Crowe LLP
Independent Member Crowe Global

MEMORANDUM

To: Mr. Jon Braslaw
Director, Business Systems Services

Subject: Operating Ratio Analysis

Date: May 16, 2023

Recology provides solid waste, recyclables, and organics collection service to the City/County of San Francisco (San Francisco or City) under terms of a 1932 Ordinance. Recology's residential and apartment rates are set by the Refuse Collection and Disposal Rate Board (Rate Board). Recology serves over 160,000 customers in the City.

Recology's profit level in the City is regulated using the operating ratio (OR) methodology. The allowable OR is set by the City at 91 percent on allowable expenses. Recology requested an analysis conducted of how current City OR levels compare with industry averages.

A. Scope and Deliverables

Crowe provided Recology with written analyses of OR data and input to the Company related to OR use in the waste management industry (hereafter referred to as Analysis). Specific tasks included:

1. Develop background on the OR, including a definition, the OR relationship to allowable costs, and how the OR is typically used in the waste management industry.
2. Survey OR data of selected similar California jurisdictions, and compile results. Survey industry OR data (e.g., publicly and privately held returns) and compile results. Compare with City OR.
3. Evaluate the OR on a pre-tax and post-tax basis. Assess the pre-tax OR provided by the City and its relationship to Recology's ESOP structure. Evaluate the historical background for the City's OR determination and the ESOP cost treatment.
4. Assess whether a balancing account provides the company with a "guaranteed profit" and what factors continue to create risk and necessitate profit requirements for the company even with a balancing account.

This letter report is organized as follows:

A. Operating Ratio Background
B. Operating Ratio Survey Results
C. Use of Pre-tax Versus Post-Tax Operating Ratio
D. Relationship of Balancing Account to Operating Ratio.

B. Operating Ratio Background

The City currently regulates Recology's profit level using the operating ratio (OR) methodology. The allowable OR is set by the City at target of 91.0 percent on allowable (operating ratio-eligible) costs. The City has provided Recology this 91.0 percent target operating ratio since 2006.[1] The operating ratio is defined as:

$$\frac{\text{OR-Eligible Costs}}{\text{OR Eligible Costs Plus Allowed Profit.}}$$

C. Operating Ratio Survey Results

We surveyed operating ratio data from the following three (3) sources, the results of which are described below:

- California jurisdictions with operating ratios
- Publicly held company operating ratios
- Privately held company operating ratios.

1. California Jurisdictions with Operating Ratios

Attachment A provides survey data for 29 California jurisdictions that regulate the profit of refuse collection companies using an OR methodology. The average OR for these 29 jurisdictions is 89.4 percent. Most, or 72 percent (22), of these jurisdictions provide the OR on earnings before interest and tax (EBIT) basis, with these averaging an OR of 89.2 percent. The remaining 28 percent (8) provide the OR on earnings before tax (EBT) basis, with these averaging an OR of 90.0 percent. None of those 29 surveyed provided the OR on a post-tax basis.

OR data surveyed ranged from 83.9 to 93.0 percent. Some of this variation is explained by the differences in how a jurisdiction treats costs for rate setting purposes. Specifically, there is variation in which costs are considered allowable costs (on which the OR is applied), pass-through costs (not earning on OR but included in rates), and non-allowed costs.

2. Publicly held Company Operating Ratios

Operating ratio data for the three (3) largest publicly held waste management companies is provided in **Attachment B**. This data is sourced from company annual reports and 10Ks. Over the last four years, the weighted average operating ratio, on an EBIT basis was 83.4 percent and on an EBT basis was 86.5 percent. These companies are engaged in a variety of waste management services beyond collection, including, for example, transfer station and landfill ownership and operations.

3. Privately held Company Operating Ratios

Operating ratio data for privately held refuse collection companies is provided in **Attachment C.** The source of this data is the Risk Management Association (RMA). Over the last four years, the weighted average operating ratio on an EBIT basis was 91.0 percent and on an EBT basis was 92.6 percent. These returns included between 150 and 278 private companies of varying size and location throughout the U.S.

OR survey results for the three above sources are summarized in the table below.

[1] This 91 percent OR is also identified as a 9 percent profit margin.

Summary of Operating Ratio Data
California Regulated, Privately-Held, Publicly-Held
Source data for 4 years, from 2019-2022
(As of April 10, 2023)

Description	Operating Ratio EBIT	EBT	Comment
California Regulated (Avg)	89.4%		Target
Median	90.0%		
Mode (most frequent)	90.0%		
Maximum	93.0%		
Minimum	83.9%		
Privately Held (RMA, Wt. Avg)	91.0%	92.6%	Actual
Publicly Held (Wt. Avg)	83.4%	86.5%	Actual
San Francisco	91.0%		

Conclusion**:** the 91.0 percent target operating ratio provided by the City is in line with published actual privately-held refuse collection company returns, is slightly above (less profit) than targeted returns provided by other California jurisdictions, and well above (less profit) than published actual returns of the 3 largest publicly-held waste management companies.

D. Use of Pre-tax Versus Post-tax Operating Ratio

Prior to 1982, the City provided Recology with a target 95.0 percent after tax OR. In 1982, the City shifted from the 95.0 percent after tax OR to a 90.5 percent pre-tax OR, based on the conclusion that it simplified the rate making process and finding, similar to the surveyed results in B. above, that most other government entities used pre-tax ORs. At that time, the City determined that using an after tax OR unnecessarily complicated the rate making process. The City's consultants indicated that allowing tax in the calculation placed the risks and potential burden of uncertain future tax law changes, which could either increase or decrease Recology's income tax expense, onto the ratepayers rather than on Recology.

In studies performed at the time by the City's consultants, they calculated that the equivalent of a pre-tax 90.5 percent OR on a post-tax basis equaled 93.6 percent for Recology Sunset Scavenger and 94.4 percent for Recology Sanitary Fill. Both figures were relatively close to the City's pre-1982 after tax OR target of 95.0 percent.

Relationship of Employee Stock Option Plan (ESOP) to Operating Ratio

In 1986, Recology implemented an ESOP. Given that Recology's S-corporation ESOP is exempt from federal and state income taxation, the City has recently asked whether the company should receive a higher OR (or lower profit) as a result.

For context, Recology's profit for tax purposes is passed through to the Recology ESOP, which is income tax exempt under federal and state tax laws.[2] In 1998, Congress changed the tax laws to provide a meaningful benefit to ESOP companies to encourage employee ownership.

[2] Recology's current effective tax rate is 1.5% (representing a State Excise Tax).

An ESOP is similar to a pension plan, or a 401(k) plan, except that the investments made by Recology are solely in company stock. Without an established market for Recology's stock, each year Recology must buy back the shares from retiring employees who Recology is cashing out (referred to as the "repurchase obligation").

Under ESOP law, in lieu of paying taxes, the company incurs ESOP-related expenses including the annual repurchase obligation described above. This repurchase obligation is fully taxable to Recology employees so the federal and state government ultimately still collects the tax revenue.

Recology's total repurchase obligation has averaged approximately $21.3M annually over the past 5 years (2018 to 2022). Using a combined federal and state corporate tax rate that a California corporation would pay[3], Recology's imputed tax on its earnings (i.e., if Recology were required to pay tax) would have equaled approximately $14.8M annually for 2018, 2019 and 2022.[4] Compared to the tax Recology would have paid for these three years of 2018, 2019 and 2022 combined, the repurchase obligation exceeded the tax amount by $18M. This demonstrates that the company's ESOP-related costs are at least equivalent to, if not greater, than what Recology's tax liability would be were Recology taxed.

The City has never allowed Recology's ESOP repurchase obligation costs and these costs have never been included in rates charged to City customers. For the first decade of the ESOP program, first generation ESOP costs were allowed in rates to the extent that they replaced demonstrated savings and then were phased-out completely in 1996 thereby passing the full savings onto City ratepayers.

Conclusion: The fact that Recology does not pay federal and state tax does not provide Recology an advantage given the size of Recology's annual ESOP repurchase obligations. Consequently, the OR should not be increased (profit lowered) to account for the fact that Recology does not pay federal and state income taxes.

E. Relationship of Balancing Account to Operating Ratio

In the December 2022 Settlement Agreement between the SF Recology Companies and the City (Settlement Agreement), the parties agreed to establish a balancing account. The Settlement Agreement (Section 8.4) provides a methodology to increase or decrease the balance account based on comparing the company's actual profitability with the projected profitability. Specifically, the notional balance of the balancing account is adjusted for 50 percent of the difference between actual net profits or losses earned in a quarter, at or below the profit that would be earned using a 91 percent operating ratio on operating ratio-eligible costs.

In discussions the company had with the City regarding the balancing account and the OR, the City has suggested that the OR should be higher (profit lower) than in the past because the balancing account essentially provides the company with a "guaranteed profit." However, with the balancing account, as it is defined in the Settlement Agreement, the company continues to bear risks serving the City, in the following ways:

1. If the balancing account true up mechanism is set at 50 percent of the projected versus actual profit differential (as stated in Section 8.4 of the Settlement Agreement), the 91 percent OR profit is not guaranteed. Recology does not recover the entire shortfall in a case where its actual profit falls below the 91 percent target and conversely could receive a windfall for profits in excess of the 91 percent target.
2. There is future uncertainty with how the RRA and/or Rate Board may allow future recovery of profit shortfalls if they result in significant rate increases to City ratepayers (e.g., limit or spread out recovery over a long period of time).
3. Certain line items included in the rate application are largely outside of SF Recology Company control (e.g., revenues, intercompany disposal costs, and intercompany processing costs). Recology bears a larger degree of risk if the company does not fully recover profit shortfalls resulting from differences between projected and actual results of these uncontrollable line items.

[3] Equal to 27.3 percent for 2018 and 27.5 percent for 2019 and 2022.
[4] Including years 2018, 2019, and 2022 and not including 2020 and 2021 which were anomalous years.

Other factors creating uncertainty with respect to the OR and use of the balancing account include:

- The SF Recology entities incur some costs that are OR eligible and some that are not OR-eligible. Approximately over 35 percent of total City expenses are not OR-eligible. Hence the effective total projected OR realized (included in rates) by the combined SF Recology Companies, including both OR-eligible and non OR-eligible costs, is always greater than 91 percent.
- If non-OR eligible costs increase faster than OR eligible costs, the effective OR will increase, decreasing profits.
- As revenues increase or decrease, the change in non-OR eligible and OR eligible costs may not change at the same rate. For example, a 20 percent increase in revenue may not result in a similar 20 percent increase in costs. This revenue-cost misalignment can lead to substantial “excess” or “shortfall” profits since Recology is limited to earn profits only actual OR-eligible costs.
- The OR percentage is not equivalent to a profit margin (which is often what companies such as Recology use as a measure to support company financing). A profit margin is calculated by dividing the net profit (loss), calculated as the revenue less total expenses, by total revenue. Uncontrollable fluctuations in the company’s revenues will change the actual profit margin which could result in a higher or lower profit margin than the target 9 percent level.

<u>Conclusion:</u> The current 50 percent balancing account true up mechanism included in the Settlement Agreement should not be viewed as providing the company a guaranteed 91 percent OR. Consequently, the OR should not be increased (profit lowered) to account for the fact that the Settlement Agreement includes this balancing account mechanism.

* * * * *

In the course of preparing this Analysis, we have not conducted an audit, review, or compilation of any financial or supplemental data used in the accompanying Analysis. Certain projections may vary from actual results because events and circumstances frequently do not occur as expected and such variances may be material. We have no responsibility to update this Analysis for events or circumstances occurring after the date above.

Our procedures and work product are considered confidential and intended for the benefit and use of the company. This engagement was not planned or conducted in contemplation of reliance by any other party and is not intended to benefit or influence any other party. Therefore, items of possible interest to a third party may not be specifically addressed or matters may exist that could be assessed differently by a third party.

This Analysis is substantially different from an audit, examination, or review in accordance with Generally Accepted Auditing Standards, the objective of which is to express an opinion. Accordingly, we do not express such an opinion. Crowe’s services and work product were performed in accordance with the Standards for Consulting Services established by the American Institute of Certified Public Accountants (“AICPA”) and do not constitute an audit, examination, or review in accordance with standards established by the AICPA.

In the preparation of this Analysis, Crowe relied upon certain information provided to Crowe without verification or investigation. The information in this Analysis is based on estimates, assumptions and other data developed by Crowe from information provided by Recology, knowledge of and participation in other studies, and other sources deemed to be reliable.

The company agreed to be responsible to make all management decisions and perform all management functions; designate an individual who possesses suitable skill, knowledge, and/or experience, preferably within senior management to oversee these services; evaluated the adequacy and results of the services performed; and accepted responsibility for the results of the services.

Crowe’s fees are not dependent upon the outcome of this report and Crowe is independent with respect to any other economic interests.

Crowe LLP

Crowe LLP

San Francisco, California
May 16, 2023

Attachment A

California Cities and Counties
Operating Ratio (OR) Survey
For Jurisdictions that Have Established an OR in a Franchise Agreement or Contract
As of April 10, 2023

No.	Jurisdiction	Operating Ratio (OR)
1	City of Alameda *	90.0%
2	City of Carmel by the Sea *	85.8%
3	City of Concord **	90.0%
4	City of East Palo Alto *	90.5%
5	City of El Cerrito **	90.5%
6	City of Grover Beach *	92.0%
7	City of Half Moon Bay **	90.0%
8	City of Martinez *	90.0%
9	City of Milpitas *	89.5%
10	City of Petaluma *	88.0%
11	City of Pinole *	88.0%
12	City of Pleasanton *	90.0%
13	City of San Ramon *	89.0%
14	City of Santa Rosa **	90.0%
15	City of San Jose (Commercial) *	85.3%
16	City of Vallejo **	89.0%
17	Butte County *	90.0%
18	Central Contra Costa County (JPA, 6 jurisdictions) *	87.0%
19	El Dorado County *	90.0%
20	Marin County (JPA, 5 jurisdictions) *	90.5%
21	Napa County **	90.5%
22	Contra Costa County (unincorporated areas) *	90.0%
23	Plumas County **	90.0%
24	Santa Cruz County *	83.9%
25	South Lake Tahoe Basin Waste Management Authority (JPA, 3 jurisdictions) *	89.0%
26	South Bayshore Waste Mgt Authority (SBWMA, 11 jurisdictions) *	90.5%
27	San Luis Obispo County (uninc.) *	93.0%
28	Town of San Anselmo *	90.5%
29	Town of Windsor **	90.0%
	Average (all)	89.4%
	Median	90.0%
	Mode (most frequent)	90.0%
	Maximum	93.0%
	Minimum	83.9%
	* Earnings before interest and tax (EBIT) basis (21 jurisdictions)	89.2%
	** Earnings before tax (EBT) basis (8 jurisdictions)	90.0%
	Recology San Francisco (EBIT)	91.0%

Attachment B

Publicly-Held Company
Operating Ratio Data
Republic, Waste Connections, Waste Management
Data from 2019 to 2022
Sources: Published Financial Statements, 10Ks

Republic Services	Operating Revenue	Costs	Earnings Before Interest and Taxes (EBIT)	Other Income (Expense)	Earnings Before Taxes (EBT)	Tax Costs	Earnings After Tax (EAT)	OR (EBIT)	OR (EBT)	OR (EAT)
2022	13,511	11,120	2,391	(560)	1,831	344	1,487	82%	86%	88%
2021	11,295	9,219	2,076	(501)	1,575	283	1,292	82%	85%	88%
2020	10,154	8,445	1,709	(566)	1,143	173	970	83%	88%	90%
2019	10,299	8,512	1,787	(491)	1,296	222	1,074	83%	87%	89%
Waste Connections	Op Rev	Costs	Earnings Before Interest and Taxes (EBIT)	Other Income (Expense)	Earnings Before Taxes (EBT)	Tax Costs	Earnings After Tax (EAT)	OR (EBIT)	OR (EBT)	OR (EAT)
2022	7,211,859	5,960,565	1,251,294	(202,331)	1,048,963	213,301	835,662	83%	85%	88%
2021	6,151,361	5,217,823	933,538	(162,796)	770,742	152,695	618,047	85%	87%	89%
2020	5,445,990	5,029,701	416,289	(162,375)	253,914	49,237	204,677	92%	95%	96%
2019	5,388,679	4,535,420	853,259	(147,368)	705,891	139,050	566,841	84%	87%	89%
Waste Management	Op Rev	Costs	Earnings Before Interest and Taxes (EBIT)	Other Income (Expense)	Earnings Before Taxes (EBT)	Tax Costs	Earnings After Tax (EAT)	OR (EBIT)	OR (EBT)	OR (EAT)
2022	19,698	16,333	3,365	(447)	2,918	678	2,240	83%	85%	88%
2021	17,931	14,966	2,965	(616)	2,349	532	1,817	83%	86%	89%
2020	15,218	12,784	2,434	(541)	1,893	397	1,496	84%	87%	90%
2019	15,455	12,749	2,706	(601)	2,105	434	1,671	82%	86%	88%
						4 Year	**Average**	**84%**	**87%**	**89%**
							Median	**83%**	**86%**	**89%**
							Min	**82%**	**85%**	**88%**
							Max	**92%**	**95%**	**96%**
Weighted Average (3 Companies)	Op Rev	Costs	Earnings Before Interest and Taxes (EBIT)	Other Income (Expense)	Earnings Before Taxes (EBT)	Tax Costs	Earnings After Tax (EAT)	OR (EBIT)	OR (EBT)	OR (EAT)
2022	40,421	33,414	7,007	(1,210)	5,798	1,235	4,562	83%	85%	88%
2021	35,377	29,403	5,975	(1,280)	4,695	968	3,727	83%	86%	89%
2020	30,818	26,259	4,559	(1,270)	3,290	619	2,670	85%	89%	91%
2019	31,143	25,796	5,346	(1,239)	4,107	795	3,312	83%	86%	89%
Total (4 years)	137,759	114,872	22,887	(4,999)	17,889	3,617	14,272	**83%**	**87%**	**89%**

Attachment C

Risk Management Association
Administration & Waste Management Services - Solid Waste Collection
NAICS 562111
Data from 2017/18 to 2021/22

Description	Prior Year Data					
	2017-18	2018-19	2019-20	2020-21	2021-22	4 Year Wt Avg
Number of Entities	246	278	191	150	158	
Income Data						
Net Sales	100	100	100	100	100	400
Gross Profit						
Operating Expenses	90.1	91.2	91.9	90.7	91.8	365.60
Operating Profit	9.9	8.8	8.1	9.3	8.2	34.40
All Other Expenses (net)	1.9	1.5	1.5	1.5	0.5	5.00
Profit Before Taxes (EBT)	8	7.3	6.6	7.8	7.7	29.40
Operating Ratio (EBT)	92%	92.6%	93.3%	92.1%	92.3%	**92.6%**
Operating Ratio (EBIT)	90%	90.4%	91.7%	90.8%	91.1%	**91.0%**