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## **ENVIRONMENTAL PROTECTION**

### **SITE REMEDIATION AND WASTE MANAGEMENT**

#### **Solid Waste; Landfills**

**Adopted Amendments: N.J.A.C. 7:26-1.4, 1.6, 2.8, 2A.1, 2A.4, 2A.7, 2A.8, and 2A.9;**

**7:26A-1.3; 7:27-7.1; and 7:27A-3.10**

**Adopted Repeal and New Rule: N.J.A.C. 7:26-2A.3**

**Adopted New Rule: N.J.A.C. 7:27-7.3**

Proposed: August 15, 2016, at 48 N.J.R. 1526(a).

Adopted: August 8, 2017, by Bob Martin, Commissioner, Department of Environmental Protection.

Filed: August 10, 2017, as R.2017 d.166, **with non-substantial changes** not requiring additional public notice and comment (see N.J.A.C. 1:30-6.3).

Authority: N.J.S.A. 13:1B-3, 13:1D-1 et seq., 13:1D-125 et seq., 13:1E-1 et seq., 13:1E-100 et seq., 13:1E-125.1 et seq., 26:2C-1 et seq., 47:1A-1 et seq., 58:10-23.11, and 58:10A-1 et seq.

DEP Docket Number: 08-16-07.

Effective Date: September 5, 2017.

Operative Date: October 7, 2017, as to N.J.A.C. 7:27-7.1, 7.3, and 7:27A-3.10, in accordance with N.J.S.A. 26:2C-8.

Expiration Dates: September 16, 2023, N.J.A.C. 7:26;

December 23, 2022, N.J.A.C. 7:26A;

Exempt, N.J.A.C. 7:27; and

March 21, 2020, N.J.A.C. 7:27A.

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The Department of Environmental Protection (Department) is adopting amendments, new rules, and repeals in its rules governing legacy landfills and all sanitary landfill facilities to codify and implement the provisions of the Legacy Landfill Law, N.J.S.A. 13:1E-125.1 et seq. (the Law), which became effective on June 26, 2013. Rather than promulgating a separate subchapter to implement the Law, the Department is integrating the Law's requirements into the existing rules to provide the regulated community and the public with comprehensive rules that address closure and post-closure care and disruption of all sanitary landfills. The adopted amendments affect the Solid Waste rules, N.J.A.C. 7:26, Recycling Rules, N.J.A.C. 7:26A, Air Pollution Control rules, N.J.A.C. 7:27, and the Air Administrative Procedures and Penalties, N.J.A.C. 7:27A. Additional amendments address post-closure requirements and clarify rule language.

The Law establishes requirements and controls applicable to legacy landfills and closed sanitary landfill facilities that accept new materials after closure to, for example, close a landfill that has not been previously closed, regrade a landfill for proper drainage, or prepare the landfill surface for redevelopment. The Law requires certain people who undertake closure and possible redevelopment of legacy landfills, and owners or operators who propose to bring material to closed sanitary landfill facilities for redevelopment, to apply for and obtain municipal site plan approval. The Law further requires financial assurance in an amount necessary to pay for closure costs to be established before certain regulated materials may be accepted at legacy landfills and closed sanitary landfill facilities, and liability insurance to cover damages or claims resulting from the operation or closure of a legacy landfill or closed sanitary landfill facility. The Law establishes a maximum air quality standard for hydrogen sulfide (H<sub>2</sub>S) of 30 parts per

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billion by volume (ppbv) averaged over any 30 minutes, measured at the property line of a legacy landfill or closed sanitary landfill facility, and provides for injunctive and other judicially-imposed relief if the air quality standard is violated.

The adopted rules add new requirements or clarify existing requirements regarding financial assurance for closure costs, escrow funding for post-closure costs, general liability insurance, including environmental or pollution liability insurance, municipal site plan approval, and management of H<sub>2</sub>S. They also expand the existing requirements applicable to professional engineers, and for post-closure reports.

This rule adoption can also be viewed or downloaded from the Department's website at <http://www.nj.gov/dep/rules>.

### **Summary of Hearing Officer Recommendation and Agency Response**

The Department held a public hearing on September 23, 2016, at the Department's Public Hearing Room, 401 East State Street, Trenton, New Jersey. Two people provided oral comments. Anthony Fontana of the Division of Solid and Hazardous Waste within the Site Remediation and Waste Management Program served as hearing officer. After reviewing the comments received during the public comment period, the hearing officer has recommended that the proposal be adopted with the changes as described below in the Summary of Public Comments and Agency Responses. The Department accepts the hearing officer's recommendations.

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The record of the public hearing is available for inspection in accordance with applicable law by contacting:

Department of Environmental Protection

Office of Legal Affairs

ATTN: Docket No. 08-16-07

401 East State Street, 7th Floor

Mail Code 401-04L

PO Box 402

Trenton, New Jersey 08625-0402

### **Summary of Public Comments and Agency Responses**

The following people submitted written comments and/or gave oral testimony on the proposal:

1. Sandra T. Ayres, Esq., Scarinci Hollenbeck, on behalf of Ocean County Landfill Corp.
2. John R. Baron, Solid Waste Association of North America, NJ Chapter
3. Rodger A. Ferguson, Jr., Licensed Site Remediation Professional Association
4. Richard L. Fitamant, Middlesex County Utilities Authority
5. Toni Granato, New Jersey Sierra Club
6. Timothy R. Henderson, Esq., Rich and Henderson, P.C., on behalf of Soil Safe, Inc.
7. Samantha Jones, Chemistry Counsel of NJ and Site Remediation Industry Network
8. Michael McGuinness, NAIOP NJ, the Commercial Real Estate Development Association

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9. Thomas H. Prol, Esq., Laddey Clark & Ryan, LLP, on behalf of Sussex County Municipal

Utilities Authority

10. Matthew Rutkowski, Monmouth County Reclamation Center

11. Jerome Sheehan, Burlington County Board of Freeholders

12. Brett Slensky, Esq., Manko Gold Katcher & Fox, LLP, on behalf of Waste Management of New Jersey, Inc.

13. Behram Turan, P.E., CME Associates, on behalf of Gloucester County Improvement Authority

14. Edwin Valis, Cornerstone Environmental Group

A summary of the timely submitted comments and the Department's responses follows. The number(s) in parentheses after each comment identify the commenter(s) listed above.

### **Comments in Support**

1. COMMENT: The proposed amendments do a good job of identifying the closure obligations of owners of legacy landfills in accordance with the directives in the Landfill Legacy Law. (6 and 12)

2. COMMENT: The additional monitoring, public notice, and testing requirements, and the air quality standard for H<sub>2</sub>S are appropriate. (5)

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3. COMMENT: The Department's proposed framework is sorely needed to guide the critically important evaluation of a landfill's progress during the post-closure care period. (12)

4. COMMENT: The proposed rules are important because existing landfills need to be properly monitored and there must be funding in place to close them. The requirement that landfills establish bonds and escrow accounts is necessary in order that there is an adequate way to deal with closure costs. (5)

5. COMMENT: The definition of "contaminated soil" and the deletion of "clean fill" from the definition of "solid waste" are appropriate. It is right that the Department is exempting non-water-soluble, non-decomposable, inert solids, such as rock, soil, gravel, concrete, glass, and/or clay or ceramic products, from the definition of "solid waste," provided these materials do not contain contaminant concentrations exceeding the more stringent of the residential or non-residential direct contact soil remediation standards. (7)

RESPONSE TO COMMENTS 1 THROUGH 5: The Department acknowledges the commenters' support for the adopted rules.

### **General Comments**

6. COMMENT: The information gathering meetings were not adequate regarding consideration of active landfill owners and operators, and did not include a discussion of H<sub>2</sub>S. (11)

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7. COMMENT: The public stakeholder meetings lacked transparency. The Department did not include one of the largest Class B recyclers in the State to the session in which amendments to the Class B recycling rules were to be amended. (6)

RESPONSE TO COMMENTS 6 AND 7: Regulated community involvement is an integral component of the Department's rule and policy development. The purpose of the information gathering meetings held as part of this rulemaking was to convene representatives of affected interests to seek their experiences and perspectives on a given topic, so that the Department could make well-informed and balanced decisions when drafting rules. The Department did not discuss H<sub>2</sub>S at the information gathering meetings. However, the purpose of the information gathering meetings was not to reach a consensus on the rulemaking; rather, the meetings allowed the Department and the regulated community to exchange ideas about some of the issues involved in the rulemaking. Ultimately, the Department must determine how best to satisfy its statutory mandates to protect public health, safety, and welfare and the environment.

As noted in the notice of proposal Summary (48 N.J.R. at 1527), the Department held information gathering meetings in September, October, and December 2014, at its headquarters in Trenton to solicit input from representatives from the regulated community, including representatives of both active and closed sanitary landfills, Class B recycling facility owners, municipalities, and engineering and environmental consultants. Although Soil Safe, Inc., was not among the participants, the Class B recycling industry was represented, both by individual Class B recyclers and the New Jersey Concrete and Aggregate Association (NJCAA). NJCAA, according to its website ([www.njcaa.net](http://www.njcaa.net)), represents a variety of entities that engage in the production and marketing of

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ready-mixed concrete and sand aggregates, and “is committed to representing the Class B recycling community.”

### **Hydrogen Sulfide (H<sub>2</sub>S)**

8. COMMENT: Hydrogen sulfide (H<sub>2</sub>S) should not be considered a toxic or harmful substance. In *Strategic Environmental Partners LLC v. NJDEP*, 438 N.J. Super. 125 (App. Div. 2014), cert. den. 221 N.J. 218 (2015), the court stated H<sub>2</sub>S is not “air pollution.” The court stated that “[h]ydrogen sulfide is not on the list of New Jersey air toxics, see N.J.A.C. 7:27-21.1, and the New Jersey Department of Health has determined that hydrogen sulfide has not been shown to cause cancer in humans, and its possible ability to cause cancer in animals has not been studied thoroughly. Similarly, based on available data, the New Jersey Department of Health does not believe there would be long-term adverse health effects from the emission of hydrogen sulfide.” H<sub>2</sub>S is not defined as a toxic air contaminant by the State or Federal government. (2, 4, and 9)

RESPONSE: The Department has not identified H<sub>2</sub>S as a “toxic substance,” to be regulated under N.J.A.C. 7:27-17, Control and Prohibition of Air Pollution by Toxic Substances.

However, H<sub>2</sub>S is an air pollutant that can cause health effects. The commenter is incorrect that the court in *Strategic Environmental Partners LLC* determined that H<sub>2</sub>S is not “air pollution.” In its decision the Appellate Division stated that “[h]ydrogen sulfide is an odorous, noxious, colorless, poisonous, flammable gas that produces a ‘rotten egg’ odor” and that, although not found to be carcinogenic based on available information, “for some individuals, hydrogen sulfide



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may cause eye, nose, and throat irritations, headaches, and nausea, as well as aggravate pre-existing respiratory issues.” 438 N.J. Super. at 133-34. The Appellate Division, in a subsequent unpublished decision *State of New Jersey v. Strategic Environmental Partners LLC*, Docket no. A-4968-13T4 (November 19, 2015), held that the H<sub>2</sub>S odors from the Fenimore Landfill “caused injury, detriment or annoyance to [Roxbury] Township residents or endangered their comfort, repose, health or safety.”

The Air Pollution Control Act at N.J.S.A. 26:2C-8 authorizes the Department to promulgate rules to prevent, control, and prohibit air pollution in the State. The Air Pollution Control Act defines “air pollution” as “the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property” in the State. Therefore, based on the mandate of the Air Pollution Control Act, the Department has the authority to implement rules that ensure that emissions of H<sub>2</sub>S from landfills are not of a quantity or duration to constitute air pollution.

Numerous studies show the effect of H<sub>2</sub>S on human health. For example, the U.S. Environmental Protection Agency’s (EPA’s) Integrated Risk Information System has established an H<sub>2</sub>S chronic health value of one parts per billion by volume (ppbv) (two micrograms per cubic meter-ug/m<sup>3</sup>). This is an estimate of an air concentration that would cause no significant health effects for the human population, including sensitive subgroups, even if inhaled for up to a lifetime. It is based on data that showed damage to the nasal cavities (mucous membranes) of rats. The California Office of Environmental Health Hazard Assessment established an H<sub>2</sub>S acute health value of 30 ppbv (42 ug/m<sup>3</sup>) based on data from humans exposed to increasing

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concentrations of H<sub>2</sub>S. Human exposure to this H<sub>2</sub>S level for more than an hour could result in mild adverse health effects to the central nervous system including headache and nausea. Other H<sub>2</sub>S health studies suggest that H<sub>2</sub>S exposure may have negative effects on the respiratory tract, cardiovascular system, and nervous system.

9. COMMENT: The Department is attempting to promulgate a regulation referencing an ambient “standard” when there is no documented New Jersey Ambient Air Quality Standard for H<sub>2</sub>S. An H<sub>2</sub>S concentration of 30 ppbv at the perimeter of an operating landfill or off-site cannot be used in determining whether an H<sub>2</sub>S control needs to be implemented. The ambient air quality standards are vague with respect to implementation of monitoring beyond the facility boundary. (1, 4, 9, and 13)

10. COMMENT: There is simply no statutory authority to consider the proposed 30 ppbv H<sub>2</sub>S concentration as determinative of odor pollution at an operating sanitary landfill solid waste facility without a more rigorous treatment of the unique factors present at each separate operating landfill as required under the statute. Simply put, the proposal to utilize 30 ppbv of H<sub>2</sub>S for an average of 30 minutes as a concentration limit at an operating sanitary landfill’s property line or off-site, giving rise to odor violations and penalties, offends the requirements of the New Jersey Air Pollution Control Act, and is an arbitrary, capricious, and unreasonable approach to rulemaking. In short, besides being impractical and unworkable at an active, operating landfill, it violates the Administrative Procedures Act (APA), which requires regulatory authorities draft with clarity as a fundamental principle of administrative due process. H<sub>2</sub>S is not a criteria

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pollutant or toxic substance, and it has no promulgated ambient air quality standard. (1, 2, 4, 9, 10, and 13)

11. COMMENT: Is the Department proposing to make the H<sub>2</sub>S threshold of 30 ppbv an ambient air quality standard, or is it still part of the air toxic guidelines and not a vetted, discussed, and justified standard? (14)

12. COMMENT: Operating landfills are already required to meet odor and H<sub>2</sub>S emission controls. Applying an air quality standard on a fugitive source of emissions is not practicable. The 13 highly regulated operating sanitary landfill solid waste facilities in New Jersey are already required to control odor and landfill gas emissions from both Solid Waste Regulations and State and Federal air pollution control regulations. Additional regulations in this context are not only unnecessary and duplicative, but contribute to an excessive and costly burden in both time and money to these largely governmental entities. The Department should withdraw this proposed rule. (1, 4, 9, 12, and 13)

13. COMMENT: The Law does not authorize the H<sub>2</sub>S standard emission limitation and testing requirements for all operating sanitary landfills. The Law explicitly limits the application of that standard to legacy landfills and closed sanitary landfill facilities. Extending the proposed rules to all landfills beyond those covered by the Law exceeds the Department's rulemaking authority, and is ultra vires, arbitrary, and capricious. An administrative agency may not promulgate rules that amend, alter, or enlarge the confines of enabling legislation. The Law was

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passed to control activities at closed and poorly maintained landfills and not landfills with modern, state-of-the-art facilities and controls. The Department is effectively removing any distinctions between landfills, as outlined in promulgated regulations. (1, 4, 9, and 11)

14. COMMENT: A 30 ppbv H<sub>2</sub>S concentration at an operating landfill's perimeter or off-site cannot be used as a mechanism for imposing costly H<sub>2</sub>S monitoring requirements, either during a landfill's operating life, during final closure, or during the post-closure care period. (1 and 9)

15. COMMENT: Does the Department have the regulatory authority to incorporate H<sub>2</sub>S ambient air monitoring requirements into New Jersey's Title V Operating Permits? New Jersey does not have an ambient air concentration limit, or standard, for H<sub>2</sub>S for operating landfills. If not regulated, it should not be included in Title V permits. There are no regulations within N.J.A.C. 7:27-22 of the Air Pollution Control rules that indicate the applicable scenarios in which the Department could mandate such monitoring. (2)

16. COMMENT: It is unclear whether the Department will be requiring H<sub>2</sub>S monitoring at landfills that do not have any odor complaints as a part of a permit compliance plan, or as a means of determining an "exceedance" of the H<sub>2</sub>S standard. Will the Department require, in addition to monitoring after a verified H<sub>2</sub>S odor complaint, landfills to conduct routine H<sub>2</sub>S monitoring as part of its general operation? If so, how can the regulations justify that mandate? (9 and 14)

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17. COMMENT: Because there are many different potential sources of odors at a landfill and not all of them are related to H<sub>2</sub>S generation, these rules should not be adopted. However, if the Department chooses to move forward, N.J.A.C. 7:26-2A.7(h)10 should be amended to read as follows: “The Department may require the owner or operator to design and install a hydrogen sulfide ambient air monitoring system based upon the Department’s determination that the sanitary landfill is the source of a verified hydrogen sulfide odor complaint or an exceedance of the hydrogen sulfide standard at N.J.A.C. 7:27-7.3.” (1, 9, 10, and 11)

18. COMMENT: Additional regulations to control odor from landfills are not warranted, and contribute to an excessive regulatory burden on a properly regulated industry. (4)

19. COMMENT: The Department should revise proposed N.J.A.C. 7:27-7.3 to measure the H<sub>2</sub>S ambient air quality standard at the property fenceline, and revise proposed N.J.A.C. 7:26-2A.7(h)10ii to remove the reference to “off-site” monitoring locations. To be consistent with the Department’s authority under the Law, proposed N.J.A.C. 7:26-2A.7(h)10ii should instead provide that the H<sub>2</sub>S monitors should be installed at the property fenceline where the maximum, or near-maximum, concentrations of H<sub>2</sub>S were detected. (12)

20. COMMENT: The proposed 30 ppbv H<sub>2</sub>S standard should not be applied beyond a landfill’s property line. The Department oversteps its authority requiring such H<sub>2</sub>S monitoring. The Department does not outline how H<sub>2</sub>S monitoring can be implemented beyond the facility

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boundary, and such a proposal sets a dangerous precedent in terms of public/private liability.

Please explain how H<sub>2</sub>S monitoring outside of a facility's property line would be allowed if the monitoring would have to take place on private property. Private property owners will exact

significant costs for their required permission to allow access to their property for this purpose.

Will regulators conduct the monitoring, and how will the data relate to the ambient monitoring network? (1, 9, 11, and 14)

21. COMMENT: The phrase "verified odor complaint" is not defined in the proposed rule or anywhere else in the Department's regulations, and proposed N.J.A.C. 7:26-2A.7(h)10 is unreasonably vague and ambiguous. The Department should not rely on a "verified odor complaint" as a basis for requiring an ambient air monitoring system. (12)

RESPONSE TO COMMENTS 9 THROUGH 21: For the reasons stated in the Response to Comment 8, the Air Pollution Control Act authorizes the Department to regulate emissions of H<sub>2</sub>S as an air pollutant. The Solid Waste Management Act further directs and empowers the Department to formulate and adopt rules for solid waste facilities, including, specifically, "standards for the . . . operation of solid waste facilities . . . requiring . . . odor control programs; and such other measures as shall be deemed necessary to protect the public health and safety and the natural environment." N.J.S.A. 13:1E-6.a(2). As the commenters recognize, the Solid Waste rules have long required operating sanitary landfills to monitor, collect, and control malodorous emissions using a variety of measures. See N.J.A.C. 7:26-2A.7(f) and 2A.8(b)15 and 30. However, as described below, operating landfills continue to be a source of H<sub>2</sub>S emissions that

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can cause air pollution violations off-site, despite the existing rules. Consistent with its authority under the Air Pollution Control Act and Solid Waste Management Act, the new rules strengthen these existing requirements. The new rules also ensure consistent measures are required to address H<sub>2</sub>S emissions from operating, closed, and legacy landfills as H<sub>2</sub>S from all three types of landfills can cause air pollution violations and disrupt public health and safety in neighboring communities. Contrary to some commenters' assertions, the Law in no way limits the Department's authority under the Air Pollution Control Act and Solid Waste Management Act to regulate H<sub>2</sub>S at operating landfills. The Law supports the new rules as it reflects the Legislature's determination that 30 ppbv is an appropriate threshold to implement stringent odor control measures at landfills. N.J.S.A. 13:1E-125.4.a.

All H<sub>2</sub>S emissions are the result of the anaerobic digestion of waste containing sulfur placed in a landfill. Emissions of H<sub>2</sub>S can originate from various sections of a landfill at different rates, depending upon where and when sulfur containing wastes were placed. Laboratory studies have demonstrated that H<sub>2</sub>S is detectable by the sense of smell in the concentration range of 0.07 to 1,400 ppbv and gives off a distinctive, foul rotten egg odor. Given its low detection level, which would increase the frequency and duration of impacts, and its severely unpleasant odor, any recurring incidents of H<sub>2</sub>S releases have the potential to unreasonably interfere with the enjoyment of life or property, in violation of the Air Pollution Control Act. At concentrations above the minimum odor detection threshold, H<sub>2</sub>S also has the potential to cause health symptoms in humans, as discussed in the Response to Comment 8.

Because of excessive H<sub>2</sub>S emissions, the Department has issued notices of violation of N.J.A.C. 7:27-5.2 to both operating and legacy landfills in the State (such as the Fenimore

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Landfill in Roxbury Township) that required those landfills to address H<sub>2</sub>S emissions both on-site and off-site. For example, the Department required the Warren County District Sanitary Landfill in Oxford Township, an operating landfill, to install an upgraded landfill gas extraction system and a sulfur removal control system that processed landfill gas prior to combustion. Other operating landfills have also had to address H<sub>2</sub>S emissions and resulting odors due to their use of alternate cover material and their acceptance and disposal of certain waste streams, including Hurricane Sandy debris. For example, after the Atlantic County Utilities Authority accepted Hurricane Sandy debris for disposal, the Department required the Authority to install a removal and treatment system for H<sub>2</sub>S gas, as well as a synthetic landfill cap to assist in preventing fugitive H<sub>2</sub>S emissions. These other landfills had to take such actions to mitigate the impacts of H<sub>2</sub>S emissions off-site. Accordingly, these adopted rules are needed, since operating landfills can have recurrent high H<sub>2</sub>S emissions levels that could cause off-site nuisance and health impacts.

As discussed in the notice of proposal Summary, 48 N.J.R. 1533-1534, the Law establishes a limit on the ambient concentration of H<sub>2</sub>S gas emanating from a legacy landfill or closed sanitary landfill. The Law at N.J.S.A. 13:1E-125.4.c authorizes the Department to institute an action for a violation of N.J.S.A. 13:1E-125.4.a that occurs within two miles of the property boundary of a legacy landfill or closed sanitary landfill. Adopted N.J.A.C. 7:27-7.3, which bases a violation on concentrations of H<sub>2</sub>S measured at or beyond the property line, is consistent with N.J.S.A. 13:1E-125.4.c. The Department estimates, based on results of its air quality modeling studies, that there is a negligible possibility that the highest off-site H<sub>2</sub>S concentration would be beyond two miles of a facility's property line. Although the Law



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specifies that the measurement of H<sub>2</sub>S concentration is to be taken at the property line, the Solid Waste Management Act and the Air Pollution Control Act contain no such limitation. Hence, applying an H<sub>2</sub>S concentration limit at or beyond a landfill's property line is consistent with the H<sub>2</sub>S standard in the Law at N.J.S.A. 13:1E-125.4.a, which states, “[h]ydrogen sulfide levels emanating from a legacy landfill or closed sanitary landfill facility shall not exceed 30 parts per billion averaged over a period of any 30 minutes to be measured at the property line of a legacy landfill or closed sanitary landfill facility.” Accordingly, the Department is adopting an H<sub>2</sub>S ambient air quality standard at N.J.A.C. 7:27-7.3, since sanitary landfills of various operational status have caused off-site impacts, and H<sub>2</sub>S can be generated through the same biochemical process regardless of the operating status of the landfill.

Pursuant to existing air pollution control rules, the Department has authority to require ambient air monitoring in both preconstruction and operating permits. A landfill may be subject to either air pollution control preconstruction permits or operating permits, depending upon whether the landfill is at a minor facility (as defined at N.J.A.C. 7:27-8.1) or a major facility (as defined at N.J.A.C. 7:27-22.1). Pursuant to N.J.A.C. 7:27-8.2(c)17, landfills at a minor facility that vent to the outdoor atmosphere must obtain a permit to construct and a certificate to operate at the facility. Landfills at a major facility that vent to the outdoor atmosphere as a “significant source operation” must be included in a valid operating permit pursuant to N.J.A.C. 7:27-22.3(b). The rules governing preconstruction permits, N.J.A.C. 7:27-8.3(j), and operating permits, N.J.A.C. 7:27-22.16(g)8, require that no facility subject to either of those permits may suffer, allow, or permit any air contaminant, including an air contaminant detectable by the sense of smell, to be present in the outdoor atmosphere in such quantity and duration which is, or tends

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to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property.

Before the Department approves a preconstruction or operating permit, the facility must certify the maximum potential emissions of H<sub>2</sub>S so that an assessment can be done to determine the potential off-site impact of H<sub>2</sub>S. For preconstruction permits issued pursuant to N.J.A.C. 7:27-8.13(d)2iii, the Department may include, as a condition of approval, a requirement for the installation, operation, and maintenance of instrumentation and sensing devices to measure, either at specified intervals or continuously, ambient concentrations of air contaminants. As required by N.J.A.C. 7:27-8.4(q)3, the Department partially bases each case-by-case assessment on a facility's outline of the odor prevention measures it will implement to ensure compliance with the odor provisions at N.J.A.C. 7:27-5 and 8.3(j). For operating permits issued pursuant to N.J.A.C. 7:27-22, each applicable compliance plan requirement must include a method for verifying a compliance status. For instance, if a compliance plan contains an H<sub>2</sub>S limit, the plan must also include a methodology that will be used to confirm that the specified H<sub>2</sub>S limit will be achieved. H<sub>2</sub>S monitoring pursuant to N.J.A.C. 7:27-22.9(c)2i is required for a landfill's verification of compliance with N.J.A.C. 7:27-22.16(g)8, since H<sub>2</sub>S has the potential to cause a nuisance.

As discussed in both the notice of proposal Summary and in the Response to Comment 8, the adopted H<sub>2</sub>S standard of 30 ppbv averaged over any 30-minute period is a health-based standard that is necessary to protect the health and well-being of communities proximal to landfills. Both the standard and the compliance time are consistent with the California Office of Environmental Health Hazard Assessment's health threshold level and guideline that exposure

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be less than an hour to be protective. In addition, the 30-minute compliance time allows for any spikes in the H<sub>2</sub>S concentration to be averaged so that a more representative H<sub>2</sub>S concentration can be determined.

A significant portion of landfill air contaminant emissions are fugitive, and are not discharged from a stack or emissions point. A landfill with a well-designed and operated collection system could emit up to 25 percent of its air contaminant emissions as fugitive gases. The only way to accurately measure the magnitude of these fugitive emissions is by measuring the ambient air in and around the landfill. This measurement addresses both stack emissions and fugitive emissions. Adopted N.J.A.C. 7:26-2A.7(h)10ii(4) requires that monitoring be conducted at the location that represents the maximum, or near maximum, off-site concentration of H<sub>2</sub>S gas. If it becomes necessary for an owner or operator to monitor H<sub>2</sub>S off-site, the Department will work with the facility to ensure that any readings generated are accurate, verify the degree of the landfill's impact in the surrounding community, and find a location from which readings may be taken.

Many of New Jersey's operating commercial landfill facilities have sections that are closed. Each closed section of an operating landfill is defined by the Law as a "closed sanitary landfill facility." See N.J.S.A. 13:1E-125.1. Therefore, even though other sections of the landfill facility may still be operating and accepting solid wastes, the entire landfill facility is subject to the H<sub>2</sub>S standard emission limitation and testing requirements because at least 25 percent of all gas emissions from these controlled and vented landfill facilities are fugitive. As such, it is not possible to differentiate the H<sub>2</sub>S fenceline concentrations originating from the operating sections of the landfill facilities, from those which emanate from the closed sections.

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The Department recognizes that there are different potential sources of odors at a landfill, not all of which are related to H<sub>2</sub>S generation. N.J.A.C. 7:26-2A.7(h)10, as proposed, authorizes the Department to require an owner or operator to design and install an H<sub>2</sub>S ambient air monitoring system if the Department determines that the sanitary landfill is the source of a verified odor complaint, or an exceedance of the H<sub>2</sub>S standard at N.J.A.C. 7:27-7.3. As the commenters note, “verified odor complaint” was not defined in the proposed rule, and the odor complaint that could result in H<sub>2</sub>S monitoring was not tied to emissions of H<sub>2</sub>S. The Department is modifying N.J.A.C. 7:26-2A.7(h)10 on adoption to specify that an H<sub>2</sub>S monitoring system may be required when the Department determines that the sanitary landfill is the source of H<sub>2</sub>S emissions that caused a violation of N.J.A.C. 7:27-5.2, which prohibits the emission of substances in quantities that result in air pollution (including odor), or an exceedance of the H<sub>2</sub>S standard at N.J.A.C. 7:27-7.3.

The proposed rule prescribed specific methods of monitoring H<sub>2</sub>S. The Department is modifying N.J.A.C. 7:26-2A.7(h)10 on adoption to allow a facility to propose an H<sub>2</sub>S monitoring system that is at least as effective as the specific methods prescribed in the rule. This will allow the facility to structure the system to the facility’s unique characteristics and develop and implement it in a manner that is most cost-effective. All monitoring systems are subject to Department review and approval, either by modifying an existing closure and post-closure plan, pursuant to N.J.A.C. 7:26-2A.9(d)6, or by modifying a solid waste facility operating permit, pursuant to N.J.A.C. 7:26-2.6.

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22. COMMENT: The nine factors that the Department proposed to evaluate whether to require the installation of a monitoring system for H<sub>2</sub>S are highly subjective, vague, and ambiguous. The nine factors could be subject to different interpretations across regions of the State, and guidance should be developed to ensure uniformity. The Department should provide clarification on what H<sub>2</sub>S monitoring methodology will be required and whether the monitoring will be required only after an odor complaint is recorded, or as part of a landfill's general operation, and if so, how the regulations justify that mandate. (1, 9, and 12)

23. COMMENT: The Department should not have unlimited discretion in determining when H<sub>2</sub>S monitoring can be discontinued. The proposed rule should be revised to provide objective criteria for determining when monitoring can be discontinued. The Department should ensure that the landfill owner/operator has: (1) a sufficient opportunity to offer information that the Department will consider about the nine-factor test; and (2) the opportunity to immediately challenge a Department-issued order to install an H<sub>2</sub>S monitoring system, with a timeline for information submission and appeal formally incorporated into the proposed rule. (12)

24. COMMENT: The proposed regulations fail to differentiate between H<sub>2</sub>S odors and operating landfill workforce odors, which could create unwarranted H<sub>2</sub>S monitoring and enforcement issues for operating solid waste landfills. (1 and 9)

25. COMMENT: The Department should modify the proposed rules to provide flexibility for any facility that is required to conduct H<sub>2</sub>S monitoring. This would allow the facility to develop

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a monitoring protocol that accounts for the nature, severity, frequency, and duration of the odors and H<sub>2</sub>S emissions, as well as site-specific factors. There is concern about the potential cost of developing the required H<sub>2</sub>S monitoring plan and purchasing the equipment. The Department should allow the use of less costly monitoring methods, such as hand-held H<sub>2</sub>S monitors. The increased time and financial burden necessary to comply with the proposed H<sub>2</sub>S monitoring requirements serve no valid purpose. (1, 9, 10, 11, 12, and 13)

26. COMMENT: The method of monitoring required for H<sub>2</sub>S is not clear. Whether H<sub>2</sub>S monitoring is required at all landfills is unclear. It is unclear if the evaluation has a minimum standard. The requirements are unduly burdensome and would apply without regard to the frequency and severity of the problem. The Department should provide further clarification on expectations related to H<sub>2</sub>S compliance and monitoring. The Department should provide better flexibility into the design of the monitoring system, taking into consideration the nature and severity of the H<sub>2</sub>S problem, as well as site-specific factors that may impact whether a specific design element is needed or even feasible. (4, 9, and 12)

27. COMMENT: The odor threshold(s) for H<sub>2</sub>S is considerably lower than the concentrations at which potential (acute) health related impacts may occur. Therefore, odor monitoring represents just as valuable a tool for determining the presence of H<sub>2</sub>S in the ambient air and the need for reactive measures by a particular source, as H<sub>2</sub>S monitoring represents. In lieu of H<sub>2</sub>S monitoring, the Department should provide a facility the option to propose odor

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patrols, monitoring of the landfill surface (for methane), and monitoring of well field operational data. (2)

28. COMMENT: The Department requires an H<sub>2</sub>S monitoring report, pursuant to N.J.A.C. 7:26-2A.8(h)12iv, for both facilities and their surrounding properties. It is unclear whether the evaluation has a minimum standard. (9)

RESPONSE TO COMMENTS 22 THROUGH 28: The adopted rule specifies the factors that the Department must consider in determining whether it should require an H<sub>2</sub>S monitoring system. These factors include the cause of the H<sub>2</sub>S odor, any actions that have been taken to mitigate the odor, the history of odor complaints and violations at the facility, and relevant on- and off-site conditions. The Department's determination of the type of H<sub>2</sub>S monitoring plan and the frequency of monitoring required is based on factors that include, but are not limited to, types and amounts of waste placed in the landfill and efficiency of any landfill gas collection system installed. The Department established these nine factors to determine whether an H<sub>2</sub>S monitoring system should be installed at a facility because the circumstances that could cause H<sub>2</sub>S emissions in violation of N.J.A.C. 7:27-5.2 or an exceedance of the H<sub>2</sub>S standard at N.J.A.C. 7:27-7.3 can vary greatly. The nine factors were structured to provide the Department with the ability to conduct a thorough, case-by-case assessment of each situation, and to allow facilities to develop actions to mitigate odors.

Some commenters request more certainty about when monitoring will be required, whereas, others seek more flexibility in that determination. The adopted rules strike an

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appropriate balance between these concerns for certainty and foreseeability, on the one hand, and flexibility and regulatory discretion, on the other. The nine-factor test provides specific guidance to facilities about what information the Department can and will consider, but is not so prescriptive that the Department would have no discretion to find that monitoring is not required under appropriate circumstances. Because the Department must consider these factors, its discretion is not unlimited, as one commenter claims. The factors are also not vague or ambiguous: each is reasonably specific, although findings will vary depending on the circumstances of each case. Contrary to what one commenter contends, the factors do include considerations of frequency and severity, such as the number of complaints and history of complaints, the levels of emissions measured at or beyond the property line, and the proximity of off-site areas of human use and occupancy. The rule represents an appropriate exercise of the Department's discretion and technical expertise to tailor regulatory measures to the facts on the ground.

As stated at adopted N.J.A.C. 7:26-2A.7(h)10, the Department may require H<sub>2</sub>S monitoring based upon the Department's determination that the sanitary landfill is the source of H<sub>2</sub>S emissions that violate the general prohibition on air pollution at N.J.A.C. 7:27-5.2, or an exceedance of the H<sub>2</sub>S standard at new N.J.A.C. 7:27-7.3. Therefore, a sanitary landfill would be subject to an enforcement action before it designs and installs H<sub>2</sub>S monitoring. Prior to a Department determination that H<sub>2</sub>S monitoring is required, the Department will provide the owner or operator of the landfill an opportunity to present information about the steps it has taken to mitigate an H<sub>2</sub>S odor problem. For example, if a high H<sub>2</sub>S reading was caused by a failure in an extraction blower, and a facility made the necessary modifications to its equipment,



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then the Department may determine that monitoring for H<sub>2</sub>S is not required. Examples of such equipment modifications would include the installation of a redundant backup blower or expansion of the blower maintenance plan. Ultimately, if the Department requires an H<sub>2</sub>S monitoring system, the system must be designed in accordance with the Federal Ambient Air Quality Surveillance provisions of 40 CFR Part 58, which outline the requirements for measuring ambient air quality and reporting ambient air quality data and related information. Adopted N.J.A.C. 7:26A-2A.8(h)12 provides minimum specifications for monitoring equipment and siting requirements.

As described in the Response to Comment 21, the Department is modifying N.J.A.C. 7:26-2A.7(h)10 on adoption to allow a facility to propose an H<sub>2</sub>S monitoring system that is at least as effective as the specific methods prescribed in the rule. Allowing an alternative H<sub>2</sub>S monitoring approach is consistent with how the Department structures air contaminant emission monitoring plans for air pollution control permits. When the Department issues an air pollution control preconstruction permit, operating permit, or permit modification to a landfill, the Department includes a requirement for ambient H<sub>2</sub>S monitoring in the compliance plan; however, the Department determines the type of monitoring on a case-by-case basis. The Department develops each plan based on the source operation's distinct characteristics. A facility can propose a plan for the Department's review, or comment, and provide suggestions on any Department guidance. For instance, see the Guidance for Preparing a Fenceline Monitoring Plan December 2015, found at [www.nj.gov/dep/aqpp/permitguide/FencelineMonitoringPlanGuidance2015.pdf](http://www.nj.gov/dep/aqpp/permitguide/FencelineMonitoringPlanGuidance2015.pdf), or available in hard copy from the Department.

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However, the Department does not agree that odor monitoring alone represents just as valuable a tool for determining the presence of H<sub>2</sub>S as the monitoring systems required by the adopted rules. As described in the Response to Comments 9 through 20, the odor threshold ranges very widely between 0.07 and 1,400 ppbv. And, as described in the Response to Comment 8, health symptoms may vary at different concentrations near the lower end of that range. To adequately assess what potential threat may be posed by H<sub>2</sub>S emissions, and what control measures may be appropriate based on the levels of H<sub>2</sub>S found, monitoring equipment must be capable of detecting H<sub>2</sub>S concentrations at a much finer level than is possible by the human sense of smell alone. Therefore, the adopted rules do not incorporate measures allowing, for example, for persons to conduct odor patrols in lieu of the required monitoring systems. Also, because H<sub>2</sub>S may be attributable to fugitive emissions, monitoring of well field operational data may not reflect actual levels of H<sub>2</sub>S experienced at or beyond the property line. Monitoring at the landfill surface is also less effective at determining what levels of H<sub>2</sub>S may be experienced by receptors at or beyond the property line.

The Department accepts alternate sampling and testing methodologies, provided they do not impact emissions data needed to verify compliance. When the Department issues air pollution control preconstruction permits (pursuant to N.J.A.C. 7:27-8) and operating permits (pursuant to N.J.A.C. 7:27-22) with H<sub>2</sub>S monitoring requirements, the Department allows for a decreased sampling frequency when monitoring results indicate there are no further violations. However, a violation of N.J.A.C. 7:27-7.3 occurs if H<sub>2</sub>S monitoring shows an exceedance of the 30 ppbv standard. As a result of that violation, the Department will determine if additional testing is required, pursuant to the provisions of N.J.A.C. 7:26-2A.7(h)10. Before the Law was

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enacted, the Department required H<sub>2</sub>S monitoring, on a case-by-case basis, in operating permits issued to landfills pursuant to N.J.A.C. 7:27-22.9(c). For further discussion of air pollution control preconstruction and operating permits, see the Response to Comments 9 through 21.

As discussed in the notice of proposal Summary at 48 N.J.R. 1534, sanitary landfill operation and maintenance requirements are set forth at N.J.A.C. 7:26-2A.8. The Department has amended the existing prohibition on emitting air contaminants at N.J.A.C. 7:26-2A.8(b)30 to prohibit a violation of the H<sub>2</sub>S standard. The adopted rule also allows for other odor control methods as approved by the Department, including methods as may be required by the Air Pollution Control rules at N.J.A.C. 7:27.

N.J.A.C. 7:26-2A.8(h)12iv describes the information required in the H<sub>2</sub>S summary reports following the installation of an H<sub>2</sub>S ambient monitoring system. The owner or operator of the landfill must submit reports to the Department monthly, or in accordance with a schedule approved by the Department. In addition, the owner or operator of the landfill must include data gathered in accordance with N.J.A.C. 7:26-2A.8(h)12i, ii, and iii in the H<sub>2</sub>S summary report, and the required information must be consistent with the Department-approved H<sub>2</sub>S ambient monitoring system. H<sub>2</sub>S emissions should be evaluated with respect to the air pollution standard in N.J.A.C. 7:27-5.2, as well as the 30 ppbv standard implemented in the adopted rule. For further information about H<sub>2</sub>S summary reports, see the notice of proposal Summary at 48 N.J.R. 1534.

An adjudicatory hearing to contest an administrative order and/or a notice of civil administrative penalty assessment issued under the Solid Waste rules is available in accordance with N.J.A.C. 7:26-5.3. A request for a hearing to contest a solid waste permit or approval is

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governed by N.J.A.C. 7:26-2.4(g)22. Similar provisions to contest an administrative order and/or a notice of civil administrative penalty assessment issued under the Air Pollution Control rules are in the Air Administrative Procedures and Penalties at N.J.A.C. 7:26A-3.4. Requests for a hearing to contest Air Pollution Control permits or approvals are governed by N.J.A.C. 7:27-1.32. Each of the hearing provisions provides 20 days to request a hearing.

29. COMMENT: There are sources other than landfills that emit H<sub>2</sub>S that are not subject to the proposed rules. (9)

RESPONSE: The Department acknowledges that there are other source operations that emit H<sub>2</sub>S that are not subject to N.J.A.C. 7:27-7.3. However, the Department frequently develops rules to address categories of sources, and this rule only addresses H<sub>2</sub>S emissions from landfills. Other sources of H<sub>2</sub>S are controlled through air pollution control permits, as well as general prohibitions on odor at N.J.A.C. 7:27-5.

30. COMMENT: To the extent that the Department intends to rely on existing guidelines regarding verifying odor complaints, the Department should clearly identify those procedures in the proposed rule and provide the public with an opportunity to review and comment upon those procedures as they would be applied. Alternatively, to the extent that “verified odor complaint” is defined in a manner that is different from existing guidelines and incorporates a distinct protocol for verification, the Department should identify the chosen methodology for verifying an odor complaint. (12)

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31. COMMENT: The Department is unreasonably imposing a financial penalty for the first verified event of odor and H<sub>2</sub>S. The penalty structure requiring installation of an ambient air monitoring system after a single exceedance of the 30 ppbv H<sub>2</sub>S standard is unreasonable. The regulations should allow a facility to address any issues without penalty, through a grace period and/or exemption that considers additional context. Does the Department have any plans to alter the required penalty for the first verified event and allow at least a one-time exclusion so that a facility has the chance to rectify possible issues or prove that the issue was a one-time occurrence that will not happen again? (9 and 14)

32. COMMENT: The Department cannot use a 30 ppbv H<sub>2</sub>S concentration at an operating landfill's perimeter, or even off-site, as a determination of odor pollution in violation of the New Jersey Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., or its counterpart rule at N.J.A.C. 7:27-5. A 30 ppbv H<sub>2</sub>S concentration does not justify the Department's assessment of monetary penalties. (1 and 9)

33. COMMENT: The proposed regulations fail to address any problem outside of the Fenimore Landfill in Roxbury Township, New Jersey. The proposed rules impose a regulatory burden with no solution for permittees besides the threat of violations and penalties. (9)

RESPONSE TO COMMENTS 30 THROUGH 33: The guidelines that the Department has established for determining whether there has been a violation of the general prohibition on air

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pollution, N.J.A.C. 7:27-5.2(a) (which includes odor), are “Environmental Protection, Compliance and Enforcement, Air Pollution Investigation Guidelines,” available at [www.nj.gov/dep/enforcement/sub\\_5\\_guidlines\\_39njr912.pdf](http://www.nj.gov/dep/enforcement/sub_5_guidlines_39njr912.pdf). These guidelines clearly identify the procedures that the Department applies to confirm a violation of N.J.A.C. 7:27-5.2.

As discussed in the notice of proposal Summary (48 N.J.R. at 1534) and the Responses to Comment 8 and Comments 9 through 21, the Solid Waste Management Act, the Air Pollution Control Act, and the Law authorize the Department to adopt rules mandating odor control measures. Consistent with this statutory authority and the specific measures prescribed by the Legislature at N.J.S.A. 13:1E-125.4, and in response to multiple H<sub>2</sub>S emissions events at both legacy and operating landfills, the adopted rules prescribe when landfill owners and operators will be required to develop an H<sub>2</sub>S monitoring plan; purchase, install, and operate monitoring devices; and provide periodic reports to the Department. N.J.A.C. 7:26-2A.7(h)10, as modified on adoption, specifies that an H<sub>2</sub>S monitoring system may be required when the Department determines that the sanitary landfill is the source of H<sub>2</sub>S emissions that caused a violation of N.J.A.C. 7:27-5.2, which precludes the emission of substances in quantities that result in air pollution (including odor), or an exceedance of the H<sub>2</sub>S standard at N.J.A.C. 7:27-7.3. See the Response to Comments 9 through 21 for a discussion of the modification of the rule on adoption to no longer refer to “verified odor complaint.”

Further, because the Air Pollution Control Act provides for civil administrative penalties for violations of air pollution standards, the proposed rules provide for civil administrative penalties for violations of the proposed H<sub>2</sub>S standard. As H<sub>2</sub>S has the odor of rotten eggs and has been found to be a nuisance and potential health threat by the New Jersey courts as described

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in the Response to Comment 8, emissions of H<sub>2</sub>S may also result in a violation of N.J.A.C. 7:27-5.2, the general provisions applicable to the Air Pollution Control rules, which preclude the emission of substances in quantities that result in air pollution. Because such a violation would materially and substantially undermine the goals of the Air Pollution Control program, the Department identified the violation as “non-minor,” which is ineligible for a grace period (see the Grace Period Law, N.J.S.A. 13:1D-129). See also 48 N.J.R. at 1534.

### **Deodorants**

34. COMMENT: It is unclear whether the Department is prohibiting the use of deodorants. Please provide clarification on whether the use of deodorants and sprays applied to landfills is being prohibited. (4, 9, and 14)

35. COMMENT: Deodorizers have been proven effective in preventing the impacts of odors from wastes. The Department should not delete the regulations authorizing the use of deodorizers. (1)

36. COMMENT: Deodorants are an integral part of the existing odor program at operating landfills. The odor neutralizer is a product that encourages growth of beneficial bacteria, which reduce the potential for odors to be generated, and do not mask odors. If deodorant use is removed from the regulations, it could allow for deodorant use to be removed from a facility’s air permit, which would cause undue change in landfill operations. Please remove this proposed change. (10)

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RESPONSE TO COMMENTS 34 THROUGH 36: The adopted rules neither require nor prohibit the use of deodorants to control odors at a landfill. If an operating landfill needs to use a deodorant to control odor, the owner or operator of the landfill must evaluate the potential off-site impacts the deodorant may have on the surrounding environment in the application for an air pollution control preconstruction permit (pursuant to N.J.A.C. 7:27-8) or operating permit (pursuant to N.J.A.C. 7:27-22).

Although deodorants can be useful at a landfill, certain sprays can mask the emissions of H<sub>2</sub>S and other odorous compounds. This masking can result in high concentrations of toxic substances not being detected and causing health impacts that otherwise could have been prevented. In addition, liquids sprayed in fine droplets over a landfill could result in air pollution. For these reasons, the Department is more likely to approve the use of a liquid that is sprayed in larger droplets that will not become airborne because of their large diameter, and that prevent odors, rather than mask them.

### **Closure and Post-Closure Requirements**

37. COMMENT: The phrase “any other activities” in proposed N.J.A.C. 7:26-2A.9(c)4 is vague, ambiguous, and arguably extends the need for the involvement of a New Jersey licensed professional engineer to an infinite array of circumstances and activities at a sanitary landfill that is beyond the Legislature’s intent. The Legislature clearly envisioned reasonable limitations on the types of activities that would need the involvement of a New Jersey licensed professional engineer, and no such limitations were included in proposed N.J.A.C. 7:26-2A.9(c)4. The



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Department should revise proposed N.J.A.C. 7:26-2A.9(c)4 to include the limitations contained in the Law and additional sensible exceptions for activities that do not require the involvement of a New Jersey licensed professional engineer, such as minor and routine post-closure activities, such as site security and grass mowing. (12)

38. COMMENT: Extending the requirement, at proposed N.J.A.C. 7:26-2A.9(c)4, to hire a New Jersey licensed professional engineer to oversee closure and any other activities at operating landfills is unjustified since the Law clearly limits the applicability of this requirement only to landfills that are subject to the Law (pre-1982 landfills and closed sanitary landfills). (12)

39. COMMENT: Is there a legitimate purpose served by requiring operating landfills to file quarterly reports during landfill closures described at N.J.A.C. 7:26-2A.9(c)4 through 7? The cost for the preparation of such reports would add unnecessarily to the closure and post-closure costs to be recovered from an operating landfill's ratepayers. To avoid such an unreasonable and unjust expense the reporting requirements at N.J.A.C. 7:26-2A.9(c)4 through 7 should not apply to operating landfills. (1)

RESPONSE TO COMMENTS 37 THROUGH 39: The Law at N.J.S.A. 13:1E-125.7 provides that "[t]he owner or operator of a legacy landfill or a closed sanitary landfill facility that undertakes any activity that includes the placement or disposal of any material, regrading, compression, venting, construction, or installation of monitors or wells at a legacy landfill or a closed sanitary landfill shall hire a New Jersey licensed professional engineer to perform the

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closure and to oversee *any other activities* performed at the legacy landfill or closed sanitary landfill facility.” See the notice of proposal Summary, 48 N.J.R. at 1529, and adopted N.J.A.C. 7:26-2A.9(c). As discussed in the notice of proposal Summary, the adopted rules extend the Law’s requirements to all sanitary landfills. The adopted rules require a licensed professional engineer to certify the Closure and Post-Closure Plan.

In accordance with both existing and adopted N.J.A.C. 7:26-2A.9(e), Closure and Post-Closure Plans need to address final cover, final cover vegetation, a program for the maintenance of final cover and final cover vegetation, a program for the installation of a facility access control system, and a program for the maintenance of the facility access control system, among other requirements. Therefore, if the Closure and Post-Closure Plan includes mowing as part of the program for the maintenance of final cover and final cover vegetation, and site security as part of the program for installation and maintenance of the facility access control system, then the licensed professional engineer’s certification of the plan and quarterly reports required by this rulemaking represents his or her oversight of those activities.

Although the existing rules require the licensed professional engineer’s certification on the Closure and Post-Closure Plan, the quarterly reporting requirement is new. The Law requires the licensed professional engineer to “certify on a quarterly basis ... that all provisions and prohibitions of the administrative consent order, closure or post-closure plans, permits, or approvals are complied with” (N.J.S.A. 13:1E-125.7). Adopted N.J.A.C. 7:26-2A.9(c)5 implements this requirement. These reports represent the licensed professional engineer’s ongoing oversight of activities at the sanitary landfill, which may include mowing and site security.

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See the Responses to Comment 61 and 62, and 67 for a discussion of the Department's authority to promulgate the adopted rules. See the notice of proposal Summary, 48 N.J.R. at 1529, for a discussion of applying requirements related to licensed professional engineers to all sanitary landfills.

40. COMMENT: Pursuant to N.J.A.C. 7:26-2A.9(d)6, if a closed landfill cell is reopened to accommodate a "piggy back" for disposal of additional solid waste, would the Closure and Post-Closure Plan need to be modified and a municipal site plan approval obtained? Any action that requires a Solid Waste Facility permit under the existing Solid Waste rules should also not trigger the Law's requirements. (4 and 9)

RESPONSE: The Department interprets the commenter's use of "piggy back" in this context to mean the construction of a new landfill cell above a previously closed cell at an otherwise operating landfill facility. The owner or operator of a landfill facility can reopen a previously closed landfill cell or construct a new landfill cell above a previously closed cell only after the applicable solid waste management district includes the activity in its Solid Waste Management Plan, and the Department issues an appropriate solid waste facility permit pursuant to the Solid Waste Management Act at N.J.S.A. 13:1E-20. The owner or operator of a landfill facility with an effective solid waste facility operating permit would apply to the applicable solid waste management district to amend the district's solid waste management plan, in accordance with N.J.A.C. 7:26-6.10, and then apply to the Department for a modification to its permit, pursuant N.J.A.C. 7:26-2.6. The application for a new or modified permit would include a Closure and

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Post-Closure Plan that addresses the closure of the new solid waste cell. Municipal site plan approval is not required in order to reopen a landfill cell for solid waste disposal because the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., preempts local authority regarding operation of solid waste facilities, except as set forth in the Law.

41. COMMENT: Proposed N.J.A.C. 7:26-2A.9(d)2ii, 3v, and 3vi, which require that the acceptance of any type of material at a legacy landfill or closed sanitary landfill for any reason be first approved by the Department through a landfill disruption approval, Closure and Post-Closure Plan, or modification to a Closure Plan, are vague and ambiguous, create confusion, and unreasonably extend the proposed requirements to certain types of landfill activities and materials. The Department should revise these parts of the proposed rule to include limitations or sensible exceptions for soils that meet residential and non-residential standards, for materials that are not considered a solid waste, and for minor maintenance of landfill facilities, including side slope maintenance and repair, routine landfill operation and maintenance per the Closure and Post-Closure Plan, or a remediation activity under direction and oversight of a licensed site remediation professional (LSRP) acting under the site remediation program. (12)

RESPONSE: The Law establishes the requirements and controls applicable to legacy landfills and closed sanitary landfill facilities that accept new materials after closure to, for example, close a landfill that has not been previously closed, regrade a landfill for proper drainage, or prepare the landfill surface for redevelopment (see N.J.S.A. 13:1E-125.3 through 125.7). The Law states in relation to several requirements that they are applicable to “any” or “all” materials or

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activities. For example, N.J.S.A. 13:1E-125.3 requires municipal site plan approval when “*any* other waste or material” is accepted “for *any* reason” (emphasis added). At N.J.S.A. 13:1E-125.7.a the Law requires the hiring of a New Jersey licensed professional engineer “to perform the closure and to oversee *any* other activities” at a legacy landfill or closed sanitary landfill facility (emphasis added). N.J.S.A. 13:1E-127.b requires that the professional engineer certify on a quarterly basis that “*all* wastes and materials accepted at the site for *any* purpose are weighed, sampled, and tested according to a protocol *approved in advance by the Department*” (emphasis added). Adopted N.J.A.C. 7:26-2A.9(d)2ii, 3v, and 3vi implement the express requirements of the Law and require that the acceptance of any type of material at a legacy landfill or closed sanitary landfill for any reason be first approved by the Department through a landfill disruption approval, Closure and Post-Closure Plan, or modification to a Closure Plan.

Unlike the above, an owner or operator performing routine maintenance in accordance with an existing, Department-approved Closure and Post-Closure Plan, such as repair of erosion on side slopes or filling depressions in final cover, does not need additional Department approval to perform the maintenance; such activities are already approved as part of the Closure and Post-Closure Plan. However, if the activities are beyond approved maintenance items or would use materials not authorized by the approved Closure and Post-Closure Plan, the owner or operator must obtain prior Department approval.

42. COMMENT: The proposed rule does not prohibit the reopening of a landfill to complete its closure. Allowing certain materials to be brought into a terminated, unclosed landfill makes the situation worse by allowing additional toxic materials into the community. Some of the

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orphan landfills are already located in overburdened communities. Various materials, including garbage, debris, contaminated soils, construction materials, Class B recyclables, and toxic wallboard may be brought onto a closed landfill. Fenimore Landfill and EnCap are examples of landfills where environmental and financial issues resulted from the Department allowing contaminated materials to be accepted at terminated landfills. The proposed rule for the material acceptance protocol is vague and there is a need for proper testing to protect people and the environment. (5)

RESPONSE: The Department acknowledges that prior to the enactment of the Law there were legacy landfill closure projects in which landfill owners and operators did not manage materials properly. Thus, the Law and the adopted rules include such items as material acceptance protocols, which provide the Department with the tools it needs to ensure that future landfill projects are implemented in a manner that is safe and protective of human health and the environment. As discussed in the notice of proposal Summary (48 N.J.R. at 1528), a material acceptance protocol is a document setting forth the types, quantities, uses, and specifications of material proposed for acceptance after termination of solid waste disposal operations at a sanitary landfill, or any portion thereof, and the procedures to be implemented by the owner or operator to accept and manage such material. If the material must meet certain physical, geotechnical, and chemical specifications before the owner or operator may accept it, then the material acceptance protocol must include the means of evaluating the material for acceptance or rejection.

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For instance, the protocol must include a discussion of any potential negative impacts to human health, safety, and the environment, a description of the application and evaluation process for pre-acceptance of a material from each specific source, a description of on-going monitoring of a source material, a description of sample collection, laboratory analysis, quality assurance, and data deliverable requirements for material evaluation, a description of the tracking, quality control, and inspection procedures to ensure all shipments of material received are approved materials from approved sources, a description of shipment rejection procedures, a description of on-site materials weighing, handling, stockpiling, and placement procedures, and a description of the documentation to be used to demonstrate compliance with all aspects of the protocol. A New Jersey licensed professional engineer is responsible for overseeing the site activities and certifying that the engineering drawings, specifications, and reports applicable to the Closure and Post-Closure Plan comply with the Department's rules.

These requirements are consistent with the Law's provisions, are protective of human health and the environment, and are sufficiently defined in the adopted rule; therefore, no further change has been made in response to this comment.

43. COMMENT: The Department should revise proposed N.J.A.C. 7:26-2A.9(e)3, which requires an assessment of a landfill and its surroundings, to exclude from this requirement landfills that were constructed and have been operated in accordance with the modern standards for sanitary landfills and where sufficient baseline information is adequately addressed in existing Department submittals. These requirements are onerous, unduly excessive and overly broad, and will result in unnecessary cost and expense when applied to landfills that have been

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constructed under and operated pursuant to modern landfill requirements that were not in effect for older legacy landfills. (12)

RESPONSE: Adopted N.J.A.C. 7:26-2A.9(e) establishes the contents of the Closure and Post-Closure Care Plan. N.J.A.C. 7:26-1A.9(e)3 requires an assessment of the sanitary landfill and its surroundings to determine the environmental controls, maintenance, and monitoring necessary for closure and post-closure care. Under the rule, “[w]hen existing documentation is not available to conduct the assessment of the sanitary landfill and its surroundings, the owner or operator shall conduct an investigation sufficient to obtain the information required to complete the assessment.” Thus, if documentation already exists, such as in the Department’s files, then the Department will not require a separate investigation. The applicant may summarize and refer to the existing information, such as the contents of a solid waste facility permit application, in the Closure and Post-Closure Plan.

44. COMMENT: Under proposed N.J.A.C. 7:26-2A.9(h) and (i), which address requirements for Closure and Post-Closure Financial Plans and legacy landfill escrow accounts, the requirements are triggered upon the facility’s acceptance of any recyclable material, contaminated soil, wastewater treatment residual material, or construction debris. While this list of materials parallels the Law, the Department added an express exclusion to both rules for dredged material, so it is clear that dredged material would not trigger the financial plan and escrow account requirements. Please revise the proposal to provide additional express exclusions for other materials, such as soils that meet residential and non-residential direct



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contact soil remediation standards and other materials that do not qualify as solid waste under N.J.A.C. 7:26-1.6. (12)

RESPONSE: The Department excluded dredged material from the lists of material at N.J.A.C. 7:26-2A.9(h) and (i) as a result of the adopted definition of “contaminated soil,” and the Department’s interpretation of the Law. Adopted N.J.A.C. 7:26-1.4 defines “contaminated soil” as “soil, soil-like material, or mixtures of soil with other material containing concentrations of one or more contaminants that exceed the residential direct contact soil remediation standards or non-residential direct contact soil remediation standards, whichever is more stringent, as set forth in N.J.A.C. 7:26D, Remediation Standards.” This definition could be interpreted as including dredged material that contains contaminants at a concentration that exceeds the relevant standard.

Moreover, the Department excluded dredged material for other environmental and practical reasons. For instance, dredged material is not classified as a solid waste under N.J.A.C. 7:26-1.6, and it is routinely produced when waterway channels are deepened for marine vessel clearance. In such cases, the dredged material must be disposed or used in a beneficial manner. For example, landfill capping is a beneficial use of excavated dredged material that has been mixed with binding agents, since such material has a low permeability and is well-suited for the purpose.

If the Department did not exclude dredged material from N.J.A.C. 7:26-2A.9(h) and (i), a legacy landfill or closed legacy landfill that accepts dredged material would be required to post financial assurance and establish an escrow account for closure of the landfill. Such a result is

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contrary to the Department's interpretation of the Law. The Department examined the language of the Law to determine whether the Legislature intended dredged material to be among the material that would require financial assurance and an escrow account. At N.J.S.A. 13:1E-125.5.a and 125.6.a, the Legislature lists the materials that, if accepted at a legacy landfill or closed sanitary landfill, would trigger the financial assurance requirement. This list does not include dredged material. In another section of the Law, N.J.S.A. 13:1E-125.3, the Legislature does identify dredged material among the list of materials that trigger the requirement to obtain municipal site plan approval. Therefore, the Legislature was aware of and considered dredged material when it drafted the Law. The absence of dredged material from the lists at N.J.S.A. 13:1E-125.5.a and 125.6.a justifies the exception at N.J.A.C. 7:26-2A-9(h) and (i).

The Department has determined there is no need to modify the rules to specifically exclude soils that contain no contaminant above both the residential and non-residential direct contact soil remediation standards because these soils are not "contaminated soils" for purposes of the adopted rules, and are not among the materials that trigger the Law's requirements for financial assurance and escrow payments (N.J.S.A. 13:1E-125.5 and 125.6). Regarding the exclusion of other materials that do not qualify as "solid waste" under N.J.A.C. 7:26-1.6, if those materials fall within the list of materials at N.J.S.A. 13:1E-125.5 and 125.6 to which the Law's financial assurance and escrow provisions apply, then the Department is unable to exclude them from the Closure and Post-Closure Financial Plans and legacy landfill escrow account requirements.

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45. COMMENT: The requirement in proposed N.J.A.C. 7:26-2A.9(d)6 for a landfill owner/operator to obtain Department approval of a modification of a Closure and Post-Closure Plan prior to implementing changes to the plan is improper. Waiting for approval of a Closure and Post-Closure Financial Plan would unreasonably interfere with landfill disposal operations and services to rate payers. The existing rules allow operating sanitary landfills to implement changes affecting closure or post-closure upon approval concurrently with the approval of relevant solid waste facility permit modifications, while allowing for the Closure and Post-Closure Financial Plan component to be filed biennially. (1 and 11)

46. COMMENT: Will the Department have to approve a Closure and Post-Closure Plan amendment for a landfill facility transfer of ownership? Could the Department block such a transfer by not approving the modification? (4)

RESPONSE TO COMMENTS 45 AND 46: Owners and operators of sanitary landfills are required to comply with their solid waste facility permit, which is based on and references their solid waste facility permit application. The application includes, among other items, a Closure and Post-Closure Plan, which is made up of both a Closure and Post-Closure Care Plan and a Closure and Post-Closure Financial Plan. In accordance with N.J.A.C. 7:26-2.8(j) (unchanged in this rulemaking), a person may neither engage nor continue to engage in the disposal of solid waste in a manner that does not meet all the conditions, restrictions, requirements, or any other provisions set forth in its solid waste facility permit. Therefore, any changes to the operating

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sanitary landfill that impact the Closure and Post-Closure Plan require the owner or operator to modify the solid waste facility permit.

Under the existing rules, prior to engaging in any activity that is not expressly allowed under the solid waste facility permit, the owner or operator must apply to the Department to modify the permit, and obtain Department approval. The adopted amendments to N.J.A.C. 7:26-2A.9(d)6 do not change the obligation to modify the Closure and Post-Closure Plan if operations at the sanitary landfill change. Prior to the adopted amendments, N.J.A.C. 7:26-2A.9(d)6 allowed an owner or operator of a sanitary landfill to apply for approval to amend the Closure and Post-Closure Plan at any time, whether operations at the facility changed or there were changes to the financial assurance that needed to be addressed (even in the absence of a change to the facility's operations). (See 48 N.J.R. at 1528 for a discussion of existing N.J.A.C. 7:26-2A.9(d)6.) This allowance was separate from any required amendment to the Closure and Post-Closure Plan that was required under N.J.A.C. 7:26-2.8(j), if the operations at the sanitary landfill changed.

In practice, most Closure and Post-Closure Plans for operating landfills are designed with enough flexibility to allow minor changes in operations and maintenance without the need for a modification. Closure and Post-Closure Financial Plans include a line item for "contingency" to address expenses related to unexpected occurrences. For more significant changes to the facility, such as an expansion, it is appropriate that the Department review and approve a revised Closure and Post-Closure Plan prior to the Department allowing implementation of the change. The Department anticipates that most modifications to landfill operations that require a change to the Closure and Post-Closure Plan can be timed to coincide with the biennial Closure and Post-

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Closure Plan update, or the five-year solid waste facility permit renewal process. Such timing would obviate the need for a separate modification of the Closure and Post-Closure Financial Plan.

The Department is not required to rely upon the permittee to initiate a modification to the Closure and Post-Closure Plan. Under both existing N.J.A.C. 7:26-2A.9(d) and adopted N.J.A.C. 7:26-2A.9(d)8, the Department may require the owner or operator to modify the Closure and Post-Closure Plan at any time the Department deems it necessary. The adopted rule makes it clear to owners and operators of sanitary landfills (including landfills operating under a solid waste facility permit and landfills that have terminated operations and have approved Closure and Post-Closure Plans) that such a modification is always required prior to undertaking an activity that is not included in the Closure and Post-Closure Plan or changing any portion of the Closure and Post-Closure Plan.

A landfill facility transfer of ownership is a change that requires a modification of the Closure and Post-Closure Plan. See adopted N.J.A.C. 7:26-2A.9(d)7. If such a transfer occurs without the Department's approval of a modified plan, the owners will be in violation of N.J.A.C. 7:26-2A.9(d)6. See the discussion of changes in ownership in the notice of proposal Summary at 48 N.J.R. at 1529.

### **Post-Closure Evaluation**

47. COMMENT: The preparation of post-closure evaluation reports every 10 years is a further financial burden on operating landfills. It is difficult to see the benefit to the environment and residents in the additional costs associated with the proposal to require post-closure

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evaluation reports to be submitted three times during the 30-year post-closure care period. The reports will cost between \$50,000 and \$100,000 each, depending on the conditions at the time of the report. If the post-closure care period is extended, another report would be required every three years thereafter. The costs associated with the additional reporting are unwarranted as compared to the apparent benefit. The cost to prepare post-closure evaluation reports would add unnecessarily to the closure and post-closure costs to be recovered from an operating landfill's ratepayers. To avoid this, the reporting requirements at N.J.A.C. 7:26-2A.9(c)11 should not apply to operating landfills. (1, 10, and 13)

RESPONSE: As discussed in the notice of proposal Summary (48 N.J.R. at 1530 and 1531), the existing rules do not require landfill owners and operators to provide the Department with information necessary for it to determine whether a shortened or extended post-closure care period is sufficient or necessary. Thus, the Department often does not have sufficient information to make such a determination, and some owners or operators have discontinued post-closure care before the environmental conditions at the landfill warrant termination of such activities. Thirty years has almost become the de facto period for post-closure care activities, with the focus on the 30-year period, rather than the time necessary to protect human health and the environment. The post-closure evaluation reports, which provide a comprehensive assessment of the closed sanitary landfill, will ensure that post-closure care activities are performed as long as necessary to protect human health and the environment.

The post-closure evaluation report will also help owners and operators determine whether their sanitary landfill is on track for the scheduled end of the post-closure care period, and allow

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owners and operators to make informed adjustments to post-closure care requirements and financial plans. Although the Department will evaluate the post-closure evaluation report and determine whether the post-closure care period should be extended, reduced, or should remain as scheduled, the post-closure evaluation report is an opportunity for an owner or operator to present its own evaluation. If the sanitary landfill is exceeding expectations regarding post-closure, and the post-closure care period can end sooner than scheduled, the owner or operator may make that demonstration. If the post-closure condition of the sanitary landfill is such that the Department is likely to require an extension of the post-closure care period, the owner or operator may use the post-closure evaluation report to present its own science-based estimate of the length of the extension.

48. COMMENT: Under existing rules, the Closure and Post-Closure Plan is prepared by considering a 30-year post-closure care period. The proposed requirement for a post-closure evaluation report introduces ambiguity as to the length of the post-closure care period. (13)

49. COMMENT: The proposed rule shifts the burden to the owner of a sanitary landfill to demonstrate that the post-closure care period should end in 30 years, as opposed to the current rule requiring the Department to justify the extension. (1)

RESPONSE TO COMMENTS 48 AND 49: The adopted rules do not change the length of the post-closure care period. The existing rules set a post-closure care period of 30 years, but also

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allows the Department to reduce or extend the 30-year period as necessary to protect human health and the environment.

For the Department to extend the post-closure care period, the existing rules require the Department to make a finding that such extended period is necessary to protect human health and the environment. The adopted rules do not shift this burden from the Department to the landfill owner or operator. As discussed in the notice of proposal Summary, 48 N.J.R. at 1530, adopted N.J.A.C. 7:26-2A.9(c)11 requires an owner or operator to submit a post-closure evaluation report to the Department every 10 years, on the anniversary date of the completion of closure. The information in that report will help the Department determine whether post-closure care activities must continue to protect human health and the environment, as well as provide important information to aid the Department in evaluating whether an extension is appropriate. The post-closure evaluation report will also provide the sanitary landfill owner/operator an opportunity to present a case to end or reduce the post-closure care period.

50. COMMENT: The framework contained in proposed N.J.A.C. 7:26-2A.9(c)11 lacks required details and is impractical, and will lead to varying and subjective interpretations. The Department does not address or provide any guidance on how the post-closure evaluation reports will be evaluated, what benchmarks or conditions will be considered sufficiently protective of human health and the environment, and what conditions or trends may need to be shown in support of a Department decision to extend, reduce, or terminate the post-closure care period. The Department should revise proposed N.J.A.C. 7:26-2A.9(c)11 to include a defined set of criteria to guide the Department's review, consideration, and evaluation of each aspect of these



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reports, and to better establish expectations and increase objectivity and predictability relative to a Department decision to extend, reduce, or terminate the post-closure care period. The Department should incorporate the concept of “functional stability” for each monitored condition to guide Department’s review and consideration. Key elements needed are data collection and a target goal framework to determine when active controls can be terminated and the monitoring period term deemed protective of human health and the environment. (12 and 13)

51. COMMENT: Proposed N.J.A.C. 7:26-2A.9(c)11 should also account for the other regulatory mechanisms that may be applicable to and/or already in place at a closed sanitary landfill and that will provide sufficient regulatory oversight to support the termination of post closure under the Department’s Solid Waste Program. Specific examples include an air permit relative to future potential air emissions or a remedial action permit issued by an LSRP under the authority of the Department’s Site Remediation Program for groundwater concerns. These regulatory mechanisms should factor into the Department’s evaluation of whether the environmental conditions at the landfill are sufficiently protective of human health and the environment such that it would not be necessary to continue oversight of that condition at the landfill under the Department’s Solid Waste Program and/or continue a post-closure care period on the basis of the existence of that particular environmental condition. (12)

52. COMMENT: The rule proposal and N.J.A.C. 7:26-2A.9(c)11 should be amended to explicitly recognize that the post-closure evaluation reports may be used as a basis to terminate the post-closure care period, in addition to extending or reducing the post-closure care period. It

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is important for the Department to acknowledge in the proposed rule that while an eventual endpoint of the post-closure care period may be implicit under existing N.J.A.C. 7:26-2A.9(c)5i, and (c)5ii, it is necessary and important for the Department to explicitly recognize in the proposed rule that the post-closure care period will end, at some point, upon the Department's finding that the closed sanitary landfill is sufficiently protective of human health and the environment. (12)

53. COMMENT: The proposed rule should reference and recognize the role of institutional control mechanisms, such as deed restrictions, restrictive covenants, or easement agreements, which can be structured to be enforceable by the Department against the owner of the landfill to afford a post-closure vehicle that would ensure the continued vigilance of the owner following termination of the post-closure period. The availability and willingness of the owner to enter into such mechanisms should be included as part of the evaluative and decisional framework relative to the termination of a landfill's post-closure care period. (12)

RESPONSE TO COMMENTS 50 THROUGH 53: As stated in the notice of proposal Summary (48 N.J.R. at 1530), "[u]nder the existing rules, the post-closure care period 'shall continue for 30 years after the date of completing closure of the sanitary landfill,' or for a different period, as circumstances require." Based on those circumstances, existing N.J.A.C. 7:26-2A.9(c)5 allows the Department to either reduce or extend the post-closure care period. The protection of human health and the environment is the standard for extending, terminating, or reducing the post-closure period. The adopted rules do not change this standard. See adopted N.J.A.C. 7:26A-

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2A.9(c)11iii(5). Each circumstance is different, and landfills may require shorter or longer post-closure care periods depending on, for example, waste characteristics, landfill size and design, the type of environmental controls in place at the landfill, cap and liner construction and maintenance, geologic and hydrologic factors of the site, and proximity to sensitive human and environmental receptors. For this reason, the Department adopted amendments to the rules to ensure that at the close of the initial 30-year period the landfill owners and operators will have collected and analyzed data to enable the Department to determine whether an extension is necessary to protect human health and the environment.

The differences among sites are the reasons why it is not feasible to provide more specific standards for determining when post-closure is complete. However, the scientific basis for the Department's determination will be informed by the post-closure evaluation plan. The rules identify, in detail, the contents of the post-closure evaluation plan. For example, the adopted rules specify the type of monitoring data and trend analyses that are required to be performed, and the factors that landfill owners and operators should address. These detailed requirements are laid out at new N.J.A.C. 7:26-2A.9(c)11iii. Further, as stated in the Response to Comments 48 and 49 and in the notice of proposal Summary (48 N.J.R. at 1530), the Post-Closure Plan is an opportunity for the owner or operator to demonstrate to the Department that the post-closure measures are effective, and can be discontinued, based on the results of the evaluation.

The Department has determined that the most protective way to proceed with post-closure is through a Department-approved Closure and Post-Closure Plan. If continued maintenance and monitoring measures are required to protect human health and the environment

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at a sanitary landfill, the most logical way to oversee and enforce them is through that plan.

Other forms of oversight, such as institutional controls (deed restrictions, restrictive covenants, or easement agreements) and regulatory mechanisms (such as air pollution control permits or the requirements of the various site remediation rules) do not provide the same protections. Most importantly, they do not require the same degree of financial assurance that the Solid Waste rules require. Therefore, the Department did not include institutional controls and other regulatory mechanisms in the adopted rules.

#### **Site Remediation and Site Assessments**

54. COMMENT: Please clarify all impacts that the proposed rules would have on the Site Remediation Program, including when to retain an LSRP versus using a professional engineer. Should this rule include an obligation to use the services of an LSRP for any component of landfill closure that requires the investigation and remediation of contaminated soil using the Site Remediation Program rules (the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C), the Technical Requirements for Site Remediation (N.J.A.C. 7:26E), and the Remediation Standards (N.J.A.C. 7:26D)? Would an LSRP be required to complete baseline site assessments for new sites?

Landfill closure design, post-closure care design, and evaluation should remain the responsibility of a professional engineer and not an LSRP. The proposed rules require an assessment of baseline conditions for legacy landfills or sanitary landfills that have not been thoroughly investigated in the past. Please clarify if such an assessment is required to be conducted by an LSRP as a Preliminary Assessment/Site Investigation under the Site

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Remediation Program, another standard process, or a new Solid Waste Program process? (3 and 8)

RESPONSE: Except as discussed below regarding remediating a sanitary landfill, neither the Law nor the adopted rules require the owner or operator of a landfill (operating, legacy, or closed) to retain an LSRP.

Pursuant to the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS), N.J.A.C. 7:26C, the owner or operator of a sanitary landfill would have to hire an LSRP to remediate a discharge on the sanitary landfill property. Remediating such a discharge is not remediating the sanitary landfill. N.J.A.C. 7:26C-1.4(c)2 states that the provisions of ARRCS do not apply to any person who is remediating a landfill, unless:

- i. The sanitary landfill or any portion thereof is slated for redevelopment that includes structures intended for human occupancy;
- ii. When sanitary landfill remediation activities are funded, in whole or part, by the Hazardous Discharge Site Remediation Fund pursuant to the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-4 through 9, a Brownfield Redevelopment agreement pursuant to the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-27 through 31, or the Municipal Landfill Closure and Remediation Reimbursement Program pursuant to the Solid Waste Management Act at N.J.S.A. 13:1E-116.1 through 116.7; or
- iii. The person conducting the remediation wants a final remediation document.

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If one of these three scenarios applies, the sanitary landfill would have to be closed under the Solid Waste rules at N.J.A.C. 7:26-2A and remediated under the Site Remediation Program rules, which require the owner or operator to hire an LSRP.

55. COMMENT: How would a developer meet the due diligence requirements under existing State law? (8)

RESPONSE: This comment is beyond the scope of this rulemaking. A developer would meet the due diligence requirements under State law the same way that another person would meet the requirements, by complying with the Spill Compensation and Control Act (Spill Act), N.J.S.A. 58:10-23.11g.d.

56. COMMENT: Many sites impacted by the proposed rules are regulated under Department programs other than landfill closure, in particular the Site Remediation Program and the Land Use Program. The proposed rules do not adequately address cross-program implications, and in some cases they contradict the requirements in the Land Use Program (such as Flood Hazard Areas) and the Site Remediation Program. The Department should evaluate cross-program impacts, produce a list of all solid waste facilities and landfills so that municipalities, developers, and redevelopers can assess the impact of the proposed rules during due diligence, and clarify the impacts to the Site Remediation Program, including the use of an LSRP. Will the Department's Site Remediation Program or Solid Waste Program regulate landfills that will be closed and redeveloped for uses that include human occupancy? (8)

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RESPONSE: As part of this rulemaking, the Department assembled a team of staff members from programs that could potentially be affected by the adopted rules. Each representative brought his or her program's expertise to the rulemaking. For example, the Division of Air Quality took the lead in drafting the H<sub>2</sub>S rules, with input from the Division of Solid and Hazardous Waste. The Divisions of Remediation Management and Solid and Hazardous Waste provided substantial input to the rules, since these programs oversee operation and closure of most sanitary landfills in New Jersey.

The Law and the adopted rules provide the Department with additional tools, such as financial assurance, liability insurance, and post-closure escrow accounts, to ensure that legacy landfill closure projects will be completed in a manner that protects human health and the environment. One of the ultimate goals of proper landfill closure and post-closure care is to prevent contamination of surface and ground waters, a goal that is shared in common with the Land Use and Site Remediation programs. See, for example, N.J.S.A. 13:1E-101, 13:9B-2, and 58:10-23.11a; and N.J.A.C. 7:13-1.1(c).

The existing and new landfill rules do not inherently conflict with either the Land Use or Site Remediation rules. Rather, where the rules' respective jurisdictions intersect because of statutory mandates, they must accommodate each other. For example, see N.J.A.C. 7:26-2A.6(g) and (h), requiring consideration of environmentally sensitive areas including flood hazard areas, wetlands, riparian zones, and surface water bodies in the design and construction of landfills; N.J.A.C. 7:26C-1.4(c)2, describing when the ARRCs apply to landfill closure activities. The Department programs work together to ensure that the goals of each of the programs are

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achieved. This process is not unique to the adopted rules; the existing rules, too, can require such a case-by-case solution.

As discussed in the Response to Comment 54, a person remediating a sanitary landfill is exempt from compliance with the Administrative Requirements for the Remediation of Contaminated Sites (see N.J.A.C. 7:26C-1.4(c)2), except under certain circumstances. If these circumstances apply, the sanitary landfill would have to be closed under the Solid Waste rules at N.J.A.C. 7:26-2A, and remediated under the Site Remediation Program rules, which require the person responsible for the remediation to hire an LSRP. If a sanitary landfill is subject to both the Solid Waste rules and the Site Remediation Program rules, under the existing Department organization, the Office of Brownfield Reuse in the Department's Site Remediation and Waste Management's Program oversees landfill closure and redevelopment, including compliance with the Solid Waste rules. Otherwise, landfill closure and redevelopment is overseen by the Department's Division of Solid and Hazardous Waste.

The Department provides a list of known or suspected sanitary landfills on its website at <http://www.nj.gov/dep/dshw/lrm/landfill.htm>, and hosts an internet-based Geographic Information System called NJGeoWeb for the public and the regulated community to assess what sensitive environmental areas may be present at or near regulated sites such as landfills. NJGeoWeb may be accessed at <http://www.nj.gov/dep/gis/apps.html>.

### **Municipal Site Plan Approval**

57. COMMENT: Please clarify specific site conditions that would lead to the requirement for municipal site plan approval. Will municipal site plan approval be required for existing



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projects that currently have a professional engineer-certified closure and post-closure plan? Will municipal site plan approval be required when an owner or operator of a legacy landfill or closed sanitary landfill facility accepts a new material stream in conformance with an approved Material Acceptance Protocol? If municipal site plan approval is not required, what criteria will the Department accept for a statement from the applicant that municipal site plan approval is not required? (8)

RESPONSE: Redevelopment activities beyond closure of a landfill, such as construction of commercial buildings and solar energy projects, have always been subject to all applicable requirements of the Municipal Land Use Law.

The Department discussed municipal site plan approval in detail in the notice of proposal Summary at 49 N.J.R. at 1529-1530 under the heading “Municipal Site Plan Approval,” and at page 1528 under the heading “Closure and Post-Closure Plan Requirements.” Ultimately, if the municipality requires site plan approval for the activities at the sanitary landfill, the Department will require documentation of either preliminary or final site plan approval as part of the Closure and Post-Closure Care Plan. However, not every Closure and Post-Closure Plan or modification requires municipal site plan approval. As discussed in the notice of proposal Summary, although an owner or operator of a closed sanitary landfill facility that accepts solid waste, recyclable material, contaminated soil, cover material, wastewater treatment residual material, dredge material, construction debris, or any other waste or material must obtain site plan approval, not every entity that undertakes closure of a legacy landfill must obtain site plan approval. This is based on the definition of “person” in the Law. Federal agencies, government corporations,

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states, municipalities, commissions, political subdivisions of a state, and any interstate bodies are not considered “persons” as defined by the Law; therefore, the adopted rules do not require them to obtain municipal site plan approval to undertake closure of a legacy landfill.

Further, since the requirement to obtain municipal site plan approval arises from the Law, if the Department has approved a Closure and Post-Closure Plan prior to the effective date of the Law (June 26, 2013), the owner or operator may proceed with approved closure and post-closure activities without municipal site plan approval, including acceptance of additional cover material used for normal post-closure maintenance of the landfill. However, if the owner or operator is required to change the Closure and Post-Closure Plan after the effective date of the Law and obtain Department approval of the changes, approval may be contingent upon municipal site plan approval. For example, if the approved material acceptance protocol authorizes the acceptance of contaminated soil that meets certain specifications, the owner or operator may accept contaminated soil that meets those specifications from a different source without getting an additional approval. The material acceptance protocol sets forth the process that the owner/operator must follow to accept a new source material. However, if the owner or operator wants to accept a new material that is not authorized in an approved material acceptance protocol, then the owner or operator must apply to the Department for a modification of the Closure and Post-Closure Plan. If adopted N.J.A.C. 7:26-2A.9(e)2 applies, the application for modification of the Closure and Post-Closure Plan must contain a copy of the application for site plan approval and the preliminary or final site plan approval, or the municipality’s statement that no such approval is required.

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As set forth in adopted N.J.A.C. 7:26-2A.9(e)2ii, if a municipality determines that a project does not need site plan approval, then the Department requires written acknowledgement signed by an administrative or judicial official of competent jurisdiction from the municipality where the sanitary landfill is located, stating that site plan approval is not required for the proposed activity. A statement from the applicant will not satisfy this requirement.

Please also refer to the Response to Comment 40 for additional information concerning municipal site plan review requirements under the Law and the adopted rules.

58. COMMENT: Does the Department intend to increase the authority that municipalities have in the oversight of State-regulated environmental activities? (8)

RESPONSE: As stated in the notice of proposal Summary (49 N.J.R. at 1529), the Law and the implementing rules related to municipal site plan approval “will ensure that a municipality in which a legacy landfill or closed sanitary landfill facility is located will know of closure and other activities at the site and will have an opportunity to review the proposed project for consistency with its site planning requirements.” Therefore, the adopted rules ensure that the municipality’s site planning requirements are met during landfill closure and redevelopment, as required by the Law. The Law and the adopted rules make it clear that when specific activities, such as acceptance of any material for closure of a legacy landfill or at a closed sanitary landfill facility, are undertaken after the effective date of the Law, municipal site planning requirements are not preempted by the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. See also the

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Response to Comment 40 regarding municipal site plan approval for reopening a closed landfill cell at an otherwise operating sanitary landfill.

59. COMMENT: The Department should revise proposed N.J.A.C. 7:26-2A.9(e)2 to include conditions to guide a municipality's review of the activities requiring municipal site plan approval. These conditions should limit the ability of the municipality to unnecessarily and unreasonably condition any required approval, and should include a reasonable timeframe after which the municipality's approval will be deemed approved if comment is not received from the municipality.

The Department's requirement that municipal site plan approval be obtained for the closure of legacy landfills and where a closed sanitary landfill accepts new materials could lead to unnecessary conditions and expenses with no apparent environmental benefit. The Department should revise proposed N.J.A.C. 7:26-2A.9(e)2 to exclude certain activities from the requirement to obtain municipal site plan approval, such as minor slope maintenance activities, a remediation activity performed under the direction and oversight of an LSRP under the authority of the Department's Site Remediation Program, and the acceptance of soils that meet the Department's residential or non-residential direct contact soil remediation standards, as applicable, and other materials that do not qualify as solid waste under the Remediation Standards at N.J.A.C. 7:26-1.6. (12)

RESPONSE: The Law requires municipal site plan approval pursuant to the provisions of the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., in certain circumstances. The Law does not

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authorize the Department to dictate to a municipality how to comply with the Municipal Land Use Law in its site plan approval process. Therefore, the Department will not provide guidelines for the review of these projects, nor can the Department adopt rules that limit a municipality's authority, such as imposing review timeframes or prohibiting conditions of approval.

For a further discussion of the activities that require municipal site plan approval, see the Response to Comment 57.

#### **Definitions of Contaminated Soil, Clean Fill, and Solid Waste**

60. COMMENT: The proposed elimination of the "clean fill" definition and addition of the "contaminated soil" definition could create confusion and potential unintended consequences for other regulations that are administered by the site remediation and waste management programs. Rather than add a definition of "contaminated soil" and completely eliminate the definition of "clean fill" in the solid waste regulations, the Department should cross-reference the existing definitions of "clean fill" and "alternative fill" in the technical requirements. (6)

RESPONSE: As discussed in the notice of proposal Summary, 49 N.J.R. at 1532, the Law uses term "contaminated soil" several times, but does not define it. In order that the adopted rules are clear, the Department must adopt a definition of "contaminated soil." The notice of proposal Summary discusses the basis for the term in some detail. The notice of proposal Summary further discusses in detail why the adopted rules delete the existing definition of "clean fill" at N.J.A.C. 7:26-1.4 and 7:26A-1.3. See 49 N.J.R. at 1533. As to "alternative fill," the adopted

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rules do not use the term; therefore, there is no need for the Solid Waste rules to refer to a definition of the term elsewhere in the Department's rules.

61. COMMENT: The phrasing in the notice of proposal Summary could be misconstrued to suggest that the deletion of the term "clean fill" and addition of the definition "contaminated soil" in the Solid Waste rules, plus the addition of a new categorical exemption within the definition of "solid waste," have fundamentally altered the definition of "solid waste" in those regulations. The Department should use the definition of the term "solid waste" that is presented in the Law. The alteration to the statutory definition of "solid waste," combined with the unnecessary commentary in the Summary could be read as a fundamental alteration of the plain meaning of the Law.

The Summary phrasing suggests that the concentration of one or more chemical constituents in a material would make it a solid waste, regardless of the use of that material or whether the material is discarded, and would expand the universe of what is a solid waste. The proposed change in the regulation does not clear up any ambiguity or uncertainty in the definition of "solid waste" in the Law.

The New Jersey Register notice announcing the proposed rule stated that the purpose was to implement the Law. It was not presented as a rulemaking to alter the definition of "solid waste" and management of recyclables, in particular the products created by a Class B recycling facility. The Summary and proposed rules exceed the powers granted to the Department by the Law and related laws.

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The Summary misstates the effect that the proposed changes to the definitions in the rule will have on recycling, Class B recyclables, and products made at permitted Class B facilities. Under the proposed rules, Class B products will not be categorically exempt from being classified as solid waste.

The Summary presents a potential misinterpretation of the proposed rule, which contradicts decades of Federal and State law interpretation of regulations and Department policies upon which the recycling industry was built. The Summary, as written, will affect everyone, will open the door to lawsuits from homeowners and environmental groups, and could undermine the recycling goal of New Jersey. The Summary should be revised to eliminate the overbroad statements that create confusion and unintended consequences for recycling and site remediation programs. (6)

62. COMMENT: The position that certain materials are “solid wastes” by definition, based solely on what they are and what chemical constituents they contain, is directly at odds with the recycling goals of the Mandatory Source Separation and Recycling Act, N.J.S.A. 13:1E-99.11 et seq., and its implementing regulations. For instance, a non-hazardous material (a material that if disposed would not be categorized as hazardous waste) must be “discarded” or no longer be used for its intended purpose, to be considered a solid waste (such as wood preservative and road salt). (6)

RESPONSE TO COMMENTS 61 AND 62: The Department is not fundamentally altering the meaning of existing law or rule by amending the definition of “solid waste,” adopting the

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definition of “contaminated soil,” and deleting the definition of “clean fill.” Although the adopted rules do implement the Law, the Department does not rely solely on the Law for authority to promulgate the rules. The Department has broad authority to regulate solid waste under the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. As stated in the Response to Comment 60, the notice of proposal Summary thoroughly discusses the adopted definition of “solid waste,” and the deletion of the definition of “clean fill.” The notice of proposal Summary and the Economic Impact (48 N.J.R. at 1535) discuss the impact that amended and deleted definitions may have on the Class B recycling industry.

The definition of the term “solid waste” in the Law at N.J.S.A. 13:1E-125.1 is very similar to the definition of “solid waste” in the Solid Waste Management Act at N.J.S.A. 13:1E-3. The Law defines “solid waste” as “garbage, refuse, and other discarded materials resulting from industrial, commercial, and agricultural operations, and from domestic and community activities, and shall include all other waste materials including liquids.” The Solid Waste Management Act definition contains the same language, but goes on to provide an exception to the definition for “source separated recyclable materials or source separated food waste collected by livestock producers approved by the State Department of Agriculture to collect, prepare and feed such wastes to livestock on their own farms.” The adopted definition of “solid waste” at N.J.A.C. 7:26-1.6(a) is based on the definition of the term in the Solid Waste Management Act. The single definition applies to all solid waste management activities in the State, including existing rules for sanitary landfills. The Department would be creating confusion if it were to adopt one definition of “solid waste” for the purposes of implementing the Law, and another for



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other purposes under the Solid Waste Management Act – particularly when the definitions in the two statutes are almost the same.

The definition of “clean fill” in the existing rules was misleading. By stating that the “non-water soluble, non-decomposable inert products generated from an approved Class B recycling facility are considered clean fill,” the definition gave the false impression that products generated from an approved Class B recycling facility do not contain contaminants, including hazardous constituents. As stated in the notice of proposal Summary (49 N.J.R. at 1533), Class B products do not always meet the more stringent of the residential or non-residential direct contact soil remediation standards. Keeping the existing definition of “clean fill” would result in the possibility of the same material meeting both the definition of “clean fill” and the definition of “contaminated soil.” The adopted rules avoid confusion.

The adopted definition of “solid waste” excludes “non-water-soluble, non-decomposable, inert solid, such as rock, soil, gravel, concrete, glass, and/or clay or ceramic products that do not contain concentrations of one or more contaminants that exceed the residential direct contact soil remediation standards or non-residential direct contact soil remediation standards, whichever is more stringent, as set forth in N.J.A.C. 7:26D, Remediation Standards.” See the notice of proposal Summary, 49 N.J.R. at 1533. The adopted definition makes it clear that such materials constitute solid waste only when they contain concentrations of contaminants that exceed the residential or non-residential soil remediation standards, or if they are disposed of in the manner described at N.J.A.C. 7:26-1.6(c).

The adopted definition of “solid waste” at N.J.A.C. 7:26-1.6(a)(2) also maintains the existing exception for recyclable materials that are exempted from regulation pursuant to the

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Recycling Rules, N.J.A.C. 7:26A. Therefore, materials that are managed in accordance with the Recycling Rules and products from recycling facilities that are sent to legitimate end markets are not solid waste. Also, pursuant to N.J.A.C. 7:26-1.7(g)2, materials that are being used for their original intended purpose are not considered solid waste.

The notice of proposal Summary stated that “Class B products will not be categorically excluded from being classified as solid waste” (49 N.J.R. at 1533). Rephrased, this means that some materials produced by Class B facilities may be considered solid waste. For example, Class B materials that have no end market may be classified as solid waste. However, materials produced by a Class B facility that meet required specifications and are sent to and used for their intended purposes at a legitimate end market are not solid wastes.

63. COMMENT: The Department should clarify that soil that does not exceed the concentration criteria at N.J.A.C. 7:26-1.6(a)6 is exempt from N.J.A.C. 7:26-1.1(a)1ii, which states: “[t]he use or reuse of materials that would otherwise become solid waste pursuant to this chapter as fill material, aggregate substitute, fuel substitute or landfill cover shall be approved as beneficial use pursuant to N.J.A.C. 7:26-1.7.” The Department should also clarify that this soil would be exempt from the requirements of N.J.A.C. 7:26-1.7(g)4iv for categorical approval of beneficial use of soils reused on-site that contain contaminants at levels below the most stringent site clean-up levels established by the Department for a specific site, with the exception of sites located in the Pinelands Area. Under these circumstances, the generator of this soil would not be required to obtain a beneficial use approval from the Department prior to transporting the soil off-site for reuse. (7)

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RESPONSE: As defined at N.J.A.C. 7:26-1.4, the term “beneficial use” means “the use or reuse of a material, which would otherwise become solid waste under this chapter, as landfill cover, aggregate substitute, fuel substitute or fill material or the use or reuse in a manufacturing process to make a product or as an effective substitute for a commercial product. Beneficial use of a material shall not constitute recycling or disposal of that material.” N.J.A.C. 7:26-1.7(g) sets forth the criteria used for exempting beneficial use projects from the requirements for solid waste permitting. Materials approved for use in beneficial use projects that are exempt from permitting pursuant to N.J.A.C. 7:26-1.7(g) do not have to comply with other Solid Waste rules (see N.J.A.C. 7:26-1.1(a)1).

Consistent with the adopted definition of “solid waste” at N.J.A.C. 7:26-1.6, the Department agrees that soil that meets the most stringent of the residential or non-residential direct contact soil remediation standards is generally not solid waste. Therefore, use of such soil would not require a beneficial use approval under N.J.A.C. 7:26-1.7(g) in order to be used as fill material. Likewise, compliance with the requirements for the beneficial use categorical approval at N.J.A.C. 7:26-1.7(g)4iv is unnecessary. However, the soil for on-site reuse at a contaminated site must still meet any applicable regulatory requirements, such as the Remediation Standards, N.J.A.C. 7:26D, and the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

64. COMMENT: Over the past few years, there was an effort to clarify that “clean fill” does not include material from certified quarries. The proposed definition reintroduces the prior confusion by including references beyond soil materials. The definition of “clean fill” should be

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withdrawn, or else clarified to reflect that the definition only applies to soils being used in the context of the law as it relates to legacy landfills and closed sanitary landfills. (8)

RESPONSE: The adopted rules do not contain a definition of “clean fill.” Rather, the Department is deleting the definition from the Solid Waste rules. To the extent that the comment refers to the definition of “clean fill” in the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.8, the comment is beyond the scope of this rulemaking.

65. COMMENT: There is confusion in the definitions of “sanitary landfill,” “solid waste,” and “clean fill.” The definition of solid waste now includes non-water soluble, non-decomposable, inert solid, such as rock, soil, gravel, concrete, glass, and/or clay or ceramic products that do not contain concentrations of one or more contaminants that exceed the residential direct contact soil remediation standards or non-residential soil remediation standards, whichever is more stringent, as set forth in N.J.A.C. 7:26D.

Based on the proposed definitions, the universe of solid waste facilities and sanitary landfills has been greatly expanded to include any existing or future project/site that took in or plans to take in fill material, including soil that exceeds a direct contact residential or non-residential standards, regardless of whether the site was a development or construction activity unregulated by Solid Waste or the Site Remediation program. This would include all sites where historic fill was placed, as well as essentially all development sites in the State of New Jersey.

It would also appear that the movement of soil on any construction site containing soils above residential or non-residential direct contact remediation standards would require a landfill

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disruption permit. Again, that would include any construction activity in New Jersey, as there are very few pristine sites that have not been impacted by historic fill, dredge material, waste water sludge, water treatment sludge, pesticide and herbicide applications, air deposition, and unregulated releases from unknown or off-site sources. Did the Department intend to regulate all development and construction sites under these new rules? Did the Department intend to regulate all sites where historic fill was deposited under these new rules? Further, did the Department intend that the provisions of the Law apply to all "sanitary landfills" or to all areas where materials that are not "clean fill" (as that term is defined under the proposed rules) is present? (8)

RESPONSE: The adopted definition of "solid waste" excludes non-water soluble, non-decomposable, inert solid, such as rock, soil, gravel, concrete, glass, and/or clay or ceramic products that do not contain concentrations of one or more contaminants that exceed the residential direct contact soil remediation standards or non-residential soil remediation standards, whichever is more stringent, as set forth in N.J.A.C. 7:26D.

The adopted rule is not intended to expand the definition of "sanitary landfill," which is defined at N.J.A.C. 7:26-1.4 as a solid waste facility at which solid waste is deposited on or into the land as fill for permanent disposal or storage for a period of time exceeding six months, except that it does not include any waste facility approved for disposal of hazardous waste. The definition of sanitary landfills further classifies the facilities based on the types of solid waste they are authorized to accept for disposal. The only adopted change to the definition is to clarify that Class III sanitary landfills may also accept type ID 13C wastes. The Department does not

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intend to regulate sites that contain in-situ contaminated soils, or sites that accept, for example, fill material for purposes other than disposal, as sanitary landfills unless the site meets the existing definition of a sanitary landfill. Areas that contain historic fill or contaminated soils resulting from a discharge of a hazardous substance onto the ground are not sanitary landfills.

66. COMMENT: The definition of “contaminated soil” is not consistent with the definition of a contaminated site in the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.8. The Department should amend the definition to read “. . . Remediation Standards, or the higher of the default Impact to Ground Water Soils Screening Level or site-specific Impact to Ground Water Criteria as determined by a licensed site remediation professional, pursuant to the Department’s regulations and guidance.” (3)

RESPONSE: The Department’s intent in adopting the definition of “contaminated soil” in the Solid Waste rules, N.J.A.C. 7:26-1.4, is to create a clear, objective standard for determining whether soil is “contaminated” to implement the requirements for financial assurance and escrow accounts at a receiving landfill site. The Department based this definition on direct contact soil remediation standards, which are promulgated in N.J.A.C. 7:26D, Remediation Standards. Conversely, the Department based the definition of “contaminated site” in the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, on default and site-specific impact to groundwater criteria as determined on a case-by-case basis by an LSRP. Impact to groundwater criteria are not readily usable for implementation of the requirements for financial assurance and

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escrow accounts at a receiving landfill site because such criteria are site-specific values, based on the site where the soil is generated.

As stated in the notice of proposal Summary (48 N.J.R. at 1532-1533), under the Brownfield Act, soils with contaminant levels above the residential standards, even at a non-residential site, are considered contaminated soils. The adopted definition of “contaminated soil” in the Solid Waste rules uses the more stringent value of the residential or non-residential direct contact soil remediation standards for consistency with the Brownfield Act, to protect public health and safety and the environment, to avoid the creation of new contaminated sites by movement of contaminated soil, and to set a clear, measurable standard.

67. COMMENT: An administrative agency may not promulgate rules that amend, alter, or enlarge the confines of the enabling legislation. *New Jersey State Chamber of Commerce v. New Jersey Election Law Enforcement Commission*, 82 N.J. 57 (1980); *In re New Jersey ICHP*, 179 N.J. 570 (2004). The Department’s creation of definitions for terms that were not defined in the Law is inappropriate, as is the Department’s application of those terms to all types of landfills. The Law is applicable only to legacy landfills. (4)

RESPONSE: The Department has express authority under the Solid Waste Management Act, the Sanitary Landfill Facility Closure and Contingency Fund Act, the Law, and the Air Pollution Control Act to adopt and implement rules necessary to effectuate the purposes of those statutes. N.J.S.A. 13:1E-6, 13:1E-114, 13:1E-125.4.d, and 26:2C-8. See *New Jersey Chamber of Commerce v. Elec. Law Enf. Comm’n*, 82 N.J. 57, 83 (1980) (“[A]gencies may be vested with

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very broad discretion to determine through the exercise of their rule-making powers the appropriate means for executing the policies of the underlying statute and effectuating the legislative intent.”); see also *A.A. Mastrangelo, Inc. v. Dep’t of Env’tl. Prot.*, 90 N.J. 666, 683-84 (1982) (“[T]he absence of an express statutory authorization in the enabling legislation will not preclude administrative agency action where, by reasonable implication, that action can be said to promote or advance the policies and findings that served as the driving force for the enactment of the legislation.”). The adoption and amendment of certain definitions by this rulemaking is a reasonable and lawful exercise of the Department’s rulemaking authority. The adopted rules are necessary to implement the Law, and to assist the regulated community in complying with the Law. Moreover, the Department, as necessary and appropriate, adopts definitions of terms that are not contained in or defined by statute, but that are used in the rules.

As stated in the notice of proposal Summary (48 N.J.R. at 1533), the Law is not the only authority for the Department’s regulation of H<sub>2</sub>S. H<sub>2</sub>S is an air pollutant, which the Air Pollution Control Act at N.J.S.A. 26:2C-8 and 9 authorizes the Department to regulate. Also, the Solid Waste Management Act at N.J.S.A. 13:1E-6(a) authorizes the Department to regulate landfill gas emissions and malodorous emissions. Therefore, the Department’s regulatory extension of the standard to all sanitary landfills is appropriate because, although the Law’s H<sub>2</sub>S limit applies only to legacy landfills and closed sanitary landfill facilities, all sanitary landfills, whether or not they are still accepting waste, have the potential to generate actionable levels of H<sub>2</sub>S.

Further, as stated in the notice of proposal Summary (48 N.J.R. 1532), the term “contaminated soil” is used in several sections of the Law, most notably in N.J.S.A. 13:1E-125.5



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and 125.6, which govern financial assurance and escrow accounts, respectively, for legacy landfills or closed sanitary landfill facilities that accept, among other materials, contaminated soil. The Law does not define the term, nor is the term defined elsewhere in any New Jersey statute or rule. Therefore, it is necessary for the Department to define “contaminated soil” to clearly identify what materials trigger these statutory provisions as implemented through these rules. The Department, under its broad statutory authority to formulate and promulgate rules concerning solid waste collection and disposal, including standards for the construction and operation of solid waste facilities, promulgates requirements for all sanitary landfills, including the extension of some requirements of the Law to all sanitary landfills, whether or not they are operating. (See N.J.S.A. 13:1E-6.)

#### **Liability Insurance, Financial Assurance, and Escrow**

68. COMMENT: The pollution liability coverage limits being proposed are not appropriate.  
(4)

RESPONSE: As stated in the notice of proposal Summary, the limits are identical to those required of hazardous waste landfills (48 N.J.R. at 1532). Because the comment does not identify what aspects of the pollution liability coverage limits are not appropriate, the Department cannot respond further.

69. COMMENT: What exceptions or alternatives will be available if commercially reasonable policies or the required coverages are not available? Does the Department intend to

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require owners to have to potentially negotiate insurance coverage every year as the result of market changes? How are the insurance requirements in the proposed rules not duplicative of the requirements regarding the posting of financial assurance, and what is the need for such insurance after closure, if financial assurance is already required for post-closure? (8)

RESPONSE: The Law requires an owner or operator to “maintain a general liability insurance policy” to “pay for damages or claims resulting from operations or closure of the legacy landfill or closed sanitary landfill facility.” As stated in the notice of proposal Summary, 49 N.J.R. at 1532, the Department interprets the Law as requiring both general liability coverage and pollution liability coverage. As to availability of policies, there are approximately 40 insurance carriers that issue policies with some form of commercial environmental coverage. Therefore, coverage that meets the adopted requirements is available. In fact, the insurance carriers that issue the policies may allow the insurance applicant to negotiate for the best terms, based on the site’s past, present, and anticipated conditions. However, the Law does not condition the insurance requirement on whether a policy is “commercially reasonable.”

Insurance against potential damages or claims resulting from operations or closure of the legacy landfill or closed sanitary landfill facility is not the same as financial assurance for the cost of closing the landfill. Insurance covers potential damages to a third party. Financial assurance is intended to cover the cost of closing the landfill in the event the landfill owner or operator defaults and the Department is required to close the landfill.

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70. COMMENT: Please explain how financial assurance and escrow accounts are to be implemented by an operating landfill facility. (4 and 9)

RESPONSE: Adopted N.J.A.C. 7:26-2A.9(f) and (g), respectively, govern the Closure and Post-Closure Financial Plan and escrow requirements for sanitary landfills that accepted solid waste for disposal on or after January 1, 1982. These rules apply to operating sanitary landfills. These provisions are substantively unchanged from the existing rules, although the Department has amended the rules to update contact information and to clarify the terminology associated with escrow accounts for operating landfill facilities from those for legacy landfills and closed sanitary landfill facilities. As discussed in the notice of proposal Summary at 48 N.J.R. at 1531-1532, the escrow account required by the Law is separate from the escrow account required of sanitary landfills at existing N.J.A.C. 7:26-2A.9(f) and (g). Existing N.J.A.C. 7:26-2A.9(f) and (g) establish requirements for escrow accounts required under the Sanitary Landfill Closure and Contingency Fund Act, N.J.S.A. 13:1E-100 et seq. The Law is silent regarding combining these two types of escrow accounts; therefore, the adopted rule addresses them separately.

The Closure and Post-Closure Financial Plan and escrow requirements at N.J.A.C. 7:26A-2A.9(h) and (i), respectively, will apply to an operating sanitary landfill only after all or a portion of such landfill facility has been closed and the owner or operator accepts recyclable material, contaminated soil, wastewater treatment residual material, or construction debris for beneficial use at a portion of the landfill that meets the definition of a closed sanitary landfill facility.

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71. COMMENT: The proposed requirement for owners or operators to calculate closure and post-closure costs based on how much it would cost a third party to undertake closure is improper. Current plans already anticipate that many activities are performed in-house. (11)

72. COMMENT: The Department does not have the authority to require that closure and post-closure cost estimates be based on worst-case scenarios or the contingency of the Department taking over the site. This will greatly increase the cost of financial assurance and escrow accounts. The costs associated with State contractors and prevailing wage greatly increase the cost estimates. Only when a regulated entity violates the law and the Department determines that it is necessary to take over closure and/or post-closure should the need arise to estimate additional closure and post-closure costs. (8)

73. COMMENT: The Department should revise the use of third-party costs to calculate closure and post-closure cost estimates so as not to cause an increased financial burden for little change in the overall care and maintenance of a facility. Since some facilities perform many operational tasks in-house and plan to continue to perform some tasks during the closure and post-closure periods, the proposed changes could significantly increase closure and post-closure cost estimates. Further, increased estimates would result in increased tipping rates, which are an undue financial burden on the users of a facility. (10)

RESPONSE TO COMMENTS 71 THROUGH 73: The Department has broad authority to regulate solid waste under the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. In

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addition, as discussed in the notice of proposal Summary, 49 N.J.R. at 1531, the Law requires financial assurance in an amount necessary to cover “*all* closure costs,” N.J.S.A. 13:1E-125.5 (emphasis added), in order that the Department may draw upon the funds directly to fund closure in the case of termination of the approval for the project. This is not a fund for the owner or operator of a legacy landfill or closed sanitary landfill facility to draw upon to pay for post-closure care. Rather, the financial assurance is intended to prevent the taxpayers of the State from being burdened with the cost of doing what the owner or operator is legally obligated to do. Thus, if the Department must perform the closure, the owner or operator has not met its obligations. Although the owner or operator may intend to perform some of the closure activities in house, that intention is irrelevant at the stage in which the Department must access the financial assurance. It is a third party (whether the Department or a contractor that the Department hires for the purpose) that will perform the closure activities, funded with the financial assurance. The time for in-house activities has passed. Because the Closure and Post-Closure Financial Plan is updated every two years (N.J.A.C. 7:26A-2A.9(h)), the owner or operator may be able to reduce the financial assurance as it completes various closure activities, taking advantage of in-house cost savings.

74. COMMENT: There is no guarantee that Department staff will be consistent in evaluating the closure and post-closure cost estimates unless they are professional engineers with private construction experience. (8)

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RESPONSE: Since the 1980s, when the rules governing Closure and Post-Closure Financial Plans and financial assurance were promulgated, the Department staff has reviewed each Closure and Post-Closure Financial Plan to determine whether the recited financial assurance is sufficient to cover the anticipated costs of closure. Over that same time period, the Department has overseen the closures of numerous landfills. These decades of experience have enabled the Department to reliably evaluate whether the financial assurance recited in the Financial Plan is sufficient for its purpose.

In evaluating such plans, the Department also relies in part on the expertise of the professional engineer, in addition to the Department's own experience. The rules require the Financial Plan to be certified by a New Jersey licensed professional engineer, and updated and re-certified every two years after commencement of approved activities. A professional engineer that signs and seals a Financial Plan does so with the understanding that certifying an inaccurate plan could subject the individual to disciplinary action. An individual who has earned a professional engineer license has demonstrated that he or she has mastered the critical elements of the profession. Further, an individual must satisfy continuing professional competency requirements to maintain his or her license (N.J.A.C. 13:40-13, Professional Engineers; Continuing Professional Competency Requirements).

### **Economic Impact**

75. COMMENT: The insurance policy cost information found in the proposed rules is presented without sufficient detail to assess the validity and impact on affected facilities and is not accurate based upon the experience of the members of the Commercial Real Estate

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Development Association. Insurance markets are moving away from insuring for odors, and general liability does not cover personal injury and property damage caused by environmental conditions.

Also, the anticipated cost of pollution liability coverage has no basis since it is determined on a case-by-case basis. Experts consulted by the Commercial Real Estate Development Association estimate premiums for the stated costs ranging between \$60,000 and \$80,000 annually, with premiums for hazardous waste costing 25 percent more. The availability of such policies is not guaranteed, as the market is in constant flux, regarding both policy cost and policy term duration. (8)

RESPONSE: The Economic Impact statement for general and pollution liability insurance fully complies with the requirements of the Administrative Procedure Act at N.J.S.A. 52:14B-4(a)(2) and the Office of Administrative Law's Rules for Agency Rulemaking at N.J.A.C. 1:30-5.1(c)3. It describes the expected range of costs and other economic impacts that the Department anticipates for this portion of the adopted rules. The Department is required to provide "adequate notice" of its "views regarding the rules' expected economic impacts" to enable interested parties "opportunity to submit comments on the issue." It is not required to quantify these costs with particularity where the actual costs may vary significantly on a case-by-case basis. *In re Adoption of N.J.A.C. 5:96 and 5:97*, 416 N.J. Super. 462, 473-74 (App. Div. 2010); see *In re Protest of Coastal Permit Program Rules*, 354 N.J. Super. 293, 365 (App. Div. 2002) (holding that the Department's socio-economic impact statement is sufficient when it "set[s] forth the impact that [the Department] 'anticipate[s]' or expect[s] from the proposed regulations").

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The Law at N.J.S.A. 13:1E-125.5 requires owners or operators of legacy landfills or closed sanitary landfill facilities that accept recyclable materials, contaminated soil, wastewater treatment residual material, or construction debris to maintain a general liability insurance policy to pay for damages or claims resulting from operations or closure of the legacy landfill or closed sanitary landfill facility. The Department interprets the Law as requiring both general liability insurance and pollution liability insurance (see 48 N.J.R. at 1532). Nothing in the adopted rules expressly requires the owner or operator to obtain coverage specifically for odor. For a discussion of general liability insurance for bodily injury, personal injury, and property damage coverage, see the Economic Impact statement at 48 N.J.R. at 1537.

The Department consulted with various insurance specialists and brokers, who advised that the coverage that the adopted rules require is readily available in the insurance marketplace. Further, in drafting the scope of the required insurance coverage in the adopted rules, the Department relied on the terms of generic pollution liability coverage; accordingly, the adopted rules do not require unique or non-standard coverage. The estimated costs in the Economic Impact statement are based upon discussions with several major insurance brokers; however, in preparing the estimated costs, the Department was not able to account for all the variables that form the basis for an insurance premium. As stated in the Economic Impact statement of the notice of proposal, 48 N.J.R. at 1537, “[p]remiums for general liability insurance vary from state-to-state and among insurers, and also depend on, among other factors, the revenues, credit quality, and loss record of the insured; whether the policy limits are on a claims made or per occurrence basis; the face amount of the policy; the duration of the policy (shorter terms usually mean lower premiums); various technical factors, such as whether subrogation rights are waived;



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and whether environmental and pollution damage are covered.” The commenter’s experience in consulting with insurance experts supports the Department’s statement, in that the commenter found that the presence or absence of hazardous materials would affect the cost of the policy.

76. COMMENT: The costs outlined in the Economic Impact statement of the notice of proposal appear low and do not provide sufficient detail to assess the validity and ultimate cost impact on affected facilities. Because the Department has referenced 40 CFR Part 58, Ambient Air Quality Surveillance, there may be unaccounted costs associated with purchasing and maintaining H<sub>2</sub>S monitoring equipment, data quality needs, and implementation of monitoring beyond the landfill’s property line that have not been accounted for by the Department. (4)

RESPONSE: The Economic Impact statement for H<sub>2</sub>S monitoring costs fully complies with the requirements of N.J.S.A. 52:14B-4(a)(2) and N.J.A.C. 1:30-5.1(c)3. It describes the expected range of costs and other economic impacts that the Department anticipates for this portion of the adopted rules. See the Response to Comment 75 for a discussion of the required contents of the Economic Impact statement.

As stated in the notice of proposal Summary, 48 N.J.R. at 1534, “[i]f the Department requires a H<sub>2</sub>S monitoring system, the system must be designed in accordance with the Federal Ambient Air Quality Surveillance provisions of 40 CFR Part 58. That Federal rule contains requirements for measuring ambient air quality and for reporting ambient air quality data and related information.” In its analysis of estimated costs in the Economic Impact statement (48 N.J.R. 1534), the Department considered the costs associated with H<sub>2</sub>S monitoring systems that

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are designed in accordance with 40 CFR Part 58, as such design is required in adopted N.J.A.C. 7:26-2A.7(h)10 and 12. Depending on the size of the project, the number of H<sub>2</sub>S monitoring locations, and the quality of equipment (whether basic equipment or best available equipment) that is used, the cost for each individual site can vary. The Department acknowledges that the costs of designing, purchasing, installing, operating, and maintaining H<sub>2</sub>S monitoring equipment could be significant in some cases. See 48 N.J.R. 1537.

77. COMMENT: The Department did not consider potential costs exacted by citizens for access to their private property to perform off-site H<sub>2</sub>S monitoring. (9)

RESPONSE: As discussed in the Response to Comment 20, if it becomes necessary for an owner or operator to monitor H<sub>2</sub>S off-site, the Department will work with the facility to find a location with public access that would not impact private property. The Economic Impact statement, 48 N.J.R. 1535-1538, discussed the costs to landfill owners or operators, impacts on certain recycling facilities, and impacts on the Department related to the costs of an H<sub>2</sub>S monitoring system itself. Costs are site-specific and can include many elements, both known and unknown, that likely would not be shared by all sites. Considering the variety of activities and conditions at landfills, the Department is unable to estimate all potential costs.

### **Applicability of the Rules to All Landfills**

78. COMMENT: The Department has not undertaken the appropriate analysis required of the statute delegating rulemaking authority. The Department ignores past operational practices

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that exist between legacy landfills, which are revenue-driven, and operating landfills, which serve the public. Legacy landfills, closed sanitary landfills, and operating sanitary landfills should not be treated as similar entities. The Department's proposal to integrate regulations for legacy and closed sanitary landfills with those for operating sanitary landfills is inappropriate. The regulations should remain separate.

Melding the regulations as proposed: (1) could create confusion, misunderstanding, and misinterpretation about which regulations apply to what type of landfill; (2) is simply unfair; and (3) defines arbitrary and capricious as a matter of law and common sense. The proposed rules should be withdrawn and regulations implementing the provisions of the Law as to legacy and closed landfills should be republished separate and apart from regulations applicable to operating sanitary landfills. (1, 4, 8, 9, 10, 11, and 13)

79. COMMENT: Please clarify how the proposed rule changes impact operating sanitary landfills. (9)

RESPONSE TO COMMENTS 78 AND 79: As stated in the notice of proposal Summary, 48 N.J.R. at 1527, the proposed requirements for closed sanitary landfill facilities have the potential to impact every sanitary landfill in the State, including a currently operating sanitary landfill, because at some point every sanitary landfill, or portion thereof, should be closed. In certain circumstances, the Law applies to the closed portion of an operating sanitary landfill. For example, the definition of "closed sanitary landfill facility" at N.J.S.A. 13:1E-125.1 specifically includes "a portion of a sanitary landfill facility, for which performance is complete with respect

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to all activities associated with the design, installation, purchase or construction of all measures, structures, or equipment required by the Department in order to prevent, minimize, or monitor pollution or health hazards resulting from a sanitary landfill facility subsequent to the terminations of operations at any portion thereof . . .” Because of the substantial overlap in requirements, creating a separate set of rules of legacy landfills, another for closed sanitary landfills, and a third for operating sanitary landfills would be needlessly duplicative. In the circumstances where a requirement applies to only a subset of landfills, the applicability is clearly described in the rules.

As discussed in the Response to Comment 67, the Law is not the Department’s sole authority for promulgating the adopted rules. The existing Solid Waste rules at N.J.A.C. 7:26 contain requirements for closure and post-closure care and disruption of sanitary landfills (see 48 N.J.R. 1526). Rather than promulgating a separate subchapter to implement the Law, the Department integrated the Law’s requirements into the existing rules to provide the regulated community and the public with comprehensive rules that address closure and post-closure care and disruption of all sanitary landfills. It is under the Department’s broad statutory authority that it promulgates requirements for all sanitary landfills, including the extension of some requirements of the Law to all sanitary landfills, whether or not they are operating.

In drafting the proposed rules, the Department evaluated each requirement of the Law and determined whether the requirement should be expanded to include all sanitary landfills. For instance, the Department determined it appropriate to apply the H<sub>2</sub>S monitoring requirement to all sanitary landfills based on the nature of landfill operations and actual historical issues with H<sub>2</sub>S odors at both operating and terminated landfills. To avoid confusion, the adopted rules

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specify whether a requirement applies to all sanitary landfills, or only to legacy landfills and closed sanitary landfills. For example, N.J.A.C. 7:26-2A.9(a) requires the preparation of a Closure and Post-Closure Plan by all landfills from the time a landfill accepts any type of material. The rule specifically states that it applies to all sanitary landfills. In contrast, N.J.A.C. 7:26-2A.9(i)1 applies only to legacy landfills and closed sanitary landfills, whose owners or operators must establish legacy landfill escrow accounts.

As discussed throughout the notice of proposal Summary (48 N.J.R. 1526-1540), the Department's concerns regarding the acceptance of materials and compliance with applicable standards apply to operating sanitary landfills, as well as to those facilities covered under the Law. The adopted rules require an operating sanitary landfill to, for example, submit periodic evaluation reports throughout a landfill's post-closure care period, and adhere to the 30 ppbv H<sub>2</sub>S standard, and monitoring and notification requirements, if applicable. Additional changes for closure requirements include quarterly certification reports submitted by a New Jersey licensed professional engineer during landfill closure, closure plan modification before an operational change is made to the landfill facility, and a material acceptance protocol and a site assessment in a closure plan application.

### **Agency-Initiated Changes**

The Department is correcting N.J.A.C. 7:26-2A.9(h)6ii on adoption to replace "maybe" with "may be."

### **Federal Standards Statement**

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Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

To the extent that the new rules and amendments govern the closure of legacy landfills and closed sanitary landfill facilities that accept certain materials for placement after closure, they implement the Law and are not promulgated under the authority of, or implement, comply with, or participate in, any program established under Federal law, or under a State statute that incorporates or refers to a Federal law, Federal standards, or Federal requirements. Accordingly, no further analysis is required.

Sanitary landfills that conduct closure activities may be subject to Federal requirements for Municipal Solid Waste landfills and other disposal facilities at 40 CFR Parts 257 and 258. The adopted amendments governing the closure of legacy landfills are consistent with the Department's existing closure and post-closure care requirements for other landfills, which are, in turn, consistent with these Federal regulations. There are no comparable Federal standards governing the acceptance of certain materials for placement after closure by legacy landfills or closed sanitary landfill facilities or the emission of H<sub>2</sub>S gas at sanitary landfills.

The new rules and amendments also govern emissions of H<sub>2</sub>S from sanitary landfills. While there are Federal regulations governing air quality, particularly 40 CFR Part 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills, and 40 Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills, these regulations address only the emissions of non-methane hydrocarbons. Neither contains an H<sub>2</sub>S standard. Therefore, there are no Federal regulations to which the Department

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can make a meaningful comparison of the Department's amendments regarding H<sub>2</sub>S emissions or the acceptance of additional materials for placement by owners or operators at sanitary landfills. No further analysis with respect to these provisions is required.

**Full text** of the adopted new rules and amendments follows (additions to proposal indicated in boldface with asterisks **\*thus\***; deletions from proposal indicated in brackets with asterisks **\*[thus]\***):

7:26-2A.7 Sanitary landfill engineering design standards and construction requirements

(a) – (g) (No change.)

(h) The following are the design and construction requirements and standards for monitoring systems:

1. – 9. (No change from proposal.)

10. The Department may require the owner or operator to design and install a hydrogen sulfide ambient air monitoring system based upon the Department's determination that the sanitary landfill is the source of **\*[a verified odor complaint]\*** **\*hydrogen sulfide emissions that result in a violation of N.J.A.C. 7:27-5.2\*** or an exceedance of the hydrogen sulfide standard at N.J.A.C. 7:27-7.3:

i. (No change from proposal.)

ii. **\*[The]\*****Except as set forth in (h)10iii below, the** hydrogen sulfide monitoring system shall be designed in accordance with 40 CFR Part 58, Appendix D**\*[. The system]\*** **\*and\*** shall also meet the following requirements:

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(1) – (7) (No change from proposal.)

**\*iii. In lieu of complying with (h)10ii above, and subject to Department approval, the owner or operator may design and install a system that is at least as effective at hydrogen sulfide monitoring as a system designed in accordance with (h)10ii above.\***

(i) (No change from proposal.)

7:26-2A.8 Sanitary landfill operational and maintenance requirements

(a) – (g) (No change from proposal.)

(h) Monitoring shall be performed in accordance with the following parameters and schedules:

1. – 11. (No change from proposal.)

12. If a hydrogen sulfide ambient monitoring system is required by the Department pursuant to N.J.A.C. 7:26-2A.7(h)10, hydrogen sulfide monitoring shall meet the following requirements:

i. – iii. (No change from proposal.)

iv. A written summary report shall be provided to the Department no less frequently than the 15th day of each calendar month for all monitoring results generated in the prior calendar month or in accordance with a schedule approved by the Department.

The report shall be sufficient to provide the Department with the information necessary to determine the maximum hydrogen sulfide concentrations measured at and beyond the property line of the landfill. The report shall also identify any exceedances of the hydrogen sulfide standard and the actions taken to mitigate and



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eliminate the potential for \*[a verified odor complaint, air pollution, as defined in N.J.A.C. 7:27-5]\* **\*hydrogen sulfide emissions that result in a violation of N.J.A.C. 7:27-5.2\***, or an exceedance of the standard in N.J.A.C. 7:27-7.3;

v. (No change from proposal.)

vi. Monitoring shall meet the quality assurance requirements of 40 CFR Part 58, Appendix A, incorporated herein by reference\*, **unless different requirements are approved by the Department in accordance with N.J.A.C. 7:26-2A.7(h)10iii\***;

vii. – viii. (No change from proposal.)

(i)– (l) (No change from proposal.)

#### 7:26-2A.9 Closure and post-closure care of sanitary landfills

(a) – (b) (No change from proposal.)

(c) General closure and post-closure care requirements are as follows:

1.-10. (No change from proposal.)

11. During the post-closure care period, the owner or operator of a closed sanitary landfill facility shall submit post-closure evaluation reports to the Department as follows:

i. The owner or operator shall submit a post-closure evaluation report:

(1) (No change from proposal.)

(2) For a closed sanitary landfill facility that as of \*[the effective date of this rule]\* **\*September 5, 2017\*** is within 10 years of completion of the post-closure care period as defined in (c)9 above or the Closure and Post-Closure Plan Approval, on or before \*[one year after the effective date of this amendment)]\* **\*September 5, 2018\***;

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(3) For a closed sanitary landfill facility that is in its post-closure care period on \*[(the effective date of this rule)]\* **\*September 5, 2017\***, but is not subject to (c)11i(2) above, on or before the next 10-year anniversary of completion of closure. For example, if closure was complete on December 5, 1997, the first post-closure evaluation report is due on or before December 5, 2017; and

(4) (No change from proposal.)

ii.-iii. (No change from proposal.)

(d)-(j) (No change from proposal.)

(h) The Closure and Post-Closure Financial Plan for any legacy landfill or closed sanitary landfill facility whose owner or operator accepts recyclable material, contaminated soil, wastewater treatment residual material, or construction debris shall meet the following specific requirements. For the purpose of this subsection, the above listed material types do not include dredged material as defined in N.J.A.C. 7:26-1.4. Where a sanitary landfill is subject to the Financial Plan requirements of both (f) above and this subsection, the owner or operator shall submit one Financial Plan that addresses both subsections:

1. – 5. (No change from proposal.)

6. The Financial Plan shall be updated, re-certified, and submitted to the Department for approval every two years after commencement of approved activities on the legacy landfill or closed sanitary landfill facility.

i. (No change from proposal.)

ii. If the closure cost estimate decreases, the owner or operator may submit a written request to the Department to reduce the amount of the financial assurance required.

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This request shall include a certification by a New Jersey licensed professional engineer detailing the decrease in the cost estimate, as applicable. The financial assurance \*[maybe]\* **\*may be\*** reduced to the amount of the new estimate upon written approval by the Department; and

iii. (No change from proposal.)

(i) – (j) (No change from proposal.)