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November 23, 2016

James W. Parker, Chair
Board of Environmental Protection
c/o Ruth Ann Burke
17 State House Station
Augusta, ME 04333-0017

Re: Juniper Ridge Landfill Expansion
DEP #S-020700-WD-BI-N and #L-024251-TG-C-N

Dear Chairman Parker:

On behalf of the Bureau of General Services (BGS) and NEWSME Landfill Operations, LLC (NEWSME), I am attaching the Applicants' Post-Hearing Brief in this proceeding.

Thank you very much for your continued attention to this matter.

Very truly yours,



Thomas R. Doyle

Enclosure

cc: Service List (via email and U.S. Mail)

**STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

IN THE MATTER OF:

STATE OF MAINE BUREAU OF GENERAL
SERVICES
JUNIPER RIDGE LANDFILL EXPANSION
CITY OF OLD TOWN, TOWN OF ALTON
PENOBSCOT COUNTY, MAINE
#S-020700-WD-BI-N
#L-024251-TG-C-N

APPLICATION FOR MAINE
HAZARDOUS WASTE, SEPTAGE AND
SOLID WASTE MANAGEMENT ACT,
and NATURAL RESOURCES
PROTECTION ACT PERMITS and
WATER QUALITY CERTIFICATION

APPLICANTS' POST-HEARING BRIEF

Pursuant to Section 23 of Chapter 3 of the Department's rules, Applicants State Bureau of General Services ("BGS") and NEWSME Landfill Operations, LLC ("NEWSME") file this post-hearing brief regarding their joint application to expand the disposal capacity of the Juniper Ridge Landfill ("JRL") under the Maine Hazardous Waste, Septage, and Solid Waste Management Act, 38 M.R.S. §§ 1301 to 1310-AA, and the Natural Resources Protection Act, 38 M.R.S. §§ 480-A to 480-JJ (the "Expansion"). As will be discussed in detail below, the application meets or exceeds all applicable permitting criteria and should, therefore, be granted.

EXECUTIVE SUMMARY

The application to expand JRL continues to demonstrate the wisdom of siting the original landfill at this location in Old Town back in 1993. The site is probably the most studied and best understood landfill site anywhere in Maine – it has been extensively investigated; it is relatively remote; groundwater flow patterns are known and make it easy to monitor and (if necessary) to remediate; and it is close to a major interstate highway. The Expansion itself is robustly designed to meet or exceed all applicable standards, will have limited impacts on protected natural resources, and includes an extensive compensation package that will permanently

preserve from development 266 acres of land, including many acres of high value wetlands and vernal pools.

After the public hearing held by the Board, there appear to be relatively few issues in dispute about the Expansion. For the Board's convenience, each is described briefly here and then discussed in greater detail below.

I. Waste Management Hierarchy.

Ed Spencer argues that the Applicants fail to meet the requirements of the waste management hierarchy set forth in 38 M.R.S. § 2101 by suggesting that the Board should somehow investigate what he calls the "true source" of the waste being disposed at JRL. On the contrary, there is no such requirement. Mr. Spencer's argument, it turns out, is really an attempt to circumvent the Legislature's determination in 38 M.R.S. § 1310-N(11) that the residues of solid waste processing operations located in Maine, such as recycling centers and incinerators, are in-state waste, and thus may be disposed at JRL. That issue is not up for debate in this proceeding, and therefore this argument should be rejected.

In addition, Mr. Spencer also asserts that the Board should impose limits on certain waste streams anticipated to be disposed in the Expansion, such as oversize bulky waste ("OBW"), that are not generated by the Applicants, but rather by the customers of JRL. The hierarchy does not, however, reach that far. The Applicants are responsible for only those wastes that are sufficiently within their control to manage pursuant to the hierarchy, not the actions of unrelated third parties that send their wastes to JRL for disposal. *See* 06-096 CMR 400 § 4(N)(2)(a). In fact, once those waste streams reach JRL, the Applicants do manage them to the maximum extent practicable under the hierarchy, such as by recycling and beneficially reusing them in the landfill itself. *See* King Direct Testimony at 7. Nothing more is required.

II. Public Benefit Determination.

Another issue that arose at the hearing is whether the Public Benefit Determination (“PBD”) requires the Board to impose an OBW limit on the Expansion. The PBD states that a limit should be based on ensuring that waste processing facilities meet their obligations to recycle or process into fuel all waste that they accept to the maximum extent practicable, but at least at a rate of 50%. *See* PBD, Condition 3, at 29. This statement, however, was based on the Department’s concern in 2012 when the PBD was issued that processing facilities were not fully meeting their obligations to recycle or process into fuel their own waste streams. That is no longer the case. The primary facilities that send processing residuals to JRL, ReEnergy and ARC, now recycle the vast majority of their waste inputs. *See* BGS/NEWSME Exhibits 49 & 50. Also, at the time, one of the biggest processing facilities that sent residuals to JRL was KTI Biofuels, which was a corporate affiliate of NEWSME. There appears to have been some concern about whether that facility had adequate incentives to recycle and process, as required. *See* PBD at 11. That facility, however, has been sold to an unrelated third-party, and thus these concerns no longer exist. *See* Hearing Transcript at 293.

Further, as facilities like ReEnergy, which processes construction and demolition debris (“CDD”), and the Penobscot Energy Recovery Company (“PERC”), which incinerates municipal solid waste (“MSW”), cautioned the Board, placing a cap on how much OBW that can be disposed in the Expansion would have unintended consequences on their operations. They are in the business of processing solid waste in a manner that is consistent with the hierarchy, yet still need a place to dispose of the residues, such as OBW and ash, that they cannot otherwise recycle or further process. *See* Hearing Transcript at 297, 303. A cap on residues like OBW at JRL would, therefore, have the opposite effect desired by putting a chill on operations that conduct the kinds of activities that we want to promote under the hierarchy.

In addition, as part of the discussion about the PBD, the Board raised questions about whether OBW is a type of MSW. Although the application clearly proposes to accept OBW, MSW is not proposed to be accepted in the expansion, other than as MSW bypass and Front-End Processing Residue (“FEPR”). *See e.g.*, Solid Waste Application, Vol. I, at 3-35. Even though it is not defined in statute or regulation in Maine, OBW is generally understood to be large items that are difficult to process, such as furniture, mattresses, and carpeting. These items are generated as part of construction, remodeling, repair, and demolition activities by homeowners, businesses and contractors, and are, therefore, a type of CDD as defined by the solid waste rules, not MSW. *See* 06-096 CMR 400 § 1(FF). This is consistent with the Department’s long-standing interpretation of OBW, including in the initial license granted to the State and NEWSME for JRL in 2004, *see* DEP Order, #S-020700-WD-N-A, at 4 (April 9, 2004), and the PBD itself, where OBW is referred to as a “component of demolition debris,” *see* PBD at 11.

III. Site Geology.

Mr. Spencer also raises questions, but presents no evidence or analysis, regarding site geology. First, the issue that Mr. Spencer raises about glacial rebound and its impact on subsidence is not a concern given that it is occurring over the entire region, not just at the Expansion site, and that the soils are otherwise stable. *See* Sevee Rebuttal Testimony at 1. Second, there is no dispute with the City of Old Town’s consultant, Denis St. Peter, as Mr. Spencer suggests. Mr. St. Peter clearly and concisely states that the application meets all standards, and simply raises a concern about whether testing residential wells would be needed along Route 16, Route 43, and Stagecoach Road if the landfill were ever to leak. *See* Old Town Exhibit 2 at 2. Even though he disagrees with Mr. St. Peter about how to interpret the data for the underlying geology, John Sevee, the Applicants’ certified geologist, agreed that testing wells

in those circumstances would be a sensible precaution if there were a leak. *See* Hearing Transcript at 180. Thus, there is no conflict on this point.

IV. Landfill Design.

Mr. Spencer also raises a series of questions – again without providing any evidence or analysis – about the design of the Expansion. The Applicants’ engineer, Michael Booth, explained that each of these concerns has been addressed, namely, that the leachate collection system is designed to handle large storms, including beyond the 25-year, 24-hour storm required by the rules; that the landfill gas and leachate collection pipes are adequately designed for the conditions; that conducting an analysis to show a travel time of at least six years to sensitive receptors, as required by the rules, is not an admission that the Expansion will leak; and that the liner is designed to meet or exceed regulatory and engineering standards not to leak. *See* Booth Rebuttal Testimony at 1-4, 6; Hearing Transcript at 64, 74-76.

V. Stormwater Management.

Mr. Spencer and his expert, Dr. Steven Coghlan, next argue that the Expansion’s stormwater system is not adequately designed to account for potentially increased stormwater flows that may be caused by anthropogenic climate change (even though there is no such requirement in the rules). On the contrary, the Expansion system is designed to handle up to a 100-year storm without impacting the integrity of the structures, as illustrated when the existing stormwater system and ponds at JRL managed a 5.27 inch rainfall last year comfortably. *See* Booth Rebuttal Testimony at 8. Furthermore, given that the Expansion will be built in phases over a period of years with final design completed before each phase is constructed, the data set that will be used for the final design of the stormwater structures will be the then-current data set and all such design work will need to be approved at that time by the Department. *See id.* at 9. Thus, if the rules pertaining to design storms do change to include new precipitation data

affected by climate change, that will be reflected in the data used to design each phase of the project.

VI. Leachate Management.

Mr. Spencer and Dr. Coghlan also pose questions about management of leachate from the Expansion, again without providing any evidence that it will be inadequate. As with the existing JRL, leachate from the Expansion will be trucked to a treatment facility at either the former Old Town mill or the City of Brewer. *See Solid Waste Application, Vol. I, at 1-4.* These facilities are fully licensed by the Department to treat this waste stream, and there is no evidence whatsoever that they are failing to comply with their wastewater discharge licenses such that the discharges pose a threat to the environment. In fact, the first option for treatment is the Old Town mill, whose treatment plant recently received a renewed wastewater discharge license that explicitly addresses JRL's leachate and even downgrades the facility to "minor" status because of the low risk that it presents to water quality. *See MFGR, DEP Order #ME0002020 & W002226-5O-O-R (Oct. 12, 2016).*

VII. Wetland Compensation.

Dr. Coghlan briefly asserts that the wetland compensation package proposed in the application is inadequate because he disagrees that preserving land is an appropriate compensation technique. On the contrary, as he later acknowledged at the hearing, preservation is explicitly authorized in the Department's rules for compensation. *See Hearing Transcript at 281.* Moreover, the compensation package proposed for the Expansion would preserve sixteen times more land, including many acres of high value wetlands and vernal pools, than would normally be required under the NRPA. *See Emerson Direct Testimony at 7.*

VIII. Fisheries.

Finally, Dr. Coghlan also asserts that the Expansion will harm fisheries, including Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon. He provides no specific evidence on this point, and instead questions whether the State resource agencies have adequately analyzed it. In fact, they have – both the Maine Department of Inland Fisheries & Wildlife (“IF&W”) and the Maine Department of Marine Resources (“DMR”) have consistently advised the Department that there will be no impacts to fish. *See e.g.*, BGS/NEWSME Exhibit 57 at 1-2. In addition, the closest stream to the Expansion is an unnamed, intermittent stream over 800 feet away, and the closest perennial stream is 950 feet away. *See* Emerson Rebuttal Testimony at 3. The buffer recommended by IF&W is only 100 feet, which is supported by the scientific literature on buffers. *See* Solid Waste Application, Vol. I, App. F, at 521; BGS/NEWSME Exhibits 59 & 60.

BACKGROUND

BGS, as the owner of JRL, and NEWSME, as its operator, filed an application in July 2015 to increase the disposal capacity of JRL by 9.35 million cubic yards to meet the State’s long term solid waste disposal needs. The application was filed under the Hazardous Waste, Septage, and Solid Waste Management Act to amend the facility’s solid waste facility license and the NRPA to address impacts from the Expansion to protected natural resources.

JRL has been an integral part of the State’s overall solid waste management program since the State acquired it in 2004, providing environmentally sound disposal capacity for non-hazardous solid waste generated in Maine. In 2013, 2014, and 2015, JRL accepted approximately 606,254, 629,021, and 631,762 tons, respectively, of non-hazardous in-state waste. *See* Labbe Direct Testimony at 1. In 2014, JRL provided just over half of the overall solid waste disposal capacity for the entire state. *See* Solid Waste Application, Vol. I, at 1-3.

The Department has already concluded in the PBD that the Expansion is needed to meet the long-term disposal needs of the State, as required by 38 M.R.S. § 1310-AA(3), prior to filing the current application. *See* PBD at 28 (concluding that the Expansion “will provide a substantial public benefit”). At the end of 2014, the remaining permitted capacity at JRL was approximately 3.9 million cubic yards, enough to last only about five years using 2014 disposal rates. *See* Solid Waste Application, Vol. I, at 1-3. The Expansion will extend the life of JRL by approximately ten to twelve years, and possibly longer depending upon disposal rates. *See id.* The first cell of the Expansion will need to be constructed in 2018 to be available for use in 2019. *See id.* Furthermore, since the PBD was granted, the need for additional capacity has not materially changed. As explained by Michael Barden, the State’s Manager of State-owned Landfills, “[a]dditional state solid waste landfill capacity will be needed within the next two years to avoid serious disruption for the in-state waste deliveries that are currently being managed at JRL.” *See* Barden Direct Testimony at 4.

As with the existing landfill, the Expansion will accept for disposal only non-hazardous waste generated in Maine.¹ *See* Labbe Direct Testimony at 13. The waste stream categories and amounts for the Expansion are expected to be similar to that currently accepted at JRL, including CDD, FEPR, CDD fines, MSW bypass, boiler ash, OBW, treatment plant sludges, contaminated soils, oil spill debris, and miscellaneous special wastes.² *See id.* Although the existing JRL is licensed to accept non-bypassed MSW, the application proposes to accept only MSW bypass and Front-End Processing Residue (“FEPR”) in the Expansion. *See id.*

The Expansion, which will eventually increase the solid waste footprint at JRL by about 54 acres, will be developed in a phased manner as it is needed. *See id.* The total Expansion

¹ Because JRL is a state-owned landfill, it may accept only in-state waste. *See* 38 M.R.S. § 1310-N(11).

² For a more detailed description of these waste categories and projected amounts, please see the Solid Waste Application, Vol. I, at 3-32.

facility will include additional infrastructure, such as access roads, stormwater management ponds, and a relocated office building and scales. *See* Booth Direct Testimony at 2.

The landfill portion of the Expansion is designed with primary and secondary liners, leak detection, leachate and landfill gas collection systems, and an underdrain system under approximately 12.7 acres of the proposed footprint. *See* Solid Waste Application, Vol. I, at 1-3. The two liners and leak detection system allow the performance of the Expansion to be monitored separately from the existing landfill. *See id.* Landfill gas generated by the facility will either be combusted in the existing flare or used in a landfill gas-to-energy plant that is currently being considered for the site. *See id.* at 1-4. Leachate from JRL will continue to be hauled to and treated by a licensed wastewater treatment facility, either at the former Old Town mill or at the City of Brewer's publicly owned treatment works. *See id.*

As a result of efforts to reduce impacts to protected natural resources, the Expansion will result in the filling of only 2.04 acres and the clearing of 0.1 acres of relatively low-value freshwater wetlands. *See* NRPA Application, Vol. V, at 1-3. In addition, the Expansion will result in clearing impacts to the upland habitat of one significant vernal pool. *See id.* This activity has already been approved by the Department pursuant to a permit-by-rule under the NRPA. *See id.*, App. B. To compensate for these impacts, the Expansion application includes a robust compensation package that will permanently preserve on-site approximately 266 acres of land, including approximately 57 acres of wetlands and 25 significant vernal pools. *See id.* at 1-3. This compensation plan is *sixteen times greater* than what would normally be required under the Department's typical eight to one ratio for preservation. *See* Emerson Direct Testimony at 7.

ARGUMENT

As was extensively discussed throughout the pre-hearing process in this matter, this is a licensing proceeding to determine whether BGS and NEWSME have met the statutory and

regulatory criteria necessary to expand the JRL. It is not a policy debate about how solid waste should be managed in Maine or an opportunity to revisit the duly-enacted or promulgated laws that govern questions such as whether the Legislature should re-define in-state waste or whether the Department should allocate differently the burdens under the waste management hierarchy. Thus, the focus at each step must be on determining what specific standard applies and whether the evidence supports a conclusion that the standard has been met.

Consideration of BGS and NEWSME's application to expand JRL demonstrates clearly that solid waste policy in Maine continues to be a hot topic for debate. This is amply illustrated by the party opponents to the Expansion – Mr. Spencer and Dana Snowman – who focus the bulk of their objections on policy concerns over the wisdom of continuing to allow JRL to accept OBW and classifying the residuals of various solid waste processing activities located in Maine as in-state waste. Although Mr. Spencer attempts to question the technical validity of the Expansion, his efforts consist largely of asking questions for the Board to consider on issues such as site geology and engineering design. He offers no expert testimony on any of these issues, aside from Dr. Coghlan's largely generalized concerns about natural resource impacts. For his part, Mr. Snowman offers no testimony whatsoever. The only other parties, the City of Old Town and SSR, LLC, are either neutral or supportive of the project. In fact, the City of Old Town's consulting engineer has opined that the project meets all applicable standards. *See* Old Town Exhibit 2 at 2.

Ultimately, this is not the proper forum for a policy debate. Rather, it is a permitting proceeding designed to determine whether the applications meet applicable approval criteria. The Applicants have already filed voluminous records with the Department on this matter, including five volumes of application materials, as well as extensive responses to Department staff's review comments on the application, and pre-filed direct and rebuttal testimony from

expert witnesses at the Board's public hearing. This evidence is more than sufficient to demonstrate compliance with all applicable permitting criteria. Furthermore, during the pre-hearing process, the parties identified those issues that they believed to be in dispute for purposes of presenting testimony during the hearing, a list that as a practical matter was reduced still further during the hearing process itself.

Therefore, for the convenience of the Board and in order to focus most carefully on the key issues that remain, this post-hearing brief will address only those issues that appear realistically to be in dispute.

I. The Solid Waste Application Meets or Exceeds All Applicable Criteria.

BGS and NEWSME's application meets all applicable solid waste criteria to expand an existing state-owned landfill, including under Chapters 400, 401, and 405 of the Department's rules. *See Solid Waste Application, Vol. I, Table 1-1* (detailing where in the application to find evidence demonstrating compliance with all applicable standards of the solid waste management rules). Based on the pre-filed testimony of the parties and the discussion at the hearing, the key issues that appear to remain in dispute are limited to the waste management hierarchy, the PBD, site geology, landfill design, stormwater management, and leachate management. Each of these issues will be addressed below.

A. The Application Complies with the Waste Management Hierarchy.

One of the key issues that Mr. Spencer raises in opposition to the Expansion is his claim that it does not comply with the waste management hierarchy. His argument focuses on two points, one related to what he calls the "true source" of some of the wastes being disposed at

JRL, and the other that JRL should somehow exercise greater control over those that generate such wastes.³ *See* Spencer Direct Testimony at 2-3.

1. The Hierarchy Requires Processing Wastes Pursuant To An Order Of Priority, But Only To The Extent Within An Applicant's Control And To The Maximum Extent Practicable.

Because the hierarchy is a key issue in this proceeding, it is important to recognize what it does and does not require, as that is critical to understanding why Mr. Spencer's arguments on these points should be rejected. By statute, all waste management facilities must demonstrate that their practices "are consistent with the State's solid waste management hierarchy set forth in [38 M.R.S.] section 2101." *See* 38 M.R.S. § 1310-N(1)(D). Section 2101, in turn, provides as the policy of the State the now-familiar order of priority for how solid waste should be managed: reduce, reuse, recycle, compost, process (including incineration), and landfill. *See* 38 M.R.S. § 2101.

The Department has adopted rules to implement the hierarchy that require an applicant for a solid waste disposal license to submit evidence that the waste to be disposed "has been reduced, reused, recycled, composted, and/or processed to the maximum extent practicable prior to incineration or landfilling, in order to maximize the amount of material recycled and reused, and to minimize the amount of waste being disposed." *See* 06-096 CMR 400 § 4(N)(2)(a). This

³ Mr. Spencer also argues as evidence of the Applicants' failure to comply with the hierarchy that they previously applied for a license amendment to accept MSW for disposal at JRL until 2018, which he views as a "flagrant violation of our Hierarchy." *See* Spencer Rebuttal Testimony at 3. Although irrelevant for purposes of this proceeding, this is false, and Mr. Spencer knows it. In fact, in a proceeding that involved a two-day contested public hearing in which Mr. Spencer was a party, the Department specifically concluded that the Applicants' request to dispose of MSW at JRL was consistent with the hierarchy. *See* DEP Order #S-020700-WD-BC-A, at 41 (Dec. 20, 2013) (concluding that "acceptance of additional unprocessed MSW at JRL in addition to bypass and soft layer material for cell construction is consistent with the hierarchy provided" that certain conditions were met). This Board affirmed that finding on appeal over Mr. Spencer's objections just two years ago. *See* BEP Finding of Fact and Order on Appeals #S-020700-WD-BG-Z at 23 (June 19, 2014).

evidence must include “a description of the reduction, reuse, recycling, composting and/or processing programs/efforts that the waste is or will be subject to.” *See id.*

There are two significant qualifications to the scope of this provision. First, an applicant is only responsible for actions to promote the hierarchy that are “sufficiently within the control of the applicant to manage or facilitate.” *See id.* This means that an applicant need not demonstrate compliance with the hierarchy for those waste streams that are generated by unrelated third parties.

Second, the term “maximum extent practicable” does not require taking steps that are so burdensome that they cause “unreasonable increases in facility operating costs or unreasonable impacts on other aspects of the facility’s operation.” *See id.* This specifically includes “consideration of the availability and cost of technologies and services, transportation and handling logistics, and overall costs that may be associated with various waste handling methods.” *See id.* This means that a facility is only required to take those steps under the hierarchy that are reasonable in light of factors such as cost, logistics, and technology.

2. The Hierarchy Does Not Require Consideration Of Where The Solid Waste Was Originally Discarded.

Mr. Spencer’s first argument under the hierarchy is that any waste coming into Maine must be subject to the hierarchy from the moment it is initially thrown away – what he calls its “true source” or its “point of discard” – all the way to disposal in a landfill. *See Spencer Direct Testimony at 2.* He is primarily concerned here about CDD, much of which he believes originates outside of Maine and should be regulated through the solid waste facility license for JRL. Ultimately, Mr. Spencer hopes to turn a licensing standard applicable to one facility at a time into a mechanism for regulating the entire solid waste industry, from cradle to grave.

This is not, however, how the hierarchy works.

The rules do not require information on where the solid waste was “originally” discarded, at least as Mr. Spencer’s envisions it.⁴ By seeking information on the so-called “true source” of these wastes, Mr. Spencer is actually trying to circumvent the clear definition of “in-state waste” in hopes that he can shut down the ability of businesses like ReEnergy in Lewiston and ARC in Eliot that process CDD, some of which originates out-of-state, to send the residues that these processes generate to JRL for disposal.

The Legislature, however, has determined that residues produced in Maine by these types of businesses, as a byproduct of their efforts to recycle things like CDD (which should be *promoted* under the hierarchy, not restricted), are themselves in-state waste, because they were generated here in Maine, regardless of where the inputs to these processes originated. *See* 38 M.R.S. § 1310-N(11) (in-state waste includes: “residue and bypass generated by incineration, processing and recycling facilities within the State or waste, whether generated within the State or outside the State, if it is used for daily cover, frost protection or stability or is generated within 30 miles of the solid waste disposal facility”).⁵ As a result, by statute, the residuals that Mr. Spencer is concerned about are wastes that may be disposed at JRL because, by law, the sources of all of these waste streams are in Maine. *See* King Rebuttal Testimony at 3 (“All waste proposed to be accepted in the JRL expansion is, as defined by statute, waste generated in Maine.”). Thus, there is no reason under the hierarchy for the Board to require what Mr. Spencer

⁴ Mr. Spencer even has to borrow the definition of “discard” from the Resource Conservation and Recovery Act, 42 U.S.C. § 6109 *et seq.*, a federal statute that is not applicable here, because neither the word nor the concept exists anywhere within the plain language of the hierarchy statute or rule. *See* Spencer Direct Testimony at 2.

⁵ The statutory definition of in-state waste codified in 2007 the Department’s long-standing interpretation. For example, in the first Department order issued to the State as owner of JRL in 2004, the Department stated that residuals from in-state processing facilities was in-state waste. *See* DEP Order, #S-020700-WD-N-A, at 38 (April 9, 2004) (“The Department received comments from the public regarding wastes and whether they would be regarded as in state or out of state waste. The Department responded that FEPR and ash from incinerators in Maine, as well as a limited amount of bypass, would be considered waste generated in Maine, but that waste delivered from out of state to another facility (such as a transfer station, or a compost facility *if no processing occurs*) for transfer to [JRL] in its original form would be considered waste generated outside Maine.”) (emphasis added).

conceives of as the true source of these waste streams. That has already been answered by statute.

The real question is whether the residuals themselves could instead have been reduced, reused, composted, processed, or incinerated further by BGS and NEWSME. As Toni King, the Regional Engineer for Casella Waste Systems, NEWSME's ultimate parent, explained, the answer is no. Residuals are used at JRL as alternative daily cover, which is defined by statute as a beneficial reuse/recycling activity, *see* 38 M.R.S. § 1310-N(5-A)(B)(2), and is consistent with the hierarchy. *See* King Direct Testimony at 7. In addition, as Ms. King points out, reducing these waste streams further would require downsizing or closing the very businesses that the hierarchy is intended to promote, businesses like ReEnergy and ARC that process CDD and need a place to dispose of the processing residuals (e.g., CDD fines and OBW) that otherwise have no further reuse potential, cannot be composted, and are unacceptable waste at Maine incinerators. *See id.* at 3. Because landfilling is the only feasible alternative for these processing residues, the hierarchy has been met.

3. The Hierarchy Does Not Require A Solid Waste Facility To Somehow Control Those Who Generate Waste.

Mr. Spencer's second argument under the hierarchy is that the Applicants are somehow responsible for controlling the actions of those who generate solid wastes and seek to dispose of them at JRL. *See* Spencer Rebuttal Testimony at 3 (arguing that "[i]nstead of making sure that wastes into JRL are being fully reduced at the source before they get to JRL, Casella/BGS relies on the generators of that waste to comply with the provisions of our Hierarchy").

As noted above, however, the rules require the Applicants to manage only those waste streams that are "sufficiently within the control of the applicant to manage or facilitate." 06-096

CMR 400 § 4(N)(2)(a). During the rulemaking for the hierarchy, the Department clarified what is meant by this phrase, as follows:

The Department's use of the term "sufficiently within the control of the applicant" was intended to acknowledge and make it clear that a facility, particularly a disposal facility, may not be in a position to further effect the reduction or recycling of waste that is sent to it because it has no, or little, ability to control that waste prior to its arrival. . . . The rule is not intended to "shift this responsibility to the facility of last resort, the landfill", but simply to ensure that all waste reduction and recycling efforts that can reasonably be undertaken by the applicant, will be.

See Basis Statement and Response to Comments, 06-096 CMR 400, For Amendments Adopted March 2015, at 4.

The wastes that Mr. Spencer is talking about – residuals from CDD processing facilities such as ReEnergy and ARC – are *not* controlled by either BGS or NEWSME because these processing facilities are owned and operated by unrelated third-parties. *See* King Rebuttal Testimony at 2. It is, therefore, beyond the Applicants' power to manage what those facilities take in for processing or where it originates. They are instead JRL's *customers* in need of a place to dispose the residues of their processing operations. Nothing in the rule suggests that the Applicants must demonstrate what *other* solid waste facilities are doing to comply with the hierarchy. That is an obligation that those facilities must meet for themselves.⁶

With regard to the activities that the Applicants can control, all of the waste streams anticipated in the Expansion will be managed consistently with the hierarchy to the maximum extent practicable. This is set out in detail by Ms. King in her testimony, in which she explains why the Applicants meet this test for each type of waste, including, where applicable, how

⁶ In fact, those facilities are doing precisely that. The annual reports filed with the Department by ReEnergy and ARC show that those facilities recycle heavily, with ReEnergy reporting a recycling rate of 78.7% and ARC a recycling rate of 84%. *See* BGS/NEWSME Exhibits 49 & 50. As Ms. King explained, these facilities achieve these rates by recycling materials and creating wood chips that can be burned as fuel. *See* Hearing Testimony at 151; *see also* Hearing Transcript at 294-95 (testimony of Rich Geisser, a division manager for ReEnergy, discussing that facility's efforts to reduce the flow of waste into its facility from out-of-state and to increase recycling).

NEWSME's affiliated Casella entities assist in this process. *See* King Direct Testimony at 6-10.

As examples:

- CDD delivered to JRL comes from various sources, including some that are owned by Casella affiliates. Generally speaking, the generators of the CDD – such as contractors who are building apartments or homeowners remodeling their houses – decide where to dispose of their CDD based on factors such as cost and distance. Some of that CDD is delivered to Casella-owned transfer stations where materials such as clean wood, metal, tires, and asphalt shingles are separated and recycled. In 2015, about 15% of the CDD delivered to JRL came from Casella-owned transfer stations. In addition, Casella has a contract to deliver to ReEnergy all of the CDD that it collects in nine communities. Accordingly, CDD destined for the Expansion is being managed consistently with the hierarchy because those portions of this waste stream being handled by NEWSME's affiliates recycle it and the remainder is beyond the Applicants' control. *Id.* at 6-7.
- CDD fines received at JRL come from multiple sources that neither of the Applicants controls, including ReEnergy and ARC. This material is the residue from these businesses' processing operations for CDD, who are themselves required by law to recycle or process it into fuel to the maximum extent practicable. 38 M.R.S. § 1310-N(5-A)(B). In the Expansion, these materials will be used as landfill grading, shaping, and cover material, which is a beneficial reuse and recycling activity pursuant to 38 M.R.S. § 1310-N(5-A)(B)(2) because it reduces the amount of virgin soil that would otherwise have to be used for these purposes.⁷ There are no other solid waste management techniques allowed in Maine to manage CDD fines, and therefore this practice is consistent with the hierarchy. *Id.* at 7-8.
- As discussed above, OBW that is disposed at JRL is not currently generated by facilities within the Applicants' control. Furthermore, although it is physically possible to recycle some portions of this waste stream, such as the metal springs in a mattress, there are currently no commercially viable options for doing so in Maine. *Id.* at 8; *see also* Hearing Transcript at 173-74 (testimony of Ms. King on lack of OBW recycling outlets in Maine); *id.* at 295 (testimony of Mr. Geisser that ReEnergy is still investigating recycling of mattresses in Massachusetts and carpeting in Maine); *id.* at 413-14 (testimony of Mr. Spencer acknowledging that he's unaware of businesses in Maine that recycle mattresses or furniture). Thus, it is not yet commercially feasible to recycle OBW further and so this waste stream is being handled in compliance with the hierarchy.
- Municipal wastewater treatment plant sludge delivered to JRL is generated by various municipal treatment plants as a byproduct of the wastewater treatment process. One of NEWSME's affiliates, Casella Organics, is in the business of

⁷ The Department has previously found that the amount of CDD fines used at JRL as alternative daily cover is consistent with that used by another major landfill. *See* PBD at 12.

land applying or composting these materials, but at times the sludge cannot be utilized in those ways for various reasons, such as because the biosolids do not meet regulatory standards for land application, the generators (such as Portland and South Portland) do not choose to pay the higher cost of land application, and there are a limited number of sites willing to accept land application. *See King Direct Testimony at 8.* In addition, the Casella Organics facility is already operating at its maximum annual input for these materials, and thus cannot take any more. *See Hearing Transcript at 146.* Thus, these materials also are managed in compliance with the hierarchy.

Overall, based on past data from JRL, of the materials proposed to be disposed in the Expansion, over 44% are expected to be residuals from a processing facility that already reduces, prior to landfilling, the amount of material disposed, and over 70% will be materials subject to recycling efforts at their sources. *See Solid Waste Application, Vol. I, at 5-2.* Nearly 90% of the materials, by tonnage, have a high or medium ranking in the State Plan for landfill disposal, meaning that disposal in a landfill is either the primary or a significant material management technique to handle the materials. *See id. at 5-3.* Further, only 10% of the expected waste materials, by tonnage, have a high ranking for recycling, a principal component of which are wastewater treatment plant sludges, a significant portion of which NEWSME's affiliate, Casella Organics, already manages through composting and reuse to the maximum extent practicable. *See id.*

Given these extensive efforts, all of the waste streams proposed for disposal in the Expansion have been and will be handled consistently with the hierarchy to the maximum extent practicable. Nothing further is required.

B. The PBD Does Not Require Imposition Of An OBW Limit For The Expansion.

Although it is clear in statute that the Board cannot revisit the terms of the PBD in this proceeding, *see* 38 M.R.S. § 1310-N(3-A)(B) (stating that a public benefit determination "is not subject to review by the department or the board as part of the licensing process), the Chair has

raised the question of whether the PBD requires imposition of an OBW limit. As will be discussed below, an OBW limit would be inappropriate here.

1. There Should Be No OBW Limit Because Circumstances Have Changed Since The PBD Was Issued In 2012.

The PBD, which was issued by the prior Department Commissioner, provides that the Department was planning to impose in the eventual license for the Expansion an annual limit on OBW tonnage. *See* PBD at 20. As stated in Condition 3, the numerical limit on OBW would be “based upon the results of annual demonstrations required pursuant to 06-096 CMR 409.2.C, that waste processing facilities that generate residue requiring disposal will ‘recycle or process into fuel for combustion all waste accepted at the facility to the maximum extent practicable, but in no case at a rate less than 50%,’ submitted by the CDD processing facilities that send OBW to Juniper Ridge Landfill for disposal.” *See* PBD, Condition 3, at 29.

As Ms. King explained in her pre-filed testimony, an OBW limit is no longer needed because circumstances related to OBW have changed since the PBD was issued in 2012. The CDD processing facilities that send OBW to JRL are already meeting their obligations to recycle and process fuel in accordance with the statutory requirements. *See* King Direct Testimony at 10; *see also* footnote 6, above. Thus, the only OBW that is delivered to JRL for disposal has already been recycled and processed to the maximum extent practicable. *See* Hearing Transcript at 154 (Ms. King stating that recycling at CDD processing facilities in the range of 80% is “to the maximum extent practicable”). What is left cannot reasonably be recycled further, and thus an OBW limit is unnecessary. *See* King Direct Testimony at 10. Based on the wording of Condition 3 of the PBD, since the Maine-based CDD processing facilities that dispose OBW at JRL have met their statutory recycling requirement (the basis for a numerical limit), a numerical limit on OBW should not be established at this time. Should these CDD processing facilities fail

to meet their recycling requirement in the future, a numerical limit may be appropriate, and Condition 3 provided the Department the mechanism to do so if that were to occur..

Further, as Ms. King pointed out, imposing an OBW limit on the Expansion license would actually be an attempt to regulate indirectly the activities *of the generators* of that waste stream, rather than regulating them directly through their own licenses. This would have the unintended consequence of limiting the recycling activities of those businesses because they necessarily produce these residues as a byproduct of their recycling operations: “[I]miting residual volumes [of OBW] results in limiting recycling initiatives . . . contrary to compliance with the Maine Solid Waste Hierarchy.” *See* Hearing Transcript at 471. This is because limitations on the JRL Expansion would directly affect businesses like ReEnergy and ARC, which rely on JRL as a destination for their wastes. *See id.*; *see also id.* at 295 (Rich Geisser, the Division Manager for ReEnergy, explaining availability of JRL as a disposal site was “critical to us making the decision to invest in the facility”). State Landfill Manager Mr. Barden agreed, noting that an OBW limit on the Expansion would force the processing facilities to reduce capacity, and thus perform less recycling, or to take their OBW residuals to another facility at a higher price, due to the artificially-imposed lack of competition that would be created by a cap on OBW at JRL. *See id.* at 472-73. Mr. Geisser put it even more directly: “putting an arbitrary limit on the amount of oversize bulky waste [at JRL] would restrict our ability to grow with the improving economy.” *See id.* at 297; *see also id.* at 303 (statement of Henry Lang, plant manager for the PERC incinerator, that “we have to be careful that certain policies such as restrictions on oversize bulky waste don’t discourage complete and unfettered recycling or place unnecessary financial and operational hurdles on commercial businesses”). This will have the exact opposite effect intended under the hierarchy because fewer businesses will want to open up new processing facilities under those conditions, thus limiting how many of this kind of

beneficial recycling and processing operations exist in Maine.⁸ *See id.* at 472-73. The effect of the hierarchy should not be to dampen recycling efforts and unnecessarily increase such businesses' costs.

Moreover, the discussion of this issue in the PBD suggests that the Department's concern over OBW was motivated by the large quantities of OBW and fines that were being disposed of at the time from KTI Biofuels in Lewiston, which was then a Casella affiliate. *See* PBD at 11. Although the Department recognized that OBW and other residue from that operation was by definition in-state waste, it also noted that KTI's then-existing "inability to process certain components of the CDD delivered to the site has contributed to the large amounts of OBW delivered" to JRL. *See id.* The Department then went on to note that recent revisions to KTI's operations would allow it to "generate less OBW due to its ability to process and recycle more material from the CDD." *See id.*; *see also* Hearing Transcript at 154 (Ms. King stating that the purpose of this condition in the PBD was to encourage processing facilities to meet their recycling obligations). The KTI Biofuels facility that was the focus of this discussion, however, was sold to ReEnergy in 2013, and thus the corporate relationship that seemed to have been of concern to the Department in 2012 no longer exists. *See* Hearing Transcript at 293. Further, due to market forces, the amount of OBW being disposed of at JRL has already been steadily declining since the PBD was issued. *See* BGS/NEWSME Exhibit 66 (declining every year from 2011 at 98,887 tons to 2015 at 47,388 tons).

⁸ Although both BGS and NEWSME agree that there should be no OBW limit in the license, NEWSME did suggest at the hearing that if one absolutely cannot be avoided, an appropriate level would be 118,000 tons per year. *See* Hearing Transcript at 471. This figure is based on the highest year of OBW acceptance at JRL in 2011 of 99,000 tons, plus an estimated 3% annual rate of growth. *See id.* Ms. King explained that this would allow a high enough level to avoid hindering the growth of the solid waste processing industry and allow flexibility for year-to-year changes in the solid waste market due to factors like technology and market changes. *See id.*

Thus, given that circumstances have changed so significantly since the PBD was issued approximately four years ago, including promulgation of the waste management hierarchy rule as a permitting standard; NEWSME's inability to control the amount of residuals from the CDD processing facility that it has since sold to ReEnergy; that the processing facilities are meeting the state requirements for recycling and processing; and that OBW disposal rates at JRL have dropped significantly, an OBW limit is not needed. Furthermore, the Applicants strongly believe that it is inappropriate to regulate indirectly the activities of the generators of OBW through JRL's Expansion license. If the Department wishes to manage the generation of OBW, it should do so directly with the processing facilities, not indirectly at JRL. This is particularly so because capping OBW at JRL will not eliminate its generation. It will simply force its disposal somewhere else, likely at increased cost to Maine residents and businesses.

2. OBW Is Not MSW.

Lastly, the discussion at the hearing of whether to impose an OBW limit generated some confusion on the Board about the definition of OBW itself, including whether it might be a subset of MSW, rather than CDD. *See* Hearing Transcript at 483. This is an important issue because the Applicants do not propose to accept MSW (other than MSW bypass and FEPR), but do propose to accept OBW as they have since JRL became a State-owned facility in 2004.

The term OBW is not specifically defined in statute or rule, but is understood within the solid waste industry and by regulators to mean large items that are difficult to process as solid waste, such as mattresses, furniture, and carpeting. During the hearing, the Chair suggested that OBW must be a form of MSW because items like mattresses and furniture sometimes (but not always) come from households. *See* 06-096 CMR 400 § 1(NNNN) (MSW means "solid waste emanating from household and normal commercial sources"). This, however, does not mean that anything and everything that comes out of the home can be considered MSW.

Indeed, the solid waste rules define CDD as a separate category of waste, including many things that also emanate from households and normal commercial sources: “solid waste resulting from construction, remodeling, repair, and demolition of structures,” including but not limited to: “building materials, discarded furniture, asphalt, wall board, pipes, and metal conduits.” *See id.* § 1(FF). These types of materials (particularly discarded furniture) demonstrate that CDD clearly also includes materials that are discarded from households and commercial sources during construction, remodeling, repair, and demolition projects. As a result, just because an OBW item emanates from the home is not enough under these definitions to settle whether it is MSW or CDD.

A brief review, however, quickly resolves the potential confusion. First, more specific language in a statute typically trumps more general language. *See South Portland Civil Service Commission v. City of South Portland*, A.2d 599, 601 (Me. 1995). Here, the definition of MSW is broad, apparently purporting to include any waste from homes and commercial sources. In contrast, the definition of CDD is more specific, as it is limited to those wastes that are from construction, remodeling, repair, and demolition activities, and even specifically includes furniture as an example of what is intended. Thus, something that fits the definition of both CDD and MSW would be controlled by the more specific definition of CDD.

Second, the Department itself clearly considers OBW at JRL to be a residue of CDD processing, not a component of MSW. For example, in the PBD for the Expansion, the Department defines OBW as “large items that may be difficult to process, such as mattresses, furniture, appliances, *and certain other components of demolition debris.*” *See* PBD at 11 (emphasis added). Further, in that same document, when discussing concern over OBW disposed at JRL, the Department noted that the “most significant change in CDD generation results from a significant increase in the amount of [OBW] and fines, primarily from KTI in

Lewiston.” *See id.* Thus, when analyzing this very same issue, the Department’s Commissioner clearly considered OBW to be a “component” of CDD, particularly given her finding that CDD generation was rising primarily due to OBW and fines from KTI. Even Mr. Spencer recognizes this, calling OBW a “derivative of CDD.” *See* Spencer Direct Testimony at 2; *see also id.* (calling OBW a component of demolition debris).

Third, since the State acquired JRL in 2004, it has been clear that the State (including BGS’s predecessor-in-interest, the State Planning Office), the Department, and NEWSME always understood that OBW is not MSW. The State and NEWSME clearly proposed to accept OBW at JRL since it became State-owned in 2004, and the Department approved it, describing OBW as a processing residue. *See* DEP Order, #S-020700-WD-N-A, at 4 (April 9, 2004) (vertical amendment order listing waste streams to be accepted for disposal as “construction and demolition debris; the residues (ash, front-end process residue and oversized bulky wastes) generated by municipal solid waste (“MSW”) incinerators located in Maine; a limited amount of MSW bypass from the incinerators; water/wastewater treatment plant sludge; and smaller amounts of miscellaneous non-hazardous wastes”); *see also id.* at 37 (again distinguishing CDD, OBW, and MSW as separate waste streams, and specifically providing separate restrictions on MSW, but not OBW). The Expansion application is consistent with this historical approach by making clear that OBW (and CDD) are proposed for disposal in the Expansion, just as they have been since 2004. *See* Solid Waste Application, Vol. I, at 3-35.

Thus, OBW is not a subset of MSW.⁹ It is instead a form of CDD and can be accepted for disposal in the Expansion.

⁹ This conclusion is not changed by the fact that some homeowners improperly comingle OBW in their MSW, such as by hiding a roll of carpeting in with other household trash. *See* Hearing Testimony at 477-78 (Ms. King describing as an example a homeowner who might “stuff a roll of carpet into an MSW container or load and it’s not supposed to be there because PERC cannot process construction and demolition debris, they can only process municipal solid waste”).

C. The Application Meets All Rules Regarding Site Geology.

In his pre-filed testimony, Mr. Spencer raised questions about the potential for subsidence beneath the Expansion due to the site geology. *See* Spencer Direct Testimony at 5. He appears to be concerned that the Applicants have not adequately accounted for the earth rebounding from the weight of the last glacial ice sheet, particularly in light of the waste loadings expected in the Expansion.

Mr. Spencer does not say how this is relevant to a particular permitting standard, but in any event, Mr. Sevee, who is a certified geologist and a professional engineer, clarified that “[g]lacial rebound will have no effect on either the integrity of the landfill or the sloping of drainage pipes since the crustal rebound is occurring over the entire region surrounding the landfill.” *See* Sevee Rebuttal Testimony at 1. He went on to conclude that “there will be no significant differential movement within the landfill site that would affect the liner or drainage pipe slopes of the Expansion.” *See id.* BGS and NEWSME also addressed this issue in detail in the application materials. *See* Solid Waste Application, Vol. III, § 3.1 (addressing the integrity of the Expansion due to crustal rebound and including an assessment of landfill stability for both seismic and static loading conditions). Accordingly, whatever the standard Mr. Spencer was concerned about, it is clear that the Applicants have adequately addressed this issue.

In his rebuttal testimony, Mr. Spencer also presses a comment first raised by Denis St. Peter, the City of Old Town’s consulting engineer, questioning the Applicants’ conclusion that groundwater from the landfill site does not pass to users along Route 16, Route 43, or Stagecoach Road. *See* Spencer Rebuttal Testimony at 5. Mr. St. Peter’s report, however, clearly recognizes that the Applicants “have met all siting criteria,” but adds that the application “goes further than required” by concluding that “there is not a direct hydraulic connection under existing conditions between the shallow and deep groundwaters beneath the Expansion and the

water supply wells along Route 43.” *See* Old Town Exhibit 2 at 2. He goes on to clarify this statement, as follows:

While we agree that the risk of these wells is low due to distance, and the redundancies designed into the proposed landfill liner system, there is still potential bedrock groundwater flow from the site to the residential wells along Route 43 southwest of the site. Based on our review of the Application, the regulatory standards appear to be met without this stated conclusion; therefore, our concerns about this issue relate more to the potential need to monitor these residential wells in the future should there ever be a catastrophic failure of the designed system.

See id. at 3.

Thus, the technical report that Mr. Spencer is relying upon for this issue itself concludes that the siting standards are met, and raises this issue only to alert the Department of an alternative view that “it should not be relied upon *in the future* as a basis to eliminate the need for monitoring *if there is ever a significant release from the landfill* without additional support.” *See id.* (emphasis added). Mr. Sevee addressed this issue at the hearing, as well. He again explained why he believed based on four lines of evidence that the groundwater would not migrate to users along Route 16, Route 43, or Stagecoach Road, but acknowledged that if there were a leak, it would make sense to test domestic wells in that area as a precaution. *See* Hearing Transcript at 180.

Therefore, Mr. Spencer’s argument that there is a “conflict here about the nature of the threat” is incorrect. *See* Spencer Rebuttal Testimony at 5. On the contrary, both Mr. St. Peter and Mr. Sevee agree that the threat is low, that all regulatory standards are met, and that testing of wells along Routes 16 and 43 and Stagecoach Road would make sense if the Expansion were ever to leak. The only point of disagreement is whether the data that exists today demonstrates the lack of a groundwater connection from the landfill site to potential domestic wells in these areas. That technical point, however, does not need to be resolved now, as the Department

would evaluate that under its authority to require assessment monitoring and, potentially, a corrective action plan, if it were ever necessary. *See* 06-096 CMR 405 §§ 2(C)(3) & 2(D). Thus, all standards related to site geology have been met.

D. The Application Meets All Landfill Design Standards.

Mr. Spencer also raises a series of what he calls “troubling” issues related to the design of the Expansion. As with some of his other arguments, he offers no evidence on any of these points, but simply raises questions as a lay person.

First, he asks whether the leachate collection system is adequately designed to handle large storms during power outages. *See* Spencer Direct Testimony at 6. Mr. Booth, a professional engineer, explained that the system is designed to address such contingencies, including through a backup generator to be used during a power outage, stormwater management techniques that divert clean run-off away from the leachate collection system, and storage sumps designed to meet a 25-year, 24-hour storm, with additional freeboard. *See* Booth Rebuttal Testimony at 1-2. In addition, Mr. Booth points out that the leachate system in the existing landfill readily handled a 5.27 inch storm event (well in excess of the 25-year storm) in 2015 without a problem, despite the fact that leachate flows temporarily increased from about 26,000 gallons per day to 112,000 gallons per day. *See id.* at 2-3.

Second, Mr. Spencer is apparently concerned that the horizontal pipes in the landfill gas collection system “may collapse,” and asks whether there is a similar risk with the leachate collection pipes. *See* Spencer Direct Testimony at 6. Mr. Booth addresses these concerns in his rebuttal testimony, as well. With respect to horizontal gas collector trenches, he points out that they are only a temporary collection method and need only function until the permanent vertical extraction wells are installed. *See* Booth Rebuttal Testimony at 3. Likewise, Mr. Booth explains

that the leachate collection pipes are specifically designed for the Expansion setting, and therefore will not collapse. *See id.*

Third, Mr. Spencer questions the need to calculate a six-year travel time to sensitive receptors and contends that this “does not inspire confidence” because “it is as if we are planning for a leak.” *See* Spencer Direct Testimony at 6. As an initial matter, the rules *require* the Applicants to perform this calculation. *See* 06-096 CMR 401 § 1(C)(1)(c) (time of travel to sensitive receptors from the bottom of the landfill and leachate pond liner systems must be greater than six years). In addition, Mr. Spencer wrongly conflates analyzing travel times to sensitive receptors in case of a leak with expecting a leak. Rather, performing such analyses is “a prudent design evaluation tool used to quantify potential effects on the surrounding environment should an unanticipated failure of landfill containment systems occur.” *See* Booth Rebuttal Testimony at 4. In other words, contrary to Mr. Spencer’s apparent concerns, it would actually be foolish *not* to conduct such analyses.

Fourth, Mr. Spencer cherry-picks testimony from a landfill permitting proceeding in Massachusetts at which an engineer claimed that “[a]ll liners leak.” *See* Spencer Direct Testimony at 6. He then says only that this is “relevant to the expansion of JRL,” but offers no evidence about whether the liner proposed by the Applicants will leak or, more to the point, how it fails in any way to meet the regulatory requirements, such as for the protection of surface waters or significant groundwater aquifers.

In response, Mr. Booth strongly refuted the claim that all liners must necessarily leak, stating that the testimony appears to have been targeted only at the geomembrane portion of the liner system at that particular landfill, without focusing on defects caused by construction damage and stress cracking. *See* Booth Rebuttal Testimony at 5. As Mr. Booth points out, the Expansion liner was specifically designed to address these issues.

First, the Expansion construction process includes an electronic leak detection survey of the primary geomembrane liner once construction is complete, a system that is used at only approximately 2% of the landfills in the country. *See* Hearing Transcript at 75. This allows for detection of pin holes that are not visible to the naked eye so that they can be repaired. *See id.* at 74-75. Second, the specifications for the geomembranes in the Expansion specifically account for stress cracking by requiring compliance with ASTM standards for the material, as well as construction practices that are intended to limit pressure points beneath the liner that could lead to stress cracks. *See* Booth Rebuttal Testimony at 6. Third, the design of the landfill eliminates liner penetrations, such as for leachate pipes, that have been responsible for leaks at other landfills in the past. *See* Hearing Transcript at 76. Fourth, the landfill design also includes a robust cover that will deprive the post-closure Expansion of the precipitation that is needed to generate leachate from the waste. *See id.* at 64. Finally, the application includes an extensive analysis of liner performance using the Environmental Protection Agency's Hydraulic Evaluation of Landfill Performance model, which shows "through its quantification of the amount of liquid that may pass through the secondary liner (0.0 inches) that the Expansion liner system is designed to prevent liner leakage from occurring during the facility's operational and closure periods" *See* Booth Rebuttal Testimony at 6 (citing the results of the modeling, provided at BGS/NEWSME Exhibit 53). Thus, given the vigorous design, including two geomembrane liners that are thicker than required by the rules, *see* Booth Direct Testimony at 14, and careful construction practices that will be required, the liner system for the Expansion is designed not to leak and more-than-complies with all regulatory requirements. *See also* Hearing Transcript at 182 (Mr. Sevee stating there "is no reason why there should be any leakage from that liner over the next 50 years").

E. The Application Meets All Stormwater Management Standards.

Both Mr. Spencer and his expert, Dr. Coghlan, who is an ecologist and environmental scientist, but not an engineer, raise questions about whether the Expansion's stormwater system is adequately designed to account for potentially increased stormwater flows that may be caused by anthropogenic climate change. Neither even attempts to point to any provision in the solid waste rules that requires such an analysis.

Mr. Spencer focuses on a particularly large rainfall event in Brownville Junction of 8 inches in 24 hours, which exceeds the 25-year, 24-hour design storm. *See* Spencer Direct Testimony at 7. Without offering any evidence or analysis, he assumes that because the rules only require use of a 25-year, 24-hour storm, and that larger events do occur from time to time, that the stormwater system must necessarily be inadequate. *See id.* As Mr. Booth testified, however, this is incorrect.

Although the rules do require the Expansion to meet the 25-year, 24-hour storm event, *see* 06-096 CMR 400 § 4(M)(1)(b), Mr. Spencer fails to recognize that the stormwater system is also designed to allow flows from a 100-year storm to pass without impacting the integrity of the structures, *see* Booth Rebuttal Testimony at 8. Further, Mr. Booth points out that the existing JRL stormwater system readily handled a 5.27 inch rain event (in excess of the 24-hour storm) in 2015 without any of the problems that Mr. Spencer claimed would occur. *See id.* Finally, as the stormwater structures are constructed in the coming years, the Applicants will always use the then-current design storm in the solid waste rules to ensure that facility designs are up-to-date. *See id.* at 9. Thus, if the frequency or severity of rain events does change over time, the stormwater structures will be designed using the latest data set for design standards in the rules.

Dr. Coghlan also focuses on changes in precipitation events from climate change to argue that the Expansion poses a significant risk of flooding. He contends that precipitation events will

increase over time, but acknowledges that scientists cannot yet predict the details of such changes and thus must rely instead on a general trend toward more variability and more frequent and violent storms. *See* Coghlan Testimony at 11. While acknowledging that these changes cannot be predicted today, he fails to explain how new and stricter requirements rationally can be imposed on the Expansion without this information. He also questions the use of the applicable floodplain map, which was developed prior to current understandings about climate change. *See id.* His primary point appears to be that the application fails to account for potential changes in climate when analyzing impacts on flooding from the Expansion, although he does not say how the Applicants should do so given the uncertainty he acknowledged in future precipitation levels. Dr. Coghlan's analysis on the risks of flooding, however, is flawed.

As an initial matter, the rules require submission in the application of the "most recent" 100-year flood plain map for the project area. *See* 06-096 CMR 400 § 4(M)(2)(a). The most recent version of that map is from 1978, *see* Booth Rebuttal Testimony at 9, and it is not readily apparent why the topography depicted at that time is somehow different today. In addition, as Mr. Booth points out, Dr. Coghlan fails to provide any analysis of how changes in the floodplain might impact the Expansion. Any review of changed flooding patterns must take into account elevation (three dimensions), although Dr. Coghlan appears to focus only on area (two dimensions). As Mr. Booth explains, because the Expansion is proposed to be located on a ridge, the floodplains are at lower elevations than that lowest proposed landfill grade by 12 feet to the east and 32 feet to the west. *See id.* These elevation differences make it "highly improbable that any change in the floodplain boundaries . . . would affect the landfill containment structures," as Dr. Coghlan surmises. *See id.*

Therefore, the application meets all applicable stormwater and flooding standards.

F. The Application Meets All Leachate Management Standards.

Mr. Spencer and Dr. Coghlan also raise questions about how the leachate from the Expansion will be managed. Mr. Spencer points out that the leachate is being treated at the treatment plant for the Old Town mill, which has not produced paper since last year, but stops short of actually stating that the treatment plant is not functioning. *See* Spencer Direct Testimony at 8. Dr. Coghlan incorrectly notes several times in his written testimony that the leachate is “directly discharged” to the Penobscot River and argues that the increase in leachate of approximately 8,000 gallons per day due to the Expansion should be cause for “alarm.”¹⁰ *See* Coghlan Testimony at 5. As with other arguments, they provide no specific analysis of how the discharge of treated leachate will harm water quality or fisheries.

Landfill leachate from the Expansion will be trucked to the wastewater treatment plant at the former Old Town mill, which is now owned by MFRG, LLC. *See* Booth Direct Testimony at 16. That treatment plant holds a wastewater treatment plant license from the Department, which was renewed during the public hearing in this matter. *See* Hearing Transcript at 469. While the existing JRL sends approximately 800,000 gallons per month of leachate to that treatment plant, it was designed to treat over *20 million gallons per day*. *See id.* at 420-21. In addition, the City of Brewer’s treatment plant is available as a back-up, should it be necessary. *See* Booth Direct Testimony at 16.

As the Chair recognized prior to the hearing, “[p]rovided the waste water treatment facility is licensed to accept the leachate and is in compliance with the terms of its license, issues regarding the operation of the off-site waste water treatment facility are beyond the scope of the current licensing proceeding.” *See* Fifth Procedural Order at 6. In this case, the wastewater

¹⁰ Dr. Coghlan acknowledged during the public hearing that his characterization of a “direct discharge” is incorrect because the leachate is first treated by a wastewater treatment plant prior to discharge. *See* Hearing Transcript at 276.

discharge license for MFGR specifically authorizes treatment of landfill leachate from JRL, and notes that the facility has been reclassified to a “minor facility,” given, among other things, the reduction in conventional pollutant loading, lack of reasonable potential for toxicity, and lack of public health impacts.” *See* DEP Order #ME0002020 & W002226-5O-O-R (Oct. 12, 2016), at 1-2.

Thus, the Department has specifically established limits for the MFGR treatment plant with full knowledge that it will be accepting landfill leachate from JRL, and, at the same time, concluded that this facility does not present a significant risk to the receiving waters. Moreover, there is no evidence whatsoever that the MFGR facility is violating its license. As a result, the Applicants have done all that is needed to comply with the requirements for safely treating landfill leachate from the Expansion.

II. The NRPA Application Meets or Exceeds All Applicable Criteria.

In addition to meeting the solid waste management standards, BGS and NEWSME’s NRPA application also meets all applicable natural resource criteria to expand JRL, including under Chapters 310 and 335 of the Department’s rules. Although Mr. Spencer briefly questions whether the Applicants have avoided wetland impacts to the greatest extent practicable, this appears merely to be a recitation of the points discussed above with respect to the waste management hierarchy. *See* Spencer Direct Testimony at 8-9. Therefore, the only issues that appear to remain in dispute are limited to the proposed use of land preservation in the wetland compensation package and potential impacts to fisheries from the Expansion. Each of these will be addressed below.

A. The Application Meets All Compensation Standards.

Dr. Coghlan argues that the Applicants' wetland compensation plan is inadequate because it involves preservation.¹¹ On the contrary, however, and as Dr. Coghlan admitted at the hearing, preservation is specifically authorized as a form of compensation in Chapter 310 of the Department's rules, 06-096 CMR 310 § 5(C)(4)(c). *See* Hearing Transcript at 281; *see also* Emerson Rebuttal Testimony at 4 (same).

In fact, as wetland scientist Bryan Emerson explained, the compensation package more than meets the requirements of the Department's rules. The plan includes a deed restriction, with the City of Old Town as a third-party administrator, which permanently preserves 266 acres on-site. *See* City of Old Town submittal re: Declaration of Covenants and Restrictions, Allocation of Costs for Implementation of Declaration of Covenants and Restrictions, and MDOT information, at 2. The conservation area includes approximately 57 acres of wetlands that have higher functions and values than the approximately two acres of wetlands that will be impacted by the Expansion, including multiple Wetlands of Special Significance, such as peatlands, large emergent marshes, and beaver flowages, as well as three significant vernal pools. *See* Emerson Direct Testimony at 7-8. Moreover, the large size of the preservation area heightens its value by allowing it to function as an independent ecological unit and to supplement the sixteen existing acres of preservation that were protected when the landfill was initially permitted. *See id.* at 8. Ultimately, the amount of preservation is *sixteen times greater* than that required under the Department's typical eight to one ratio for preservation projects. *See id.* at 7. By any measure, therefore, the compensation package far exceeds the requirements of the Department's rules.

¹¹ Dr. Coghlan even goes so far as to compare wetland preservation to larceny. *See* Coghlan Testimony at 15 (preservation as a form of compensation is "akin to a burglar compensating his victim by agreeing not to steal anything else").

B. The Expansion Will Not Harm Fish.

Dr. Coghlan also argues that the Expansion will harm fish species, including Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon. *See Coghlan Testimony at 4-5.* The NRPA requires that the “activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.” 38 M.R.S. § 480-D(3).

Rather than offer any evidence of his own or even assert that the Expansion fails to meet this test, Dr. Coghlan instead merely calls into question the Applicants’ “high degree of confidence” in concluding that fisheries will not be unreasonably impacted. *See Coghlan Testimony at 5.* In addition, he mischaracterizes the opinions of the State resource agencies that have commented on the application, which uniformly conclude that there will be no unreasonable impacts. *See id.* at 4-5.

The record includes extensive evidence from the State’s own experts that fish species will not be negatively impacted. For example, DMR advised that “[n]one of the stream[s] in the project area are Atlantic salmon stream.” *See BGS/NEWSME Exhibit 57 at 1.* IF&W was even more definitive: “fisheries staff do not anticipate any adverse impacts on fisheries resources associated with this landfill expansion.” *See id.* at 2; *see also* Solid Waste Application, Vol. I, App. F, at 485 (letter from IF&W concluding that there are “no essential RTE [rare, threatened, or endangered] habitats” in the project area); *id.* at 576 (letter from IF&W stating “I do not anticipate any significant impacts on fish habitat); *id.* at 521 (letter from IF&W concluding again that there are “[n]o RTE species within the project area”). Thus, there was ample evidence from state agencies that fisheries (including endangered species like Atlantic salmon) would not be harmed by the project.

Moreover, as Mr. Emerson detailed in his testimony, the closest stream to the proposed landfill is an unnamed, intermittent stream approximately 800 feet away. *See* Emerson Rebuttal Testimony at 3. The nearest perennial stream is 950 feet away. *See id.* These distances greatly exceed IF&W's recommendation for this project of 100-foot buffers, *see* Solid Waste Application, Vol. I, App. F, at 521, as well as scientific literature concluding that a buffer width between 49 and 98 feet is sufficient to protect streams, *see* BGS/NEWSME Exhibits 59 & 60.

Accordingly, there is more than enough evidence in the record to conclude that the project will not unreasonably harm fisheries, including Atlantic salmon, Atlantic sturgeon, and shortnose sturgeon.

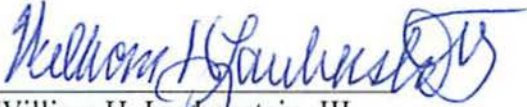
CONCLUSION

As illustrated by the Department's grant of the PBD for the Expansion, this project is necessary to meet the long-term solid waste disposal needs of the State. JRL and other landfills are the foundation of our solid waste management hierarchy and serve a key infrastructure role, every bit as important as our major roads and bridges, hospitals, sewer systems, and wastewater treatment plants. Although some day we may no longer need landfills, a nurse who lives near JRL may have put it best when she said "you can't make that decision now on what might be in fifty years," because "[w]e have to put waste somewhere today . . . with what you know of is the best, safest way to do that." *See* Hearing Transcript at 383-84 (testimony of Amanda Willey).

As discussed above, and throughout these proceedings, we respectfully submit that all of the applicable standards have been met with the overwhelming weight of the evidence, and thus that the Expansion is indeed the "best, safest way" to provide the disposal capacity that the State

needs. Therefore, we respectfully request that the Board approve the solid waste and NRPA applications to expand the JRL.

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