

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 ) EDWARD S. SPENCER  
#S-020700-WD-BI-N ) INTERVENOR  
#L-024251-TG-C-N ) REBUTTAL TESTIMONY  
APPLICATION FOR MAINE ) FOR BOARD OF ENVIRONMENTAL  
HAZARDOUS WASTE, SEPTAGE AND ) PROTECTION PUBLIC HEARING  
SOLID WASTE MANAGEMENT ACT, ) FILED SEPTEMBER 9, 2016  
and NATURAL RESOURCES )  
PROTECTION ACT PERMITS and  
WATER QUALITY CERTIFICATION )

Dear Chairman Parker,

Please accept my rebuttal to testimony offered by Casella Waste Systems and the Bureau of General Services. I will comment in the order of the testimony as it appears in the document offered July 29, 2016, beginning with that of Mr. Michael Barden, who oversees state landfills for the Maine Bureau of General Services.

Mr. Michael Barden

On the second page, Barden notes "Out -of-State wastes are defined as 'excluded wastes' and disposal at JRL is prohibited. The term of the OSA is 30 years." He is correct in saying these wastes are prohibited from JRL. However, there is no proof offered that these non-Maine wastes are actually excluded from JRL. The State as owner, either in the form of the BGS or the SPO before it, has never made any effort at documenting this Exclusion, but accepts this as a fact based on Casella's reports.

As far as the 30 year term of the OSA between the State and Casella, he is partially correct. There is indeed a 30 year contract, but only provided that there is licensed landfill capacity available at JRL. If the Board were to reject the Expansion Application, NRPA, either or both, Casella's contract relationship with the State as owner would terminate, subject to post-closure conditions in the OSA and DEP licenses. To state the length of the term without further explanation is misleading, and could infer that the State has an obligation to furnish Casella with enough licensed capacity to last 30 years. There is no limit to the amount of wastes brought into JRL on an annual basis so at least to an extent Casella could make the current space last longer.

Following the Fifth Procedural Order, the Juniper Ridge Landfill Advisory Committee's role is relevant to the Expansion Hearing, and there should be an opportunity to question Mr. Barden and others about the BGS/Casella performance in regard to that entity at the Public Hearing.

On page 4, Mr. Barden states "Additional 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." Two years from offering this as testimony would be late-July 2018. It is doubtful that "serious disruption" would take place by then. Even without any of the current wastes into JRL being diverted or diminished, there is ample capacity at JRL through 2018 and into 2019. He then states "The one remaining commercial landfill currently licensed to accept these waste streams does not have capacity to absorb this tonnage post 2020/21..." This statement seems untrue to me as well, and combined give an impression that without JRL Expansion soon there will be a severe shortage of landfill space available in Maine. This issue may be a topic for discussion at the Hearing.

Ms. Toni King

Her testimony includes on Page 1 a statement that "As an integrated resource management company, Casella has historically operated its infrastructure and facilities consistent with Maine's waste management hierarchy, well before the regulatory requirement was enacted." Whether or not this statement is valid or untrue should in large part determine whether or not JRL should be expanded with Casella as operator. This Expansion process is the first time that Maine's Waste Hierarchy will be fully incorporated as a licensing standard for a Maine landfill.

One example of Casella's inconsistent behavior in regard to our Hierarchy is what happened after they closed their Biddeford incinerator (MERC) at the end of 2012. In the beginning JRL was prohibited from receiving curbside Municipal Solid Waste (MSW), except for short durations when incinerators were inoperable as "bypass". Then Casella got permission to use MSW as a "soft layer" at the bottom of each new landfill cell. After MERC closed they applied for permission to bring the wastes that formerly went to MERC to JRL, even though they had failed to include this change of waste stream in their application for Public Benefit Determination (PBD). As a result, they were granted permission to bring over 80,000 tons per year of MSW to JRL until 2018. When this waste went to MERC, some metals and other recyclables were removed from the waste stream and recycled. This practice stopped once permission was granted to deliver MSW to JRL, and Casella is allowed to bring MSW from southern Maine to JRL unsorted. Unsorted curbside wastes deposited directly into a landfill is a flagrant violation of our Hierarchy.

Within her discussion headed "1. Reduce" on Page 2, Ms. King says "So, we must rely on the generators of the waste to reduce their wastes to the maximum extent practicable before it arrives at JRL." Casella (and BGS) fail to take responsibility for their obligation that all wastes into JRL must comply with 38 M.R.S. 1310-N(5-A) which says

"An applicant for a new or expanded solid waste disposal facility shall demonstrate that:

- (1) The proposed solid waste disposal facility will accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by this chapter and other provisions of state law..."

On Page 6 it says "The ultimate decision on the waste management technique used by the generators is not within the control of either BGS or NEWSME." Instead 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 provisions of our Hierarchy. This has been the practice at JRL to date, but moving forward, and certainly at an Expanded JRL, the Hierarchy should be strictly enforced, and the true Sources of the Waste need to be revealed so that the DEP, as regulator, can ascertain whether Source Reduction and Recycling has actually been "...at least as effective as those imposed by this chapter...". Failure of waste generators to furnish Casella/BGS with information about the true Source, or "point of discard" of all wastes, should result in exclusion from JRL. It is no secret that a high percentage of JRL wastes were discarded out-of-state but have been admitted using seemingly legal but creative definitions and practices. Wastes discarded beyond our borders should not be exempt from our Waste Hierarchy.

Under "2. Reuse", Page 2, Ms. King discusses Construction and Demolition Debris (CDD) inputs to JRL from ReEnergy in Lewiston and ARC in Eliot, which are defined as "processing facilities". Most of this waste was discarded outside Maine's borders, brought here to be "processed" where minimal amounts of wood for fuel are removed. The remainder, which was over 90% when Casella owned KT1, the current ReEnergy facility in Lewiston, comes to JRL classified as either CDD or CDD Fines. The Fines are used as Alternative Daily Cover or for grading at JRL, and are classified as a "recycled waste" under current DEP rules. At the bottom of Page 2, Ms. King states "In addition, there are no other solid waste management techniques allowed in Maine to manage CDD processing fines other than use as daily cover or disposal in secure landfills." So, wastes mostly from outside of Maine, come to a "processing facility" in Maine where a small % is removed, and the remainder comes to JRL. Casella says they get only \$4/ton to dispose of this waste. Without this waste being classified as "recycled" the processing facility could not

meet its mandate to Recycle at least 50% of its waste inputs. This waste, discarded outside Maine's borders, composes at least one-third of the current JRL facility, which is running out of space for important wastes that fully comply with our Hierarchy. Casella's acceptance of the planned waste streams after an Expansion of JRL will continue this practice. On Page 3 Ms. King talks about Casella Recycling programs and concludes "As a result, the waste stream coming from the communities and businesses we will service in the JRL Expansion will already have been subject to recycling and reuse programs at least as effective as those imposed by State law." Is this "some" of the waste stream or "all" of the wastes into JRL, which is required?

Ms. King's testimony includes numerous mention of suggested Relevant Metrics that should be used to evaluate the effectiveness of Hierarchy activity. I partially agree that "The metric to evaluate the effectiveness of the MWTPS (Municipal Wastewater Treatment Plant Sludge) will be a comparison of the overall amount of MWTPS managed by Casella Organics compared to the amount disposed in the Expansion." (Page 8). For other waste streams she thinks that the Relevant Metric should be the gross tonnage of materials recycled or removed (ash on page 5, CDD from transfer stations on Page 6). In my opinion, the Relevant metric for these materials should also be compared to the total tons received, as well as the tons remaining in the landfilled material. Her suggestion on Page 8, in discussing CDD fines, is that "...the amount of this material used as daily cover (as opposed to that which is disposed) is the metric to evaluate the effectiveness of this recycling effort...". This is wrong. A Relevant Metric for CDD fines being recycled, as well as for CDD inputs to JRL, needs to include a comparison of the total waste inputs to the processing facility to the amounts deposited in JRL.

I must take issue with Ms. King's comments about Oversized Bulky Waste. On Page 8, "Because of the very low volume of Oversized Bulky Waste (OBW) expected to be disposed in the Expansion...". She goes on to say that this "very low volume" is "...anticipated to be about 60,000 tons per year...". This is a very creative use of the term "very low". 60,000 tons is 120 million pounds. She further states "OBW is not currently generated by entities within the control of NEWSME or BGS." What would be a Relevant Metric to evaluate the effectiveness of dealing with this material in regard to our Hierarchy? I suggest that we compare the annual OBW total deliveries into JRL with the annual amounts into JRL from the PERC/MRC communities, which I believe is less than 2000 tons/year. Even though the PERC/MRC wastes currently contain about one-third out-of-state wastes, this is a far more accurate description of OBW volumes from Maine communities. Comparing the population base of the MRC towns with the relative population necessary to produce 60,000 tons/year would show that the vast majority of JRL's OBW inputs are from beyond Maine's borders. Ms. King states that "There are no currently viable mechanisms for the reuse, reduction, or recycling of OBW that are within the control of the BGS or NEWSME." Once again, I reiterate that wastes brought into Maine from elsewhere that are not effectively managed in compliance with our Hierarchy should not be allowed into JRL currently or in a future Expansion.

Regarding Public Benefit Determination (PBD) Compliance, on Page 10, Ms. King's testimony reflects Casella's lack of respect for the authority of JRL's regulator, our DEP. Even though a Condition of the PBD was to set a limit on OBW deliveries to JRL, Casella, apparently with BGS's consent, concludes "We are unaware of any customers of JRL that are waste processing facilities that generate residue requiring disposal not having met the recycling standard based upon the results of their annual demonstrations. Thus what is left cannot be practicably recycled. Therefore, an OBW limitation placed on JRL Expansion acceptance in this proceeding is not required." Furthermore, this testimony, and that of others, fails to

even mention Commissioner Aho's Conclusion in the PBD that Casella and BGS should revisit the terms of the OSA in regard to CDD volumes from out-of-state. Their attitude seems to be that since failure to comply with the directives of the PBD is not an "enforceable obligation", then they have no obligation to even mention it in their testimony.

Mr. John Sevee

Mr. Sevee's testimony on the Hydrogeological Setting of the JRL site includes a statement that "The modeling indicated that groundwater emanating from the landfill site does not pass to groundwater users along Route 16, Route 43, or Stagecoach Road." (Page 6). During this Expansion process, the City of Old Town hired CES to help evaluate threats posed to local residents by an Expanded JRL. In their submission of May 13, 2016, CES has a different conclusion. They discuss the potential for groundwater flows to effect wells along Rt. 43, and conclude "However, there does not appear to be any data presented to support the presence of a bedrock groundwater divide to the southwest between the site and the residential wells. It seems more reasonable that the regional groundwater flow in bedrock in this direction is controlled by the main stem of Pushaw Stream to the southwest (not the small Unnamed Tributary)." Furthermore, they state "...there is still potential bedrock groundwater flow from the site to the residential wells along Route 43 southwest of the site." (Page 2 into Page 3, CES 5/13/16). There appears to be a conflict here about the nature of the threat of groundwater contamination to local wells, and this needs further scrutiny by independent experts.

Mr. Sevee also says "Thus, in the unlikely event of a leak from the landfill, in addition to the natural protection, groundwater could be collected (e.g., pumped from wells drilled into the bedrock and/or till) and prevented from migrating beyond the landfill site." (Page 6). I am skeptical that the groundwater remains localized underneath JRL. Has this sort of remediation ever been successfully completed? And if it was done at JRL, what would be done with the contaminated water- treat it as leachate? Mr. Sevee's final sentence of his testimony seems to rationalize a system failure: "Furthermore, groundwater beneath the site can be controlled by pumping to prevent any off-site migration." This hardly inspires confidence.

Mr. Michael Booth

In his Waste Reduction and Alternative Waste Management section, Mr. Booth offers no real analysis of any efforts to reduce waste volumes into JRL. Neither he nor others hired by Casella bothers to mention that the State has an official goal of reducing total wastes by 5% every two years. He says "Prior to their arrival at JRL, and consistent with the waste management hierarchy, many of these waste streams will have been reduced by using waste management methods..." (Page 5). He uses the term "many". What about the other wastes that have not been subjected to the Hierarchy? Shouldn't they be reduced at the source, recycled, etc.? He later repeats the Casella/BGS mantra that "The Expansion will only accept in-state waste materials" (Page 12), once again without offering any proof or independent evaluation. It seems that he continues the same unconvincing line of testimony as did Ms. King as far as compliance with our Hierarchy.

Mr. Booth discusses Landfill Components and mentions that "The leak detection system has been designed in accordance with the standards identified in Chapter 401.2.D.4 of the Rules to detect leaks from the primary liner within 30 days during the active, closure, and post-closure life of the Expansion." (Page 14). Understanding that the benchmark is to comply with the rules, one still has to wonder why

the time for detecting a leak can be as long as 30 days. To protect the Public, wouldn't we want to know of a problem as soon as possible so that remediation could begin?

Mr. Booth discusses on Page 16 how leachate volume estimates are arrived at. These numbers are based on data "...using the 34 years of weather data that was available from the greater Bangor area." In our testimony, both Dr. Coghlan and myself discuss how scientists conclude that in the future we should expect more extreme precipitation than we have experienced in the past. Yet Mr. Booth insists that "The Expansion also will not unreasonably cause or increase flooding on-site or on adjacent properties, nor will it create an unreasonable flood hazard." (Page 20). When one hears words such as "unreasonable" used in scientific discussion it has to raise the question: Just how would they define a "reasonable flood hazard"? If JRL is to be expanded, it should be built to a far more robust scenario than the past 34 years. This will certainly be a topic of discussion at the Hearing.

Descriptions of the Landfill Gas Collection and Infrastructure raises some questions. Mr. Booth notes how "Vertical gas extraction wells will be installed as areas of the landfill reach final grade..." (Page 18). Given the fact that a landfill settles as it ages, and is not a homogenous mass, I wonder if there is anything besides the waste beneath it that keeps these wells set "...to a design depth of 15 feet above the top of the leachate collection sand." (Page 18). How do they prevent the slots in these well pipes avoid becoming plugged?

During his testimony on Expansion Settlement and Stability, Mr. Booth describes how "SME calculated the potential base liner system settlements due to loads imposed by the waste deposit when the landfill geometry will be at the design final grades." (Page 20). They look at the effect of the landfill's weight on the foundation soils to predict how that might affect the base line and leachate collection systems and conclude that there will be no harmful effects. It does not mention if the analysis includes a factor for the constant compaction of the waste pile by heavy machinery. Nor is there any mention of the threat of Subsidence due to the extreme weight, which may approach that of the glaciers that compressed the earth's crust beneath Maine 10,000 years ago. I also fear that the settlement of the wastes themselves may be underestimated and result in inadequate final cover, rainfall intrusion, and landfill gas escaping.

On Page 22 it says "The first waste placed in the completed cell is the 5-foot soft layer, consisting of selected waste such as FEPR, which does not contain large protruding objects that could damage the liner." This soft layer is largely made up of MSW, or curbside waste. We are taking a chance that no objects sharp enough to puncture a liner (like for example, an old knife) will be included in this material.

Mr. Bryan Emerson

Mr. Emerson, on behalf of Stantec, worked on the wetlands and wildlife evaluation performed on the proposed Expansion site. On the second page of his testimony he states "The wetlands located outside of the proposed expansion area were not verified during the 2014 or 2015 surveys because they will not be impacted by the expansion project...". This may prove to be a false assumption, given the threats of extreme precipitation events in the future due to Climate Change. DEP rules only require that JRL comply with a 25 year flood event.

On the third page, Mr. Emerson concludes that "The wetlands within the proposed expansion area provide limited functions and values, with only wildlife habitat considered to be a principal function of any of the wetlands based on the presence of vernal pools. Secondary functions provided by the

wetlands in the expansion area include sediment/toxicant retention, nutrient removal, and production export, but at a very limited level.” He thinks that destruction of these wetlands will have no effect on the surrounding ecosystem. It seems to me that we should place greater value on a functioning wetlands in proximity to a landfill, if for no other reason than the stated function of sediment/toxicant retention.

Looking more closely at the Page 3 quote above, Mr. Emerson said “...with only wildlife habitat considered to be a principal function...”. Let me repeat that again: “only wildlife”. This testimony contains not a single mention of an Expansion’s threat to endangered and threatened species, such as the Atlantic Salmon and northern long-eared bat. This is despite the fact that the facility site falls within the critical habitat for Atlantic salmon mapped by the National Oceanic Atmospheric Association. Overall, the Casella/BGS application and testimony does an inadequate evaluation in regard to Atlantic Salmon. When a request was made to the Maine Department of Inland Fisheries and Wildlife to review and confirm that there would be no impacts on listed or eligible species or critical habitat, the response did no such thing. This letter is included as Attachment 12 in Volume 5 of the Application. This matter is also discussed in Dr. Coghlan’s testimony (Page 4 and 5 of the redacted version).

We should hope that there will be robust review of the threats to endangered species and habitat forthcoming from the various State and Federal agencies. Stantec did a bat survey and though they found adequate shelters for them on the compensatory property to the north of the expansion, they found no endangered bats. This summer Maine DIFW has been conducting a bat survey, and perhaps Mr. Emerson could have a look at those results and find out how close they have documented endangered or threatened bats. It is not likely to find bats directly adjacent to an active landfill, as they are insect-feeders and insect life is greatly diminished by the toxics and sterile environment.

Mr. Jeremy Labbe

Mr. Labbe’s testimony require some questions to be fully understood; I will save many for the Hearing. On Page 3 he describes the overall Casella Waste Systems network throughout New England, New York, and I believe Pennsylvania. Aside from JRL, how many other Casella-operated or owned landfills are licensed for and accept CDD and its byproducts, CDD processing fines and OBW? On Page 5 within a section called Traffic, he says “... in 2005 we also adopted a policy to penalize truckers who arrive at the landfill scales overweight on a repeated basis.” What is the nature of the penalties, and how many truckers have been banned from JRL as a result of violations? Have any trucking companies been penalized or excluded from JRL as a result?

As part of a discussion of Landfill Gas Related Odors, Mr. Labbe describes “Quarterly methane emission surface scans are completed on the inactive landfill areas containing intermediate cover...measuring methane emissions from the landfill surface to assure the effectiveness in containing, collecting, and combusting methane.” (Page 12). Are there also measurements taken of the Active landfill areas to ascertain the level of escaping methane? Landfill gases are one of the leading causes of greenhouse gas emissions with methane being the primary threat. On Page 11 he acknowledged the importance of greenhouse gas destruction during a description of the flaring of the landfill gas. On Page 10, he talks about using synthetic cover material on the side slopes and states accurately that “Synthetic materials are not prone to these problems, and provide a very effective barrier to gas migration out of the landfill and air infiltration into the landfill.” Why not use more tarps as daily cover to achieve both of these effects, and also reduce the active area of the landfill, which would diminish fugitive greenhouse gases?

Hydrogen sulfide (H<sub>2</sub>S) monitors are used at JRL; four of them are automated and placed around JRL. “Currently, data collected from these monitors is regularly provided to the MEDEP, and summarized in JRL’s annual report.” (Page 12). Is this data provided to regulators in real time on an ongoing basis? In other words, can we see when and where H<sub>2</sub>S concentrations are at their highest and lowest? He also mentions “...two additional monitors are internally utilized around the JRL.” (Page 12). Are the results of these tests public information? He describes procedures following an odor complaint, including “...identifying the H<sub>2</sub>S concentration at the time of each complaint at the nearest offsite monitor.” (Page 13). This would be an accurate measurement if the winds are calm; since they also record the wind direction, shouldn’t they include the data from downwind as well as the closest monitor? As part of protecting Public health and that of the workers, it would be helpful to measure gases other than H<sub>2</sub>S and occasionally methane, such a Volatile Organic Compounds (VOCs).

At the bottom of Page 13 Mr. Labbe writes “The waste composition in the Expansion is anticipated to remain generally consistent with existing waste composition, except we currently propose to accept only MSW bypass in the Expansion.” Does this intermittent delivery, or no delivery, of MSW mean that MSW will no longer be used as a Soft Layer for a cell base? Within testimony on Waste Inspection practices, he says “Documentation from the load is checked to make sure it matches the pre-profiled material...”. (Page 14). How does this pre-profiling work? How many loads have been rejected on average over a period of time? Lastly, listing of the “...waste origin (by Maine county).” (Page 15) actually lists the location of the transfer station or processing facility. The true “waste origin” is at the point of discard, which is never fully disclosed and often beyond Maine’s borders.

#### Conclusion

On Page 2, Mr. Barden mentions the OSA, which is the contract between the State and Casella. Within that document there is simple statement: “The State shall control the Landfill”. In Ms. King’s testimony is contained statements such as that on Page 6: “The ultimate decision on the waste management technique used by the generators is not within the control of either BGS or NEWSME.” The operator fails to control JRL for much of the wastes delivered, and therefore cannot factually ascertain that these wastes are consistent with our Hierarchy.

More scrutiny needs to be applied concerning groundwater flows and what remediation should occur if and when the landfill leaks. I consider the wildlife and wetlands testimony to be inadequate. It does not even mention the threat to endangered Atlantic Salmon or that the proposed Expansion includes NOAA-mapped critical habitat for Atlantic Salmon. Given the fact that the United States Army Corps of Engineers will be accepting Public Comment on JRL Expansion until September 29, 2016, I urge BEP/DEP to incorporate comments into the NRPA record, especially those comments offered by other State and Federal Agencies.

Respectfully submitted,

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