

#### STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

#### DEPARTMENT ORDER

# IN THE MATTER OF

)

)

)

)

)

)

)

STATE OF MAINE, ACTING THROUGH THE BUREAU OF GENERAL SERVICES OLD TOWN, PENOBSCOT COUNTY, MAINE JUNIPER RIDGE LANDFILL MODIFICATION OF OBW ANNUAL TONNAGE LIMIT #S-020700-WD-CM-M (APPROVAL WITH CONDITIONS) SOLID WASTE LICENSE

MINOR REVISION

Pursuant to the provisions of the Maine Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S. §§ 1301 to 1319-Y, Solid Waste Management and Recycling, 38 M.R.S. §§ 2101 to 2236, the Rule Concerning the Processing of Applications and Other Administrative Matters, 06-096 C.M.R. ch. 2 (last amended June 9, 2018), and the Solid Waste Management Rules: General Provisions, 06-096 C.M.R. ch. 400 (last amended February 9, 2021); Landfill Siting, Design and Operation, 06-096 C.M.R. ch. 401 (last amended April 12, 2015); and Water Quality Monitoring, Leachate Monitoring, and Waste Characterization, 06-096 C.M.R. ch. 405 (last amended April 12, 2015), the Department of Environmental Protection ("Department") has considered the application of the STATE OF MAINE, ACTING THROUGH THE BUREAU OF GENERAL SERVICES ("BGS" or "applicant"), with all supportive data, agency review comments, and other related materials on file, and FINDS THE FOLLOWING FACTS:

## 1. APPLICATION SUMMARY

- A. <u>Application</u>: The applicant has applied for a minor revision to Department license #S-020700-WD-BI-N, issued June 1, 2017. The Application for a Solid Waste Project Minor Revision ("Application"), with a signature date of June 1, 2021, requests to establish a methodology and process for determining the annual Oversized Bulky Waste (OBW) limit at the State-owned Juniper Ridge Landfill.
- B. <u>History</u>: The following history is a relevant summary and does not include all licensing actions:
  - (1) On July 28, 1993, James River Paper Company, Inc. was issued a license to construct and operate a 68-acre secure landfill, known as the West Old Town Landfill, to dispose of the James River Paper Company's pulp and papermaking residuals (license #S-020700-7A-A-N).
  - (2) On October 21, 2003, the Department issued conditional approval for the transfer of licenses for the West Old Town Landfill, from the Fort James

	•	
STATE OF MAINE, ACTING THROUGH THE	2	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

Operating Company, to the State of Maine, State Planning Office ("SPO") (licenses #S-020700-WR-M-T and #L-019015-TH-C-T); the transfer became effective when the sale of the landfill to the State of Maine, acting by and through SPO, occurred on February 5, 2004.

- (3) On February 5, 2004, the State of Maine, acting by and through the SPO, and Casella Waste Systems, Inc. ("Casella") entered into an Operating Services Agreement ("OSA") for the operation of the West Old Town Landfill.
- (4) In 2006, the West Old Town Landfill became known as the Juniper Ridge Landfill ("JRL").
- (5) Pursuant to PL 2011, ch. 655, § GG-69, on July 1, 2012, the BGS, within the Department of Administrative and Financial Services, became the state agency acting as the owner and licensee of JRL. NEWSME Landfill Operations, LLC, a wholly-owned indirect subsidiary of Casella, operates the landfill for the State of Maine, acting through BGS.
- (6) On January 31, 2012, the Department approved a Public Benefit Determination ("PBD") for an expansion (license #S-020700-W5-AU-N) which includes a condition that if, and when, an expansion license is issued, the applicant shall comply with the limit, and any subsequent modifications to the limit, established by the Department in the license on the tonnage of OBW that may be disposed.
- (7) On June 1, 2017, the Department approved the construction and operation of a 9.35 million cubic yard expansion at JRL (license #S-020700-WD-BI-N), which includes a condition (Condition 12) establishing an annual OBW tonnage limit of 65,000 tons and provisions to evaluate the OBW limit annually and propose modifications to the OBW limit, if needed.
- (8) On December 18, 2019, the Department denied the Minor Revision (license #S-020700-WD-BW-M) request to increase the annual OBW limit from 65,000 tons to 85,000 tons for an unlimited period, but approved the request to modify the annual OBW disposal limit from 65,000 tons to 85,000 tons through the end of the 2020 calendar year, and to return to the original annual limit of 65,000 tons for subsequent years starting in 2021.
- C. <u>Summary of Proposal</u>

STATE OF MAINE, ACTING THROUGH THE	3	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	) )	
OLD TOWN, PENOBSCOT COUNTY, MAINE	ý	
JUNIPER RIDGE LANDFILL	ý	
MODIFICATION OF OBW ANNUAL	ý	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

The applicant requests to establish a methodology and process for determining the annual OBW limit at the State-owned JRL under the terms and conditions specified in Condition 12 of license #S-020700-WD-BI-N for the JRL Expansion. The Application was accepted as complete for processing on June 16, 2021.

- D. <u>Public Participation</u>
  - (1) Notice of Intent to File

A Notice of Intent to File an application was published in the Bangor Daily News on May 19, 2021 in addition to being mailed to Landfill Advisory Committee members, property abutters, and the City of Old Town and Town of Alton municipal offices.

(2) Application Comments

The Department received 38 comments on the Application from interested persons containing the following concerns: the OBW disposed at JRL is transported from Resource Waste Services of Lewiston ("Resource") which receives largely waste originating from out-of-state; increased quantities of out-of-state OBW will quickly use up state landfill space intended for Maine generated waste; the technical information submitted is limited regarding waste stabilization requirements; Casella is hauling the material to be processed at Resource and is therefore profiting twice from the OBW; Casella claims they require more OBW to stabilize the increasing quantity of sludge coming to JRL, but JRL is accepting out-of-state sludge that is bypassed from Casella's Hawk Ridge Compost facility; OBW could instead go to Crossroads Landfill in Norridgewock, Maine which is closer to the Resource facility, reducing costs and emissions associated with transportation; mixing sludge with Construction and Demolition Debris ("CDD") rather than OBW is a viable option for sludge stabilization; and OBW material often contains Per- and Polyfluoralkyl Substances ("PFAS") which poses a danger to the citizens of Maine.

(3) Draft License Comment Period

# 2. APPLICATION INFORMATION

A. <u>Historical OBW Limit and OBW Definition</u>

STATE OF MAINE, ACTING THROUGH THE	4	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

Condition 12 of license #S-020700-WD-BI-N, addresses OBW disposal at JRL. Condition 12 reads, in part, as follows:

- 12. <u>OBW</u>
  - A. The applicant shall be restricted to an OBW disposal limit of 65,000 tons on an annual basis in the proposed expansion.
  - C. The OBW limit shall be evaluated annually by the Department and modified as needed based on current OBW recycling opportunities, economic factors, and other relevant factors. Modification of the OBW limit will be accomplished either through a license modification process pursuant to 38 M.R.S. § 341-D(3) or a license application submitted by the applicant pursuant to 38 M.R.S. § 344(9) and 06-096 C.M.R. chs. 2 and 400.

The expansion landfill license states: "The term OBW is not defined in regulation or statute; therefore, for the purpose of this licensing action, OBW refers to the standard industry meaning that includes large items that may be difficult to process, such as mattresses, furniture, appliances, and certain other components of demolition debris" (#S-020700-WD-BI-N, Findings of Fact 37(B), page 88). The Department is using this same definition of OBW for this minor revision request.

# B. <u>Current OBW Limit</u>

Condition 2 of Minor Revision #S-020700-WD-BW-M reads as follows:

- 2. The OBW disposal limit for the expansion landfill stated in Condition 12(A) in license #S-020700-WD-BI-N of 65,000 tons shall be revised to 85,000 tons on an annual basis for a limited time, as follows:
  - A. For the remaining calendar year of 2019, the applicant shall be restricted to an OBW disposal limit on a pro-rated basis. [For example, if half a month remains in the 2019 calendar year: [(85,000 tons/year)/(12 months/year)]\*[0.5 month] = 3,542 tons for the remainder of the 2019 calendar year.]

STATE OF MAINE, ACTING THROUGH THE	5	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	Ĵ	
JUNIPER RIDGE LANDFILL	Ĵ	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

- B. For calendar year 2020, the applicant shall be restricted to an OBW disposal limit of 85,000 tons.
- C. In 2021 and in subsequent years, the applicant shall be restricted to the original OBW disposal limit of 65,000 tons on an annual basis unless this limit is further modified in accordance with the provisions of Condition 12 of license #S-020700-WD-BI-N.

# C. <u>Application Request</u>

The applicant requests a license minor revision to modify the 65,000 tons annual OBW license limit and proposes establishing a methodology for determining the annual OBW limit for a five-year period. The applicant states two primary factors for the proposed revision (1) JRL is experiencing greater disposal volumes of sludges as a consequence of restrictions of sludge management practices due to potential PFAS contamination and this sludge disposal requires mixing with bulkier and drier waste for stabilization purposes and (2) Resource (formerly ReEnergy) continues to invest in infrastructure to ensure they are recycling "to the maximum extent practicable" but will likely shut down if they are required to transport OBW tonnage to alternative landfill sites due to increased cost of transport and disposal. The applicant states that the loss of the recovery facility will be detrimental to the State-owned landfill and the greater State of Maine.

(1) Sludge Disposal

The applicant states that waste-water treatment plant sludge volumes have increased significantly since 2019 due to restrictions imposed on sludge management practices related to PFAS. The applicant asserts that best management practices for bulking sludge materials includes an approximate 4:1 ratio of dry, bony material for stabilization purposes. The applicant notes that it is preferred that at least one of the four parts is comprised of OBW. Historically, other categories of waste have been utilized for bulking sludge; however, the applicant explains that the previously utilized wastes streams are no longer optimal due to negative physical and/or chemical characteristics, or the inconsistency of disposal frequency at JRL:

a. <u>Combustion Ash</u>. While ash is suitable physically and chemically for bulking sludge, JRL has seen a reduction in disposal volumes due to market changes.

STATE OF MAINE, ACTING THROUGH THE	6	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

- b. <u>Contaminated Soil</u>. Contaminated soil is a suitable bulking material for sludge, but it is received inconsistently as special waste and is typically used as daily cover when available.
- c. <u>Municipal Solid Waste ("MSW"</u>). MSW is a viable bulking material, though JRL is only licensed to accept bypass MSW from in-State incinerators and processing facilities. The incoming MSW stream varies widely depending on the in-State facilities' ability to process waste; therefore, the material is not available in consistent or reliable quantities.
- d. <u>Construction and Demolition Debris ("CDD"</u>). JRL accepts a reliable volume of CDD, but the applicant asserts that the material is not favorable due to the rapid production of hydrogen sulfide that occurs when compounds within the material combine with moisture.
- e. <u>Oversized Bulky Waste ("OBW"</u>). The applicant maintains that OBW is the most suitable waste type for bulking sludge. OBW is chemically and physically stable, and JRL receives consistent and reliable quantities.
- (2) OBW Generation and Disposal Needs

In the PBD license for the JRL Expansion, the Commissioner specified that CDD processors providing CDD to JRL must annually demonstrate that they are recycling to the "maximum extent practical" pursuant to *Processing Facilities*, 06-096 C.M.R. ch. 409 § 2(C) (last amended July 27, 2014). The PBD established that the Department would reevaluate the annual OBW limit based on the results of the facilities' annual demonstrations. Additionally, the PBD established that any CDD processing facility that transports more than 10,000 tons of OBW to JRL on an annual basis will be subject to periodic independent third-party audits. The first of these audits was conducted in 2019 at ReEnergy, now Resource. The audit concluded that the facility's processing and recycling was maximized, and therefore, eligible for disposal at JRL.

On January 27, 2021 Resource was issued a license to install additional processing equipment and update existing equipment to increase recycling capabilities at the facility. The applicant states that Resource "is making

ry 27, 2021 Resource was issued a license to install additional

STATE OF MAINE, ACTING THROUGH THE	7	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	Ĵ	
(APPROVAL WITH CONDITIONS)	Ĵ	

intensive capital investments to their facility to comply with recently promulgated legislative mandates for processing recycling increases" (Application, page 4). The applicant asserts that restricting the quantity of OBW accepted at JRL from Resource will result in greater costs to the facility related to transportation and disposal fees, potentially leading to the closure of the facility. Resource provides residuals known as "fines" to JRL to be used as daily cover material as an alternative to virgin material. Additionally, the applicant states that a potential closure of Resource would result in the placement of more virgin materials into the landfill and eliminate a valuable processing facility that provides revenue to the State of Maine.

(3) Disposal Data and Proposed Methodology

Table 1 includes information regarding the disposal of OBW and sludge at JRL over the last five years, as presented in the Application.

	Sludge	OBW
Year	(tons)	(tons)
2016	39,473	58,727
2017	36,713	67,504
2018	53,023	78,903
2019	82,888	84,554
2020	82,406	86,035

Table 1: OBW and Sludge Disposal Totals at JRL 2016 through 2020<sup>1</sup>

Given the increasing quantities of sludge requiring bulking material at JRL, the applicant requests establishing a methodology to determine annual OBW limits based on the averages of OBW tonnage and the Consumer Price Index ("CPI") over a five-year period. The methodology proposed determines the annual OBW tonnage limit by averaging the OBW tonnage accepted over the previous five years adjusted by the average CPI over the same five-year period.

The applicant proposes that the Department evaluate the OBW limit calculated and submitted by JRL at the beginning of each calendar year

<sup>&</sup>lt;sup>1</sup> The 65,000 ton OBW limit applies to the Expansion landfill. Years 2017-2019 have higher OBW tonnages than 65,000 tons because some of the OBW material was placed in the footprint of the old landfill.

STATE OF MAINE, ACTING THROUGH THE	8	SOLID WASTE LICENSE
· · · · · · · · · · · · · · · · · · ·	0	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

using this formula and may modify the calculated value based on relevant factors including, but not limited to, new OBW recycling opportunities and economic considerations. The Department would be required to accept or deny the new proposed annual limit within 60 days of the first of the year. Otherwise, the previous year's OBW limit will be assumed until the Department makes a final determination. The applicant further proposes a not-to-exceed maximum tonnage limit of 85,000 tons per year, regardless of the outcome of the calculation. The proposed calculation methodology would be valid for five years, at which point the applicant and Department would review the formula and adjust as necessary.

Tables 2 and 3 include information over the most recent five years to be used in the proposed methodology calculations.

	JRL OBW	
Year	(tons)	CPI
2016	58,727	2.1
2017	67,504	2.1
2018	78,903	1.9
2019	84,554	2.3
2020	86,035	1.4

Table 2: OBW Tons Disposed at JRL and CPI from 2016 to 2020

Table 3: Calculated 2021 Tonnage Limit Using Applicant's ProposedMethodology

2021 OBW Tonnage Limit		
Average OBW Tonnage at JRL	75,145	
Average CPI	2.0	
Proposed 2021 Tonnage Limit	76,648	

Based on the proposed methodology, the applicant calculates that the annual OBW tonnage limit for 2021 would be 76,648 tons. The formula calculation would be used to determine the annual OBW limit at JRL until the year 2025, at which time the formula would be re-evaluated.

# 3. DEPARTMENT ANALYSIS AND FINDINGS

STATE OF MAINE, ACTING THROUGH THE	9	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

- A. Department Analysis
  - (1) Public Benefit Determination

In 2012 the applicant applied for a determination of public benefit for the proposed JRL Expansion. The PBD established the following requirement for an annual limit on OBW received at JRL:

"The limit will be based upon the results of annual demonstrations required pursuant to 06-096 CMR 409.2.C [06-096 C.M.R. ch. 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 CDD processing facilities that send OBW to Juniper Ridge Landfill for disposal" (License #S-020700W5-AU-N, page 20).

While Resource has demonstrated their efforts to recover as much material as practicable, the Department notes that the PBD additionally stated concerns that much of the CDD processed at Resource is undesirable from a recovery perspective, "[b]ased on the large, and to date annually increasing, volume of OBW disposed in Juniper Ridge Landfill, the Commissioner finds that it appears much of the CDD imported into Maine contains insufficient woods to justify efforts to process into CDD fuel. Although 38 M.R.S. § 1310-N(11) defines residues and bypass generated by incineration, processing and recycling facilities in Maine as Maine waste, some of the CDD delivered to [the processing facility] has little or no processing value, and therefore is ultimately disposed in a landfill, usually Juniper Ridge Landfill" (#S-020700-W5-AU-N, page 20). Multiple interested persons submitted comments on the Application expressing concern that the OBW material originating from out-of-state is depleting capacity at the state-owned landfill. The Department responds that "waste generated in the State" applies to wastes processed in Maine and that the Department does not have the authority to amend the statute.

As the applicant stated, Resource was issued a minor revision license in January 2021 to move forward with installing additional processing equipment and updating existing equipment such as the addition of an eddy current separator, drum head magnets, a destoner air classifier, and updating the conveyor belt to improve the throughput of secondary wood material. Each of these updates will increase the facility's ability to recover materials.

STATE OF MAINE, ACTING THROUGH THE	10	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	ý	
JUNIPER RIDGE LANDFILL	ý	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

In addition to investing in updated processing equipment, Resource has demonstrated in their annual reviews and the 2019 third-party audit that they are fulfilling the requirement to recycle to the maximum extent practicable as stated in the PBD.

#### (2) Juniper Ridge Landfill Expansion OBW Limit

The applicant's proposed formula to determine the annual OBW limit is similar to the initial formula used to establish the 65,000 ton annual limit from the 2017 JRL Expansion License #S-020700-WD-BI-N. The formula from the Expansion utilized the median OBW tonnage at JRL over the previous five years, adjusted by the median CPI over the same five-year period. The formula included the addition of an estimated 10,000 tons of OBW from the PERC facility due to an anticipated increase in disposal needs resulting from a change in operations. The applicant's proposed formula utilizes the five-year mean rather than median of OBW tonnage and CPI, which results in a lower limit.

(3) Sludge Disposal

Bulking material is necessary for the stabilization of sludge in landfills for compaction purposes. Due to changes in sludge management practices related to PFAS contamination, the quantity of sludge disposed in landfills continues to increase. Prior to 2019, land application of wastewater treatment sludge was a common sludge management practice. On March 22, 2019, the Department sent a memorandum to wastewater treatment facilities and paper mills informing them that residuals needed to be tested for three types of PFAS chemicals. After testing, the facilities were notified as to how materials could be distributed either for disposal, composting, or direct land application. After the initial round of testing, it was determined that approximately 98% of all residuals tested exceeded the Solid Waste Management Rules: Beneficial Use of Solid Wastes, 06-096 C.M.R. ch. 418, Appendix A screening concentrations, resulting in the disposal of thousands of cubic yards of residuals into landfills. In January of 2020 the Maine PFAS Task Force issued its final report, recommending that all wastewater residuals undergo regular PFAS testing, resulting in additional facilities making the decision to dispose of residuals in a landfill rather than continue testing.

STATE OF MAINE, ACTING THROUGH THE	11	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

Several of the commenters raised concerns regarding the potentially high concentrations of PFAS in OBW materials such as mattresses and couches, and the impacts it could have on Maine citizens. PFAS is common in stain-resistant fabrics and water-resistant materials, which are often found in upholstered furniture. Leachate from the landfill is collected in a leachate management system prior to the leachate being transported to the ND OTM LLC (ND Paper) wastewater treatment plant in the City of Old Town, or the City of Brewer's Pollution Abatement facility for proper treatment. The Department comments that the State is actively working on addressing the various concerns associated with PFAS in landfill leachate. As of October 18, 2021, the Department is requiring landfills that manage leachate to test their leachate for PFAS.

One commenter raised the concern that JRL is accepting bypassed sludge from Casella's Hawk Ridge Composting Facility ("Hawk Ridge") that originated from out-of-state. Hawk Ridge accepts sludge from primarily Maine communities, but the facility does accept materials from municipalities in New Hampshire and Massachusetts in conformance with site-specific Department licenses. JRL is licensed to accept bypassed MSW from Maine facilities, but does not accept bypassed sludge. No out-of-state sludge is bypassed to JRL.

(4) OBW and Bulking Material Practices

The Department recognizes that OBW is not the only viable bulking material for sludge stabilization. As mentioned by the applicant, CDD has desirable physical characteristics for bulking sludge, but it produces hydrogen sulfide gas when combined with moisture. In the application, the applicant claims, "Current operations at the landfill occasionally bring the hydrogen sulfide concentration of the gas within the limit of the treatment capacity" (Application, page 6). While the Department acknowledges that the facility should minimize gas emissions, JRL is in compliance with their air emission license. Additionally, the Landfill Gas Expansion Design Report, dated June 2015, established that the existing hydrogen sulfide removal equipment was adequate to handle landfill gas from the Expansion. These findings indicate as the Expansion progresses, more hydrogen sulfide will be required to be processed and the gas system is capable of meeting those requirements.

STATE OF MAINE, ACTING THROUGH THE	12	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

MSW is another material that can be utilized for sludge stabilization as stated by the applicant. JRL is licensed to take bypass MSW resulting in inconsistent volumes of material; however, in the last year JRL has received large quantities of bypass MSW due to an inability to process waste at capacity at two waste-to-energy facilities. Penobscot Energy Recovery Company ("PERC") has been experiencing unexpected prolonged power line maintenance, equipment repairs, and labor shortages, reducing the usable capacity of PERC and causing the facility to bypass material to JRL. Coastal Resources of Maine ("CRM"), a waste-to-energy facility in Hampden, Maine, ceased operations in May of 2020 due to lack of sufficient funding. While there have been discussions of various potential buyers taking over the facility, CRM remains closed with no specific plan to reopen. According to the 2020 JRL Annual Report, JRL received 110,866 tons of bypass MSW last year and has continued to receive large quantities of bypass MSW in 2021. The Department notes that the circumstances at PERC and CRM are temporary, meaning it is difficult to predict the timeline that the elevated volumes of bypass MSW will continue to be disposed at JRL.

The applicant asserts that best management practices include a 4:1 ratio of bulking material to sludge to ensure stability. One comment submitted by an interested person questioned the source of the ratio provided by the applicant. The 4:1 ratio is a management practice determined by the applicant based on the typical waste mixing that is performed at the facility. The exact ratio can be higher or lower depending on available materials; however, 4:1 is the most commonly utilized ratio.

One commenter raised the point that there is a closer facility to Resource that could accept the OBW rather than JRL. Crossroads Landfill in Norridgewock, owned by Waste Management Disposal Services of Maine, is licensed to accept OBW and is geographically closer to the Resource facility than JRL. However, since sludge stabilization is the applicant's primary grounds for requesting a higher annual OBW limit, offering a different location for the OBW does not address this concern.

## B. <u>Department Findings</u>

The Department finds that recent changes in sludge management practices due to required PFAS testing of wastewater treatment residuals has led to an increase in sludge disposal in landfills. Further, the Department finds that OBW is a viable and

STATE OF MAINE, ACTING THROUGH THE	13	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

consistently reliable bulking material for sludge that results in improved stabilization and lower hydrogen sulfide gas production than CDD. The Department finds that the intent of the OBW annual limit as stated in the PBD for the Expansion was to prioritize waste management methods higher on the waste hierarchy and reduce the quantity of waste, such as OBW, being disposed in landfills through recycling to the maximum extent practicable. The third-party audit conducted for Resource has demonstrated to the Department that Resource is maximizing recycling efforts. In addition, Resource was issued a license in January 2021 to update and install additional processing equipment to further enhance their recycling efforts. The Department further finds that the applicant's proposed methodology to determine the annual OBW limit is acceptable, resulting in an annual OBW limit for 2021 of 76,648 tons.

By January 31<sup>st</sup> of each year from 2022 through 2025, the applicant shall submit on a Department-approved form the calculated OBW limit as well as a discussion of other relevant factors that may impact the proposed OBW tonnage. The submittal shall be posted on the BGS and Department websites with certified mailing to the City of Old Town, the Town of Alton, the Landfill Advisory Committee, and interested persons as requested. The Department shall have 90 days from January 31<sup>st</sup> to respond to the applicant's request, rather than the proposed 60 days. The Department will accept public comments for a 60-day period beginning January 31<sup>st</sup> of each year. The Department will evaluate the calculated limit and determine whether the limit is still appropriate based on available technology, economic, and other applicable factors, and make changes accordingly. If the Department does not respond by May 1<sup>st</sup> (the final day of the 90-day period) the previous year's OBW limit will apply unless otherwise determined by the Department due to unforeseen or extenuating circumstances. Regardless of the results of the calculations, the annual OBW limit shall not exceed 85,000 tons. The proposed methodology will be utilized until December 31st of 2025, after which, the annual limit shall revert to 65,000 tons. The applicant shall submit a new minor revision application if they request to establish an alternative OBW limit to 65,000 tons per year after the year 2025.

## 4. ALL OTHER

All other Findings of Facts, Conclusions, and Conditions remain as approved in Department license #S-020700-WD-BI-N and subsequent modifications.

BASED on the above Findings of Fact, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

STATE OF MAINE, ACTING THROUGH THE	14	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	)	

- 1. The proposed modification of the annual OBW disposal limit from 65,000 tons to applying the proposed methodology starting at 76,648 tons in 2021, will not pollute any waters of the state, contaminate the ambient air, constitute a hazard to health or welfare or create a nuisance; provided that:
  - A. The applicant is restricted to an annual OBW disposal limit based on the average OBW tonnage over the previous five years adjusted by the average CPI over the same five-year period, utilizing the process specified in the conditions below such that the Department may modify this limit as proposed by the applicant based on current OBW recycling opportunities, economic factors, and other relevant factors.
  - B. The methodology is valid for five years (until December 31, 2025) after which time the annual limit will revert to 65,000 tons. The applicant must submit a minor revision application to propose an alternative limit.
  - C. The annual OBW limit shall not exceed 85,000 tons regardless of the outcome of the methodology.

THEREFORE, the Department APPROVES the noted Application as proposed by the applicant to determine the annual OBW limit based on the proposed methodology at JRL, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

- 1. The Standard Conditions of Approval, a copy attached as Appendix A.
- 2. The OBW disposal limit for the Expansion stated in Condition 12(A) in license #S-020700-WD-BI-N of 65,000 tons shall be revised using the proposed methodology to determine the annual limit, as follows:
  - A. Beginning in calendar year 2021, the applicant is restricted to an annual OBW disposal limit based on the average OBW tonnage over the previous five years adjusted by the average CPI over the same five-year period, with the understanding that the Department has the authority to modify this limit based on current OBW recycling opportunities, economic factors, and other relevant factors and utilizing the process set forth in condition 2(D) below. Pursuant to this methodology, for the year 2021, the OBW limit will be 76,648 tons.
  - B. The methodology is valid for five years (until December 31, 2025) at which time the annual limit will revert to 65,000 tons. The applicant must submit a minor revision application to Department license #S-020700-WD-BI-N to propose an alternative limit.

STATE OF MAINE, ACTING THROUGH THE	15	SOLID WASTE LICENSE
BUREAU OF GENERAL SERVICES	)	
OLD TOWN, PENOBSCOT COUNTY, MAINE	)	
JUNIPER RIDGE LANDFILL	)	
MODIFICATION OF OBW ANNUAL	)	MINOR REVISION
TONNAGE LIMIT	)	
#S-020700-WD-CM-M	)	
(APPROVAL WITH CONDITIONS)	ý	

- C. The annual OBW limit shall not exceed 85,000 tons regardless of the outcome of the methodology.
- D. The applicant shall submit on a Department-approved form the calculated annual OBW limit as well as a discussion of other relevant factors that may impact the proposed OBW tonnage to the Department by January 31<sup>st</sup> of each calendar year. The initial submittal will be posted on the BGS and Department websites with certified mailing to the City of Old Town, the Town of Alton, the Landfill Advisory Committee, and interested persons as requested. The Department shall have 90 days (until May 1<sup>st</sup>) to respond to the applicant's request. The Department shall accept public comments for the first 60 days (until April 1<sup>st</sup>). If the Department does not respond within the 90-day period, the previous year's OBW limit will apply unless otherwise determined by the Department due to unforeseen and extenuating circumstances.
- 3. The invalidity or unenforceability of any provisions, or part thereof, of this license shall not affect the remainder of the provision or any other provision. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

DONE AND DATED	AT AUGUSTA,	MAINE THIS	DAY OF	, 2021.
----------------	-------------	------------	--------	---------

# DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Melanie Loyzim, Commissioner

# PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: <u>06/01/2021</u>

Date of application acceptance: 06/16/2021

Date filed with the Board of Environmental Protection:

SE

XSP#87706