of the landfill and caused injury to the groundwater.

Quincy Mut. Fire Ins. Co. v. Borough of Bellmawr, 338 N.J.Super. 395, 402-04, 769 A.2d 1053 (2001). The Appellate Division's determination, that there was no injury until the landfill failed and the materials it contained caused damage to groundwater, is consistent with Muller Fuel's principles, and with the consistent application of those principles in Hartford and Owens-Illinois.

Quincy, *supra*, 338 N.J.Super. at 402-04, 769 A.2d 1053. See also Astro Pak Corp. v. Fireman's Fund Ins. Co., 284 N.J.Super. 491, 499-501, 665 A.2d 1113 (App.Div. 1995) (holding that depositing of solid waste into landfill took place within policy period, and finding that triggering event was "not the placing of pollutants into the landfill," but rather their escape), *certif. denied*, 143 N.J.

323, 670 A.2d 1065 (1995). I view the majority decision of the Appellate Division as consonant with the notion that it is injury causing damage, and accrual of liability, that "triggers" coverage under an indemnity policy of insurance.

The Court's notion of inevitability of injury and damage is based on a misapplication of the doctrine of "continuous injury" and leads one to wonder why coverage should start only at the time of the dumping of the material because, one could argue, it was inevitable that the discarded waste would end up at the landfill contracted to receive the waste.

The open-ended approach of the majority mistakenly has severed the notion of injury and damage to a third party from the accrual-of-liability analysis. Accordingly, I respectfully dissent from that portion of the Court's opinion that allocates any responsibility to an insurer prior to the date of damage to the groundwater. I would affirm substantially for the reasons expressed in the thorough and thoughtful decision of Judge Lesemann.

Quincy, *supra*, 338 N.J.Super. at 397-404, 769 A.2d 1053. Subject to my contrary view of when coverage should be required of an insurer, I concur with the Court's affirmance of the Appellate Division's allocation of coverage as among liable carriers. Justice VERNIERO joins in this concurrence and dissent.

For reversal and remandmentJustice PORITZ and Justices STEIN, COLEMAN, LONG, and ZAZZALI5. *518 Concurring in part; dissenting in partJustices VERNIERO and LaVECCHIA2. NOTES [1] The following exchange during Dr. Steiner's cross examination demonstrates what appears to be the virtual inevitability of groundwater contamination once toxic wastes are deposited in an unlined landfill: Q. Well, holding capacity is merely a way station, the movement of [] one molecule will move to downward, hit a dry area, a way station, waiting for it to be wetter at which point it will continue its migration downward, right?

A. That's true. Q. Okay. So eventually [] one molecule reaches the ground water, is that right? A. Yes. Q. Now, the placement of new material at the [top] of the landfill creates new molecules of

material that will eventually find their way to ground water? A. Eventually, yes. Q. And if that new material was not placed in the landfill it would not find its way to ground water?

A. True.

STEIN, J.

The opinion of the Court was delivered by STEIN, J. This appeal raises two important issues relating to environmental pollution liability. First, we must determine under the “continuous trigger theory” of liability whether an insurance policy in effect at the time the Borough of Bellmawr (Borough) was depositing waste in a landfill provides coverage for resulting environmental pollution claims against the Borough.

Although the trial record reveals that contaminants from the landfill could not have begun to be dispersed into the surrounding groundwater until *412after Century Indemnity Company’s (Century) policy had expired, Quincy Mutual Fire Insurance Company (Quincy) contends that Century’s policy is implicated because the Borough deposited hazardous waste in the landfill while Century’s policy was in effect.

Second, we again must examine the appropriate allocation of coverage among the carriers whose policies have been triggered under the “continuous trigger theory.” Quincy argues that if Century’s policy is implicated its proportionate share of liability under the “continuous trigger theory” should be determined based on the number of years it was on the risk.

Century maintains that its responsibility should reflect the number of days it was on the risk, that is, from the time the Borough began dumping until the time its policy expired. The trial court concluded that Quincy was solely responsible for indemnifying the Borough for liability resulting from the contamination, thereby rejecting Quincy’s argument that the act of discharging hazardous waste into the landfill constituted an “occurrence” under Century’s policy.

The Appellate Division affirmed. The court also noted that if it had determined that Century’s policy was implicated the appropriate allocation of liability would be based on days on the risk rather than years on the risk. Quincy Mutual Fire Ins. Co. v. Borough of Bellmawr, 338 N.J.Super. 395, 403 n. 2, 769 A.2d 1053 (2001).

We granted certification, 169 N.J. 609, 782 A.2d 426 (2001). I The Helen Kramer Landfill (Landfill), located in West Deptford, New Jersey, operated from approximately 1963 until 1981. In April 1978, the Borough approved the Landfill as an appropriate trash disposal site, and from May 1978 until January 1981, the Borough deposited municipal waste into the Landfill.

The Borough made no attempt to segregate harmful pollutants from the municipal trash that was deposited in the facility. *413In 1981, after complaints were registered relating to the Landfill, the Environmental Protection Agency (EPA) revoked the Landfill’s registration and a New Jersey

court ordered its closure. An extensive Remedial Investigation and Feasibility Study conducted by the EPA between 1983 and 1985 revealed the presence of hazardous chemicals in the soil, surface waters and ground waters at the Landfill.

On September 8, 1983, the Landfill was placed on the Superfund National Priorities List, a list of the nation's most threatening hazardous waste sites established pursuant to the Comprehensive Environmental Response Control and Liability Act (CERCLA), 42 U.S.C.A. § 9605(a). Two years later, in September 1985, the EPA ordered a series of remedial actions to clean up the contamination that had emanated from the Landfill.

In 1989, the EPA commenced a lawsuit against the hundreds of defendants and third party defendants, including the Borough, that allegedly had contributed to the contamination of the Kramer Landfill, to recover all response and remedial costs. *United States v. Kramer*, 757 F.Supp. 397 (D.N.J.1991).

In 1997, after extended negotiations, the Borough and several other defendants and third-party defendants agreed to settle with the EPA by paying \$95 million over a five-year period, which would contribute to the approximately \$123 million in cleanup costs incurred by the United States Government.

The Borough's financial contribution to those costs under the settlement agreement totaled \$449,036.39. The Borough maintained comprehensive general liability insurance (CGL) policies with two principal insurance carriers during the time it was depositing municipal waste into the Landfill— defendant Century and plaintiff Quincy.

The Borough also maintained CGL policies with several other insurance carriers during the time the cleanup took place. The Century policy was in effect from June 18, 1977 until June 18, 1978 and the Quincy policies were in effect from June 18, 1978 until June 18, 1981.

In 1991, the Borough filed a declaratory judgment action against its insurance carriers Quincy, Century and the Harleysville Insurance Company (Harleysville). Harleysville was dismissed from the lawsuit in 1993. Thereafter, Quincy was ordered to indemnify the Borough for any liability relating to the Landfill, including litigation expenses, counsel fees and costs.

Quincy and Century subsequently entered into an agreement stating that Century and Quincy would pay the Borough's defense costs but that the carriers later could pursue the allocation of indemnification costs between them.

In October 1996, Quincy filed suit seeking a declaratory judgment determining the respective liabilities pursuant to the insurance policies issued by Quincy and other insurance carriers. With the exception of Century, Quincy's claims against the other insurers were dismissed. During the

ensuing non-jury trial, Dr. Ralph Lee Steiner testified for Century as an expert in landfill procedures and operations.

Dr. Steiner was familiar with the Landfill because he had inspected it several times in the 1970's. Dr. Steiner testified about leachate, the liquid that passes through contaminated material. He testified that because the Kramer Landfill was unlined, it acted like a "sponge" rather than a vessel or a tank. Dr. Steiner also testified that leachate could have been discharged from the Landfill only when its waste reached "field capacity," which is the maximum amount of liquid a landfill can hold before liquid seeps through the bottom and contaminates the groundwater.

Based on Dr. Steiner's calculations, including analysis of available rainfall data and the height of the landfill, it would have taken approximately 185 to 200 days from the time the Borough began dumping for the Landfill to reach field capacity.

Therefore, Dr. Steiner testified that it was not possible for waste deposited on May 1, 1978, the date the Borough began depositing waste in the Landfill, to generate contamination in the groundwater before June 18, 1978. Quincy did not rebut Dr. Steiner's testimony.

The trial court resolved the coverage issue in favor of Century, finding that Quincy was not entitled to contribution for the Borough's environmental liability. Relying on *Owens-Illinois, Inc. v. *415United Insurance Co.*, 138 N.J. 437, 650 A.2d 974 (1994) and *Astro Pak Corp. v. Fireman's Fund Insurance Co.*, 284 N.J.Super. 491, 665 A.2d 1113 (App.Div.1995), the trial court concluded that the property damage necessary to trigger coverage under a CGL policy occurs not when waste is deposited in a landfill but when leachate escapes from it and contaminates the groundwater.

Therefore, based on Dr. Steiner's undisputed testimony that the groundwater could not have been contaminated by the Borough's waste until approximately 185 to 200 days after the Borough began depositing waste in the Kramer Landfill, the court held that Quincy's policy alone was in effect when the damage occurred.

In a published opinion the Appellate Division affirmed the trial court's disposition and held that the "continuous trigger of coverage" for liability from groundwater contamination began when the leachate reached the groundwater and not when the Borough dumped its waste. It thereby absolved Century from liability because its policy was in effect only at the time of the initial dumping of municipal waste.

Quincy, *supra*, 338 N.J.Super. at 399, 769 A.2d 1053. The court also rejected Quincy's argument that if Century's policy was implicated, Century's proportionate share of liability would equal twenty-five percent of the total liability because its policy was in effect for one of the four years in question. Instead, the court found that the appropriate allocation would be based on days of coverage.

Id. at 403 n. 2, 769 A.2d 1053. Dissenting, Judge Wecker also applied the continuous trigger theory but concluded that the initial trigger of coverage was the Borough's dumping of toxic waste in the Landfill beginning in April 1978. II A In general, insurance policies cover losses resulting only from "occurrences" that take place during the policy period.

The Century policy that was in effect at the time the Borough began *416dumping defines occurrence as "an accident, including injurious exposure to conditions, which results, during the policy period, in personal injury or property damage neither expected nor intended from the standpoint of the insured." (The record does not reflect how Quincy's policy defined "occurrence").

That type of policy language frequently is used and reflects the general principle that "the insured would reasonably expect to be covered, and the insurer would reasonably expect to pay, for damage or injury occurring during the policy period, assuming all other conditions precedent to coverage have been satisfied." David J. Howard, "Continuous Trigger" Liability: Application to Toxic Waste Cases and Impact on the Number of "Occurrences", 22 Tort & Ins.

L.J. 624, 632 (1987). Therefore, when an insured has been covered by several policies over the relevant period of time, identifying the appropriate trigger of coverage, or when an occurrence took place, will be critical in determining which insurer is liable for the damages that have accrued. Litigation relating to the appropriate trigger of coverage results from the fact that insurance policies "do not refer [generally] to a 'trigger.'" Owens-Illinois, supra, 138 N.J. at 447, 650 A.2d 974.

Instead, trigger is a shorthand term used to describe " 'the event or events that under the terms of the insurance policy determines whether a policy must respond to a claim in a given set of circumstances.' " Ibid, (quoting Robert D. Fram, End Game: Trigger of Coverage in the Third Decade of CGL Latent Injury Litigation, in 10th Annual Insurance, Excess, and Reinsurance Coverage Disputes 9 (PLI Litig. & Admin, Practice Course Handbook Series No. 454, 1993)). "As so conceptualized, the trigger concept is not designed to determine coverage; rather, it acts as a gatekeeper, matching particular claims with particular periods of time and hence particular insurance policies." James M. Fischer, Insurance Coverage for Mass Exposure Tort Claims: The Debate Over the Appropriate Trigger Rule, 45 Drake L.Rev.

625, 631 (1997). In environmental contamination cases the damage that triggers liability often cannot be linked to a single event. Instead, the damage usually is attributable to events that begin, develop and *417intensify over a sustained period of time.

Therefore, the damage has "'occurred' or been 'triggered' along a continuous timeline during which several successive policies issued to the insured were in effect." Mary R. DeYoung & William R. Hickman, Allocation of Environmental Cleanup Liability Between Successive

Insurers, 17 N. Ky. L.Rev. 291, 294 (1990). Courts apply various theories in determining when damage has occurred so as to trigger insurance coverage under CGL policies in the context of environmental contamination and toxic tort cases.

Those include the exposure, injury-in-fact, manifestation, and continuous trigger theories. Under the “exposure theory,” the triggering occurrence takes place on “the date of exposure to the injury producing agent.” Fischer, *supra*, 45 Drake L.Rev. at 643.

Under the “injury in fact” theory, a policy is triggered only “if the claimant was actually injured during the policy period.” Id. at 641, 650 A.2d 974. Under the “manifestation theory,” the policy is triggered “when the injury became reasonably apparent or known to the claimant.” Id. at 643, 650 A.2d 974.

Finally, the “continuous trigger theory” provides that “all policies in effect during the aggregate trigger period, for example, during the period of exposure or injury in fact, are activated and may be called on to respond to a loss.” Id. at 646, 650 A.2d 974.

In *Keene Corp. v. Insurance Co. of North America*, 667 F.2d 1034 (D.C.Cir.1981), the District of Columbia Circuit Court of Appeals was the first court to apply the continuous trigger theory in determining coverage for asbestos-related claims.

In addition to the manifestation of asbestos-related injury, the court held that “coverage is also triggered by both inhalation exposure and exposure in residence.” Id. at 1045. The court stated further: Inhalation of asbestos is an “occurrence” that causes injury for which Keene may be held liable.

The possibility that the insurers may not be liable arises solely because there is a period of time between the point at which the injurious process began and the point at which injury manifests itself. In this case, during that interim period, the existence of latent injury among people who had worked with asbestos became predictable with a substantial degree of certainty.

The injury and attendant liability became predictable precisely because it was discovered that past *418 occurrences were likely to have set in motion injurious processes for which Keene could be held liable. [Id. at 1046.] Subsequent to the decision in *Keene Corp.*, many jurisdictions have applied the continuous trigger theory in both asbestos and environmental contamination cases.

See *Zurich Ins. Co. v. Raymark*, 118 Ill.2d 23, 112 Ill.Dec. 684, 514 N.E.2d 150 (Ill.1987) (applying continuous trigger theory to personal injury asbestos claims); *Fireman’s Fund Ins. Co. v. Ex-Cell-O Corp.*, 662 F.Supp. 71, 76 (E.D.Mich.1987) (recognizing similarity between asbestos claims and hazardous waste claims and holding that continuous trigger theory implicates “each exposure of the environment to a pollutant”); *New Castle County v. Continental Cas.*

Co., 725 F.Supp. 800, 812 (D.Del.1989), rev'd in part and ajfd. in part, 970 F.2d 1267 (3d Cir.1992)(concluding in leachate pollution case that "the entire injurious process may constitute 'injury' under the terms of the policies"); Harleysville Mutual Ins. Co., Inc. v. Sussex County, 831 F.Supp. 1111, 1124 (D.Del.1993)(finding "slow leaching of pollutants from a landfill to adjacent property" constitutes a progressive injury requiring use of continuous trigger theory); Northern States Power Co. v. Fidelity and Cas.

Co. of New York, 523 N.W.2d 657, 664 (Minn.1994)(holding groundwater contamination is "continuous process in which the property damage is evenly distributed over the period of time from the first contamination to the end of the last triggered policy"); United States Gypsum Co. v. Admiral Ins. Co., 268 Ill.App.3d 598, 205 Ill.Dec. 619, 643 N.E.2d 1226, 1257 (Ill.App.Ct.1994) (applying continuous trigger theory to asbestos-related property damage claims); GenCorp, Inc. v. AIU Ins.

Co., 104 F.Supp.2d 740, 749 (N.D. Ohio 2000)(holding that continuous trigger will be applicable when environmental contamination claimant is able to show that damage, like asbestosis, occurred on continuing basis); See also Howard, *supra*, 22 Tort & Ins. L.J. at 632-33 ("Courts faced with coverage determinations in the toxic waste setting are likely to... adopt the exposure, manifestation or continuous trigger theories rather than a 'single point in time' test, with those courts intent *419upon maximizing coverage to the greatest extent possible opting for the continuous trigger approach.").

In Owens-Illinois, *supra*, 138 N.J. at 449-51, 650 A.2d 974 we applied the continuous trigger theory of coverage to the asbestos-related personal injury and property damage claims at issue. Although we did not disturb the general rule that "the time of the occurrence of an accident within the meaning of an indemnity policy is not the time the wrongful act is committed but the time when the complaining party is actually damaged," *id.* at 452, 650 A.2d 974 (citing Hartford Accident & Indem.

Co. v. Aetna Life and Cas. Ins. Co., 98 N.J. 18, 483 A.2d 402 (1984)), we held that in asbestos-related personal injury cases the required damage occurs from the time asbestos fibers are inhaled and continues until and including the manifestation of an asbestos-related disease, *id.* at 454, 650 A.2d 974.

We also rejected the argument advanced by the defendant insurance companies that the record did not contain sufficient medical testimony to establish that inhalation of asbestos immediately causes tissue damage, recognizing both the trial court's expertise in asbestos-induced disease cases and the " 'overwhelming weight of authority' " acknowledging that injury " 'occurs when asbestos is inhaled and retained in the lungs.' " *Id.* at 454, 650 A.2d 974 (quoting Lloyd E. Mitchell, Inc. v. Maryland Cos.

Co., 324 Md. 44, 595 A.2d 469, 478 (Md.1991)). We contrasted that solid medical foundation to the record in Hartford, a case involving a drug manufacturer's liability for injuries resulting from the ingestion of one of its drugs, where the plaintiff had "failed to offer any evidence that the medication administered to the child had caused her any damage before the Hartford coverage took effect." Id. at 453, 650 A.2d 974.

Our decision in Owens-Illinois was compelled by important public policy considerations, including the need to adapt our tort law to the peculiarities of mass-exposure tort cases. We recognized that the Court previously had adapted the law to "the uncertainties of medical causation." Id. at 458, 650 A.2d 974 (citing *Ayers v. Township of Jackson*, 106 N.J. 557, 605, 525 A.2d *420287 (1987)).

For example, in *Ayers*, supra, 106 N.J. at 609, 525 A.2d 287, a case involving personal injury claims from water contamination, we had held that "mass-exposure toxic-tort cases involve public interests not present in conventional tort litigation" that "justify judicial intervention even when the risk of disease is problematic." We concluded, therefore, that the continuous trigger theory would be better suited to address the public interest in enhancing available insurance coverage for environmental damages and would give courts the opportunity to "better channel the available resources into remediation of environmental harms." *Owens-Illinois*, supra, 138 N.J. at 480, 650 A.2d 974.

Although in *Owens-Illinois* we were dealing primarily with personal injuries related to asbestos exposure, we acknowledged the applicability of the continuous trigger theory to environmental contamination cases. We noted that "[p]roperty-damage cases are analogous to the contraction of disease from exposure to toxic substances like asbestos" and that " 'while property damage is not, of course, an insidious disease, many of the same considerations apply.' " Id. at 455, 650 A.2d 974 (quoting *Lac D'Amiante Du Quebec, Ltee. v. American Home Assurance Co.*, 613 F.Supp. 1549, 1561 (D.N.J.1985)).

We then held that "claims of asbestos-related property damage from installation through discovery or remediation (the injurious process) trigger the policies on the risk throughout that period." Id. at 456, 650 A.2d 974.

We concluded by observing that "when progressive indivisible injury or damage results from exposure to injurious conditions for which civil liability may be imposed, courts may reasonably treat the progressive injury or damage as an occurrence within each of the years of a CGL policy." Id. at 478, 650 A.2d 974. *Astro Pak*, supra, 284 N.J.Super. 491, 665 A.2d 1113 a case involving environmental pollution claims resulting from landfill contamination, is factually somewhat similar to the case at hand.

In that case, the Appellate Division applied Owens-Illinois to hold that damage resulting from landfill contamination triggered coverage under two successive CGL policies. In 1976, disposal operations at the Kin Buc Landfill in Edison, New Jersey were terminated after it was discovered that leachate from the landfill was contaminating the adjoining Raritan River.

The damage occurred despite the fact that the landfill was constructed with a supposedly impervious barrier that was intended to prevent contamination of the surrounding land and water. The Astro Pak Corporation had discharged hazardous wastes in the landfill between 1973 and 1976. Astro Pak, a defendant in an action brought by the owner and operator of the landfill against users of the landfill, sought a declaratory judgment to determine the respective liability of two of its principal insurers, the Fireman's Fund Insurance Company and the Hartford Insurance Company.

The court applied the continuous trigger theory to determine whether Hartford and the Fireman's Fund policies were liable for the property damage resulting from the pollution of the Kin Buc Landfill. The court observed that "Astro Pak's actions constituted possible pollution only because of the defective nature of the landfill.

The offending 'pollution' was the escape caused by this defect, not the placing of the pollutants into the landfill." Id. at 501, 650 A.2d 974. The court compared the leakage from a "presumably impervious landfill licensed by the State to accept the pollutants" to leakage from an enclosed above-the-ground or in-the-ground tank, and observed that in both instances it "would be difficult to say that the pollution had been caused each time" material is deposited inside.

Ibid. Based on that analysis, the court rejected Hartford's claim that its policies, which took effect after the landfill's closure, were not implicated because the manifestation of injury could not have occurred after the date of closure and after Astro Pak stopped depositing pollutants in the facility.

The court found that "the slow progression of [the] contaminants into the surrounding land and water continued" during Hartford's policy period. Id. at 500, 650 A.2d 974. Moreover, the court found that the Fireman's Fund's policy was implicated because Astro Pak deposited waste throughout the entire three-year policy period "when the escape of pollutants from the landfill was known to EPA, but not to Astro Pak." Id. at 502, 650 A.2d 974.

The court stated further that the pollution continued after the landfill's closure and that "[t]he property damage for which indemnification is sought thus occurred within both insurers' policy periods, even though Astro Pak's deposit of the pollutants may have preceded The Hartford's policies." Ibid. In conclusion, the court determined that by "focusing] on the discharge" of leachate from the landfill the trial court correctly had imposed liability on both Hartford and the Fireman's Fund.

Ibid. In *Carter-Wallace, Inc. v. Admiral Insurance Co.*, 154 N.J. 312, 712 A.2d 1116 (1998), this Court expressly applied the continuous trigger theory in a case involving property damage resulting from the contamination of a landfill. Carter Wallace Inc., a manufacturer of pharmaceutical and consumer products, was a named defendant in a lawsuit brought by the EPA against parties responsible for generating the waste that contaminated the Lone Pine Landfill in Monmouth County, New Jersey.

Eventually, Carter Wallace took part in the clean-up. One of Carter-Wallace's insurers, the Commercial Union Insurance Company, denied coverage under its second-layer excess policy. In its opinion, the Court elaborated on its prior analysis regarding the proper allocation of liability when the continuous trigger theory implicates multiple insurance policies.

Citing to *Astro Pak*, the Court also acknowledged that the reasoning in *Owens-Illinois* applied to "progressive environmental property damage." Id. at 321, 712 A.2d 1116. In other cases involving environmental pollution and toxic-tort property damage claims, New Jersey courts consistently have applied the continuous trigger rule to determine liability coverage.

See *United States Mineral Products Co. v. American Ins. Co.*, 348 N.J.Super. 526, 550, 792 A.2d 500 (App.Div.2002)(citing extensively from *Owens-Illinois* and *Carter-Wallace* and supporting "proposition that losses in an environmental damages case must be treated as an occurrence in each of the periods covered by a comprehensive general liability policy"); *Williams v. Port Authority of New York and New Jersey*, 345 N.J.Super.

549, 556, 786 A.2d 114 (App.Div.2001)(applying reasoning in *Owens-Illinois* and holding that "injury occurs during each phase of environmental contamination exposure, exposure in residence (defined as further progression of injury even after exposure has ceased), and manifestation of disease" to apply continuous trigger theory to worker's compensation case for exposure to toxic substancesXquoting *Owens-Illinois*, supra, 138 N.J. at 451, 650 A.2d 974); *Universal-Rundle Corp. v. Commercial Union Ins.*

Co., 319 N.J.Super. 223, 243-44, 725 A.2d 76 (App.Div.1999), certif. denied, 161 N.J. 149, 735 A.2d 574 (1999)(using continuous trigger theory to determine respective liability resulting from clean-up costs relating to soil and groundwater contamination); *Sayre v. Ins. Co. of North Amer.* 305 N.J.Super. 209, 211-12, 701 A.2d 1311 (App.Div.1997)(affirming trial court's use of continuous trigger liability analysis for progressive indivisible injury resulting from environmental contamination and cleanup of manufacturing site); *Gottlieb v. Newark Ins.*

Co., 238 N.J.Super. 531, 537, 570 A.2d 443 (App.Div.1990)(holding that "continuous trigger theory reflects the law of New Jersey" allowing plaintiffs to seek recovery for chemical poisoning claims under successive policies). Cf. *Aetna Cas. & Surety Co. v. Ply Gem Indus. Inc.*, 343 N.J.Super. 430, 453, 778 A.2d 1132 (App.Div.2001)(finding that "the record before us does not

require a finding of a ‘continuous trigger’ or ‘progressive injury¹ commencing upon installation” of allegedly defective fire retardant wood).

B Despite the fact that many jurisdictions have applied the continuous trigger theory to asbestos claims and hazardous waste claims, no consensus among those jurisdictions exists regarding the scope or the commencement of the “injurious process” covered under the theory. Relevant to this appeal, courts have pinpointed ^{*424}different initial triggering events that set off the continuous trigger theory.

Some jurisdictions have held that the initial triggering event should be injury-in-fact. In *GenCorp, Inc. v. AIU Insurance Co.*, 104 F.Supp.2d 740 (N.D.Ohio 2000), the plaintiff brought a declaratory judgment action against its insurers to recover costs or indemnification for costs associated with the long-term disposal of industrial waste at several of the plaintiffs industrial facilities.

While preparing for trial, the parties requested that the court provide some guidance regarding the appropriate trigger for determining coverage. The court issued an opinion that held that the continuous trigger theory would apply if the plaintiff was able to demonstrate continuous property damage, but also held that under that theory the initial trigger would be injury-in-fact as opposed to mere exposure.

Id. at 749. The court’s directive was based on the fact that the plaintiff was not faced “with an unreasonable task in proving the point of initial injury.” *Ibid.* In *Joe Harden Builders, Inc. v. Aetna Casualty and Surety Co.*, 326 S.C. 231, 486 S.E.2d 89 (S.C.1997), the South Carolina Supreme Court replied to a federal district court’s certified question regarding the appropriate trigger of coverage when defective construction results in progressive and continuous property damage.

The plaintiff contractor sought payment under a subcontractor’s insurance policy. The court held that “coverage is triggered at the time of an injury-in-fact and continuously thereafter to allow coverage under all policies in effect from the time of injury-in-fact during the progressive damage.” *Id.* at 91. See also *Lincoln Electric Co. v. St. Paul Fire and Marine Ins.*

Co., 210 F.3d 672, 690 (6th Cir.2000)(holding in dispute over coverage for personal injury claims relating to welding fumes and asbestos exposure that exposure would presumably trigger defendant insurer’s policy but remanding case to allow defendant to rebut this presumption with evidence of injury-in-fact); *Sentinel Ins. Co., Ltd. v. First Ins. Co. of Hawai‘i* 76 Hawai‘i 277, 875 P.2d 894, 917 (Haw.1994)(remanding dispute over appropriate trigger for third-^{*425}party liability relating to water infiltration at large apartment complex with order to apply injury-in-fact theory except in situation where “injury-in-fact occurs continuously over a period covered by different insurers or policies, and actual apportionment of the injury is difficult or impossible to determine”).

Some jurisdictions closely follow the reasoning in cases like *Keene Corporation* and have included initial exposure in the “injurious process” when applying the continuous trigger theory to environmental contamination claims.

In *Chemical Leaman Tank Lines, Inc. v. Aetna Casualty and Surety Co.*, 89 F.3d 976 (3d Cir.1996), the Third Circuit Court of Appeals held that under New Jersey law insurance coverage under the continuous trigger theory commences at the time of the initial discharge of pollutants.

The court explained that [u]nder the continuous trigger theory, exposure to the harm causing agent is sufficient to trigger potential coverage. Actual manifestation of the injury is not required, so long as there is a continuous, indivisible process resulting in damage. It is undisputed that Chemical Leaman discharged contaminated rinsewater into the unlined ponds and lagoons in every year from 1960-70.

Moreover, the district found as a factual matter that “contaminated rinsewater from the three settling ponds started migrating through the soil to underlying groundwater almost immediately after beginning pond operation in 1960.” Accordingly, the district court correctly concluded as a matter of law that property damage occurred upon initial exposure in 1960, and should have concluded as a matter of law that property damage occurred in each policy period from 1961-70.

[Id. at 995-96 (citations omittedXemphasis added).] The court rejected the insurers’ argument that the insured had failed to demonstrate “actual injury” during the relevant policy periods and held that “[u]nder the continuous trigger theory, proof of actual injury in the sense of manifestation of injury is not required.” Ibid. See also *Armotek Indus., Inc. v. Employers Ins. of Wausau*, 952 F.2d 756, 763 (3d Cir.1991)(holding that “ ‘exposure’ and ‘manifestation’ occurred at the time of the damage causing [oil] spill”).

In *Wisconsin Electric Power Co. v. California Union Insurance Co.*, 142 Wis.2d 673, 419 N.W.2d 255 (Wis.Ct.App.1987), the Wisconsin Court of Appeals directly applied the reasoning in *Keene Corporation* to a case involving injury caused by stray voltage *426from a faulty power supply system and held that coverage commenced at the time of the initial discharge of pollutants and continued until the harm had been eradicated.

The court stated that [w]e agree with the reasoning of the *Keene* decision. Cal Union’s policy states “[t]he word ‘occurrence’... means... a continuous or repeated exposure to conditions which results in... property damage neither expected nor intended by the Assured. All... exposure to... the same general conditions existing and/or emanating from one location or source shall be deemed one occurrence.” A perfectly reasonable interpretation of this language, and the interpretation advanced by WEPCo, is that as long as there is harmful exposure to dangerous conditions, the occurrence is continuing.

As in Keene, while any part of the single injurious process continues, the occurrence continues. This interpretation best protects the expectations and understandings of the insured. We therefore hold that the “occurrence” triggering coverage of the insurance policies began with the installation of the power supply in 1970 and continued uninterrupted until the problem was resolved in 1986.

[Id. at 680-81, 419 N.W.2d 255 (emphasis added) (citations omitted).] More recently, the Wisconsin Court of Appeals applied the reasoning in *Wisconsin Electric*, *supra*, to a case involving damage resulting from landfill contamination. *Society Ins. v. Franklin*, 233 Wis.2d 207, 607 N.W.2d 342 (2000).

The plaintiff municipality was insured by defendant insurer under consecutive one-year policies from 1972 to 1986. Defendant argued that only one of its policies was triggered because the contamination from the landfill used by the municipality seeped onto neighboring property in 1981.

The court rejected the insurer’s argument and instead held that the continuous trigger theory applied “because we have concluded that the contamination was one ongoing occurrence,” and “it would make no sense for us, or the trial court, to attempt to pinpoint when the occurrence happened.” Id. at 348 (citing specifically to language in *Wisconsin Electric* that “installation” triggers coverage).

Therefore, the court concluded that all of the defendant’s policies in effect from the time of the municipality’s discharge until the date of remediation were triggered. In *New Castle County*, *supra*, the court held that the “injurious process” encapsulated by the continuous trigger doctrine included a municipality’s initial discharge into a landfill and the gradual *427leaching of contaminants into surrounding property.

725 F.Supp. at 812 (noting that the “process that led to this property damage began as early as the first half of 1969” and referring to testimony indicating that “there had been a slight deterioration of the wells at Tybouts by July, 1969”). See also *Fireman’s Fund Ins. Cos. v. Ex-Cell-O Corp.*, *supra*, 662 F.Supp. at 76 (holding several defendant insurers liable where “policyholders allegedly exposed the sites to pollutants during” policy periods); *United Technologies Corp. v. Liberty Mutual Insur.*

Co., No. 877172, 1993 WL 818913, at *18 (Mass.Super.Aug.3, 1993)(citing *New Castle County*, *supra*, 725 F.Supp. at 812, for proposition that continuous trigger doctrine “embrac[es][] dumping, leaching from the landfill, and discovery of the pollution damage”); *Huntzinger v. Hastings Mutual Ins. Co.*, 143 F.3d 302, 315 (7th Cir.1998)(adopting continuous trigger theory and stating that “exposure ‘occurs at the moment that hazardous wastes are improperly released into the environment’ ” and that “manifestation ‘is judged by the time at which the leakage and damage are first discovered’”) (citations omitted); See also *DeYoung & Hickman*, *supra*, 17 N. Ky. L.Rev. at

295 (“The dumping or discharge of the waste is akin to initial exposure to (i.e. inhalation of) asbestos; the leaching of the wastes into the ground and subsurface reservoirs is similar to exposure in residence; and the property damage ultimately discovered is analogous to the manifestation of asbestos-related diseases.”) (citations omitted).

Although factually and procedurally distinct from the instant matter, a line of cases interpreting the “owned-property” exclusion in CGL insurance policies also appears to define the “injurious process” more broadly. Many jurisdictions have held that an insured’s on-site soil clean-up should not bar coverage under an “owned property” exclusion clause if the contaminants in the soil threaten to migrate to underlying groundwater or the surrounding property of others.

Arco Industries Corp. v. American Motorists Insurance Co., 232 Mich.App. 146, 594 N.W.2d 61, (Mich.Ct.App. 1998), involved insurance claims related to the remediation of chemical contamination of an auto parts manufacturing plant.

In *428Arco, the Michigan Court of Appeals concurred with a lower court ruling that the “owned property” exclusion in the CGL policy at issue did not exclude coverage “because the failure to clean up the soil and seepage pond at the site would further contaminate the groundwater.” *Id.* at 66.

The lower court had pointed to the “substantial threat” that the contaminants would migrate into the groundwater. *Id.* at 67. In *Aetna Casualty & Surety Co. v. Dow Chemical Co.*, 28 F.Supp.2d 448 (E.D.Mich.1998), the insured sought indemnification from its insurer for remediation costs resulting from the environmental contamination at several of its manufacturing sites.

The court held that Michigan law provided coverage for environmental remediation notwithstanding the owned property exclusion. Although the insured did not need to show actual damage had occurred to a third-party, that court held that the insured must first establish “the need for remediation to prevent imminent harm to a third party.” *Id.* at 454.

As the court explained, [i]f an insured’s subsoil is contaminated and will imminently affect the groundwater, the insured need not wait for the ground water to show contamination in order to obtain insurance coverage for remediation.

The requirement of imminent damage prevents insureds from passing off the cost of the property improvements to their insurers where third-party damage is purely speculative----While the owned property provision does not bar coverage for remediation of third-party property, it also does not bar coverage where remediation was undertaken pursuant to a government mandate. [/A at 455.]

Other jurisdictions also have held that insurers are required to indemnify remediation costs even when contamination has not spread beyond the insured’s own property. See *Patz v. St. Paul Fire & Marine Ins. Co.*, 15 F.3d 699, 705 (7th Cir.1994)(holding that coverage was triggered despite

applicability of “owned property” exclusion because government had mandated remediation of the environmental contamination); *Bankers Trust Co. v. Hartford Accident & Indem.*

Co., 518 F.Supp. 371, 373-74 (D.N.Y. 1981)(“[W]ork done on property to prevent further oil seepage was as a matter of law within the coverage of the policies... if the policy did not cover this situation, plaintiffs could have allowed the *429oil to continue to pollute the river and its shores, causing further social damage and damage to third parties, and ironically ultimately costing even Hartford more money.”).

The courts in those cases reason that an insured’s act of depositing waste may set off an unalterable process that threatens to damage „other property. C The parties to this appeal do not dispute the applicability of the continuous trigger theory of coverage to environmental contamination claims and we see no reason to depart from the sound line of cases and academic support recognizing the benefits of applying that theory to these types of claims.

See *Developments in the Law — Toxic Waste Litigation*, 99 Harv. L.Rev. 1458, 1581 (1986) (“Because it avoids the dangers of the manifestation rule, and because it encourages all insurers to monitor risks and charge appropriate premiums, the continuous trigger rule appears to be the most efficient doctrine for toxic waste cases.”). Instead, this case turns on how the theory should be applied.

Indeed, the majority and dissenting appellate division opinions, although both applying the continuous trigger theory, reached different conclusions concerning Century’s coverage obligation. The majority opinion relied on *Astro Pak*, supra, 284 N.J.Super. 491, 665 A.2d 1113, for the proposition that in determining the initial trigger of the continuous trigger theory the focus should be on the discharge of contaminants from a landfill, rather than on the depositing of waste into that landfill.

Quincy Mutual, supra, 338 N.J.Super. at 400, 769 A.2d 1053. The court interpreted *Astro Pak* as holding that under the continuous trigger theory “the first pull of [the] trigger occur[s] only when there ha[s] been some ‘damage,’ and that waste disposal (or dumping) by itself did not cause ‘damage.’ ” Ibid. Furthermore, the court rejected Quincy’s comparison of the environmental contamination from the landfill in this case with the asbestos injury addressed in *Owens-Illinois*, supra, 138 N.J.

437, 650 A.2d 974, arguing that the court in *Owens-Illinois* “took pains to discuss and ultimately approve the *430trial court’s conclusion that ‘an injury-in-fact’ triggering coverage under the insurance policies occurs on the inhalation of asbestos fibers.” *Quincy Mutual*, supra, 338 N.J.Super. at 401, 769 A.2d 1053.

The court found that Quincy had presented no evidence demonstrating the presence of injury at the time toxic waste was deposited into the Landfill that was at all comparable to the scientifically

proven tissue damage associated with the initial inhalation of asbestos. Instead, damage occurred only when “the toxic leachate forming part of that waste seeped out of the landfill and reached nearby ground water.” *Id.* at 402, 769 A.2d 1053.

Therefore, because Dr. Steiner’s uncontroverted testimony indicated that that seepage could not have occurred until at least approximately 185 days after the Borough first deposited waste in the Landfill, a date subsequent to the termination date of Century’s CGL policy, the court concluded that Quincy was solely responsible for indemnifying the Borough.

Although the court correctly relied on the underlying principles set forth in *Owens-Illinois* and subsequent New Jersey cases applying the continuous trigger theory to toxic tort and environmental contamination cases, we disagree with its analysis. Instead, we would adopt the analysis of the dissent and its conclusion that Century is partially responsible for indemnifying the Borough.

In her dissent, Judge Wecker, applying the continuous trigger theory, concluded that coverage initially was triggered when the Borough first dumped toxic waste into the Kramer Landfill while Century’s policy was still in effect. Like the majority, Judge Wecker relied on Dr. Steiner’s uncontroverted expert testimony, albeit a different portion, to come to that conclusion.

As Judge Wecker’s summary of Dr. Steiner’s testimony demonstrates, the “injurious process” in this case is comparable to the “injurious process” involved in asbestos-related personal injury and property damage cases. Dr. Steiner described leachate as “a flow of liquid migrating downward through a porous material.” The downward movement “is a result of gravity and capillary action.” He agreed that “contaminated leachate” from material deposited at the *431 landfill eventually finds its way into the groundwater.

It is clear from Dr. Steiner’s testimony that the landfill was not the equivalent of an enclosed tank or container, and that by its very nature, toxic materials deposited in the landfill would, without fail, seep into the ground and run off as leachate into the groundwater, which in turn penetrates the soil below and downstream of the landfill.

The contaminated leachate therefore is not the product of some accidental leak. On the contrary, it represents the natural and unavoidable progression of the original dumping, which must be deemed the “exposure” that is the starting point of an “occurrence” that triggers coverage.

The fact that it may have taken some 200 days for the polluting leachate to reach a particular point does not mean that damage to property did not occur earlier. The property, that is, the landfill, was contaminated as soon as the toxic material was dumped, for that is when the toxins began their damaging journey through the ground — just as the asbestos fibers in *Owens-Illinois* began their damaging journey through the air immediately upon installation of the insulation.

[Id. at 410, 769 A.2d 1053.]¹ Based on Dr. Steiner's testimony, Judge Wecker concluded that the Borough's "damaging pollution set in motion a 'cumulative and progressive' process" that is analogous to the onset of asbestosis. Id. at 414, 769 A.2d 1053.

We believe that Dr. Steiner's testimony demonstrates the inescapable conclusion that the initial deposit of toxic wastes into the Kramer Landfill set off the injurious process resulting in groundwater contamination.

As one commentator has observed, "[t]oxic waste loss will be most analogous to asbestos loss when the leaching begins at the moment of dumping, since the *432 resulting damage may be deemed to have resulted from one continuous, uninterrupted process or from continuous exposure to substantially the same general conditions." Howard, *supra*, 22 Tort & Ins. L.J. at 639.

Other jurisdictions similarly have held that the depositing of waste into a landfill triggers an unalterable and injurious process. In *Harleysville Mutual*, *supra*, 831 F.Supp. at 1124, although distinguishable from this case because the record did not provide scientific evidence indicating the approximate amount of time it took for leachate to move through the landfill, the court acknowledged the possibility that the "injurious process" could have been initiated when toxic waste was first dumped in the landfill: "Although testing by Weston did not reveal contamination of third party property until 1989, the insurers themselves have argued that the geologic conditions at Landfill No. 5 were sufficient to foster the development of leachate contamination of the groundwater immediately upon the beginning of landfill operations in 1970." Id. at 1124-25.

Moreover, Dr. Steiner's testimony regarding the process by which leachate is generated and moves through an unlined landfill, such as the Kramer Landfill, demonstrates that the reasoning advanced by the court in *Keene Corporation* is applicable to the factual context in this appeal.

Although the initial exposure to the contaminants caused by the Borough's depositing of municipal waste was not "an immediate and discrete injury, the fact that it is part of an injurious process is enough for it to constitute 'injury' under the policies." *Keene Corp.*, *supra*, 667 F.2d at 1046 ("The injury and attendant liability became predictable precisely because it was discovered that past occurrences were likely to have set in motion injurious processes for which Keene could be held liable.").

See also *Chemical Leaman*, *supra*, 89 F.3d at 995-96 (holding that insured's initial discharge of contaminated rinsewater began "continuous indivisible process resulting in damage"); *New Castle County*, *supra*, 725 F.Supp. at 812 (holding that "injurious process" was initiated before leachate contamination); *DeYoung & Hickman*, *supra*, 17 N. Ky. L.Rev. at 295 (concluding that dumping of waste in landfill is directly *433 analogous to inhalation of asbestos); *Aetna Cas. & Surety Co.*, 28 F.Supp.2d at 454 (recognizing that coverage could be triggered by need to prevent imminent contamination of groundwater).

The dissent below also rejected the majority's reliance on *Astro Pak*. As Judge Wecker explained, in *Astro Pak* the court was faced with "a dispute over the last pull of the trigger — the end of the covered 'occurrence' — and not (as here) in a dispute about the first pull of the trigger." *Quincy Mutual*, supra, 338 N.J.Super. at 411, 769 A.2d 1053 (Wecker, J., dissenting).

Moreover, the court in *Astro Pak* held that the discharge of leachate into the groundwater rather than the initial depositing of waste constituted pollution damage in part because of the way in which the landfill was constructed. Unlike the *Kramer Landfill*, as described by Dr. Steiner in his testimony, the landfill in *Astro Pak* was built with a liner designed to protect the surrounding groundwater from contamination.

Based on its physical qualities, the court compared it to an enclosed tank that had sprung a leak. Here, "there is no [] evidence to support an analogy between the leaching that occurred in the *Kramer* landfill and a leaking tank." *Ibid*. Furthermore, we are persuaded that a bright-line rule triggering coverage when toxic waste is first deposited in a landfill is more consistent with *Owens-Illinois* and subsequent toxic tort environmental contamination cases. "From a theoretical point of view, when toxic material deposited in or on property creates a condition that is dangerous to life or health, the deposit itself affects the utility of the property, and the property is damaged thereby." *Quincy Mutual*, 338 N.J.Super. at 413, 769 A.2d 1053 (Wecker, J., dissenting).

Our goal in *Owens-Illinois*, supra, was to fashion a standard that would "narrow the range of disputes and provide procedures better to resolve the disputes that remain." 138 N.J. at 480, 650 A.2d 974. Requiring "each insurer (or a court) to calculate the date when pollutants that were dumped into a landfill most likely leached into the groundwater in order to determine the start of the continuous trigger period" complicates an already complicated area of the law.

Quincy Mutual, supra, 338 N.J.Super. at 412, 769 A.2d 1053 (Wecker, J., dissenting). We prefer to adopt a rule that takes into consideration the impossibility under certain circumstances of establishing exactly when the groundwater contamination began: "Unfortunately, life in a landfill is not so 'clean.' The geography of each site is unique, and thus it is not possible to generalize at what rate pollutants will migrate from the site." *New Castle County*, supra, 725 F.Supp. at 811.

Moreover, we adopted the continuous trigger theory in *Owens-Illinois*, supra, in large part because of its ability to maximize coverage. 138 N.J. at 452, 650 A.2d 974. We also recognized the ability of insurance companies to spread the costs of indemnification across the industry, and that the law should "not provide disincentives to parties to acquire insurance when available to cover the risks." *Id.* at 472-73, 650 A.2d 974.

See also *Carter-Wallace*, supra, 154 N.J. at 322, 712 A.2d 1116 (stating that decision was "guided by our concern for the efficient use of resources to address the problem of environmental disease and by the demands of simple justice").

As Judge Pressler stated in *Winding Hills Condominium Association, Inc. v. North American Specialty Insurance Co.*, 332 N.J.Super. 85, 91, 752 A.2d 837 (2000), “the law’s solicitousness for victims of mass toxic torts and other environmental contamination is entirely consistent with choosing that conceptually viable trigger theory affording the greatest ultimate redress.” See also *DeYoung & Hickman*, supra, 17 N. Ky. L.Rev. at 296 (“The more policies triggered, the more likely the insured’s losses will be covered, and the more coverage potentially available to indemnify the insured for its loss.”).

Based on the foregoing considerations, we conclude that exposure relating to the Borough’s initial depositing of toxic waste into the Landfill is the first trigger of coverage under the continuous trigger theory and constitutes an “occurrence” under Century’s policy. That result also is the most consistent with our previous decisions in the area of environmental contamination insurance law. *435III Based on our conclusion that Century’s policy was implicated as a result of the Borough’s depositing of hazardous waste into the Landfill, we now must determine the appropriate allocation of liability between the Quincy and Century policies.

Again, there appears to be no dispute among the parties that the pro rata risk allocation rule established in *Owens-Illinois*, supra, 138 N.J. 437, 650 A.2d 974, should apply. However, according to Quincy, under that rule Century should be responsible for the number of years it provided coverage during the continuous trigger period. Over the relevant time period one of Century’s policies and three of Quincy’s policies were triggered and each policy had a \$500,000 policy limit.

Therefore, Quincy contends that Century’s share of the accumulative two million dollar policy limit is twenty-five percent. Although the Appellate Division concluded that Century’s policy was not implicated under the continuous trigger theory, the court addressed Quincy’s contention regarding the appropriate allocation of liability.

The court determined that, if both insurers’ policies had been implicated, their respective liability would be allocated based on the number of days each policy provided coverage during the continuous trigger period.

Therefore, the court concluded that Century’s proportionate share of liability would only be based on one or two months exposure (between commencement of dumping in April/May 1978 and expiration of the Century policy on June 18, 1978) out of a total of some two and one-half years of dumping between May 1978 and January 1981. That would represent approximately forty-five days of a total of 880 days, or about .05 percent.

That number would be little more than de minimus. [*Quincy Mutual*, supra, 338 N.J.Super. at 403 n. 2, 769 A.2d 1053.] The Appellate Division based that analysis on our explanation of pro rata risk allocation in *Owens-Illinois*.

In *Owens-Illinois*, supra, we rejected the theory of allocation under which the continuous injury is collapsed into one year and one policy's coverage applies to that injury. 138 N.J. at 468, 650 A.2d 974. Instead, we determined that "[a] fairer method of allocation appears to be one that is related to both the time on the risk and *436the degree of risk assumed." 138 N.J. at 479, 650 A.2d 974.

Therefore, we held that a "better formula" would allocate the "losses among the carriers on the basis of the extent of the risk assumed, i.e., proration on the basis of policy limits, multiplied by years of coverage." Id. at 475, 650 A.2d 974 (citing *Armstrong World Indus., Inc. v. Aetna Cas. & Surety Co.*, 26 Cal.Rptr.2d 35, 57 (Cal.Ct.App.1993)).

We then relied on the hypothetical facts we had used earlier in the opinion to explain the concept: If we were to accept the constant levels of the policy limits as evidence of constant risks assumed over the nine-year span from exposure to manifestation (in the case of disease manifested in the ninth year), the carriers on the risk in years four, five, and six would each pay one-ninth of the loss, or collectively thirty-three percent.

If the facts of coverage had been otherwise — let us say policies had been in effect for years one through three in the amount of two million per year and in years four through six at three million per year — 'we might assess the risk assumed in years seven through nine at four million per year. Carriers during the first three years would bear- roughly twenty-two percent (6/27ths); carriers covering the middle three years would bear thirty-three percent (9/27ths); and the building owners would bear forty-four percent of the risk (12/27ths).

Of course, policy limits and exclusions must be taken into account. We recognize that such even mathematical proportions will not occur, and so we must repose a substantial measure of discretion in a master who must develop the formula that fairly reflects the risks assumed or transferred. Id. at 475-76, 650 A.2d 974.]

As the Appellate Division explained, we spoke of years of coverage only because of the hypothetical example we used to explain allocation based on the extent of the risk assumed. The use of a hypothetical that focused on years rather than days provided a simplified explanation for the concept that "a company providing coverage over a longer period would normally bear a greater share of the insured's liability than one [that] was involved for a shorter period." *Quincy Mutual*, supra, 338 N.J.Super. at 403 n. 12, 769 A.2d 1053.

Later in the opinion we stated more generally that the appropriate theory of allocation "should be in proportion to the degree of the risks transferred or retained during the years of exposure." *Owens-Illinois*, supra, 138 N.J. at 475, 650 A.2d 974.

We did not specifically address how that formula would apply to the facts presented in this appeal where an insurer was on the risk only for a portion of a year that is included *437in the continuous trigger period.

We now hold specifically that the Owens-Illinois allocation formula should reflect days rather than years on the risk when the underlying facts require that degree of precision in the allocation of liability. Our holding does not affect the capacity of the continuous trigger theory to afford maximum coverage in environmental contamination claims simply because in this case the insurer on the risk during the initial portion of the continuous trigger period will be responsible only for a de minimus portion of the Borough's liability.

Moreover, principles of "simple justice" dictate that we reject Quincy's argument that Century should be responsible for an entire year within the continuous trigger period merely because it was on the risk for a portion of that year. *Id.* at 473, 650 A.2d 974. *TV* The judgment of the Appellate Division is reversed and the matter is remanded to the trial court for an allocation of liability between the Quincy and Century policies that is consistent with this opinion.

The following exchange during Dr. Steiner's cross examination demonstrates what appears to be the virtual inevitability of groundwater contamination once toxic wastes are deposited in an unlined landfill: Q. Well, holding capacity is merely a way station, the movement of [] one molecule will move to downward, hit a dry area, a way station, waiting for it to be wetter at which point it will continue its migration downward, right?

A. That's true. Q. Okay. So eventually [] one molecule reaches the ground water, is that right? A. Yes. Q. Now, the placement of new material at the [top] of the landfill creates new molecules of material that will eventually find their way to ground water? A. Eventually, yes. Q. And if that new material was not placed in the landfill it would not find its way to ground water?

A. True.